December 18, 2020

Alaska Department of Environmental Conservation
Air Permits Program
Attention: Intake Clerk
555 Cordova Street
Anchorage, Alaska 99501

Subject: **Application for Renewal of Permit No. AQ1086TVP01**
Matanuska Electric Association, Eklutna Generation Station

To Whom It May Concern,

Matanuska Electric Association (MEA) is currently operating the Eklutna Generation Station under Title V Permit No. AQ1086TVP01, which expires on January 27, 2022. Pursuant to Condition 70, MEA is submitting the enclosed application for renewal in accordance with the requirements of 18 AAC 50.326(c), 40 CFR 71.7(b), and 40 CFR 71.5(a)(1)(iii). The application is required to be submitted no sooner than July 26, 2020 and no later than July 26, 2021.

If you have any questions regarding the enclosed application, please contact Traci Bradford at 907-761-9374 or by email at traci.bradford@mea.coop.

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

Sincerely,

Joshua Crowell
EGS Plant Manager

cc: Tony Izzo, MEA
Tony Zellers, MEA
Traci Bradford, MEA
Chris Lindsey, SLR
EPA Region 10

Attachment: Title V Operating Permit Application (Hardcopy and Electronic Copy)

Application for Renewal of an Air Quality Operating Permit

Eklutna Generation Station

Prepared for: Matanuska Electric Association, Inc.

December 2020

Application for Renewal of an Air Quality Operating Permit for Eklutna Generation Station

Prepared for:

Matanuska Electric Association, Inc.

28705 Dena'ina Elders Road
Chugiak, AK 99567

prepared by

SLR INTERNATIONAL CORPORATION

2700 Gambell Street, Suite 200
Anchorage, Alaska 99503
(907) 222-1112

December 2020

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SECTION A
STATIONARY SOURCE

Form A1: Stationary Source (General Information)

Form A2: Stationary Source Description

Form A3: Operating Scenario Description

Form A4: Title V Air Operating Permit Renewal Application Information

Attachments: Plot Plan, Regional Map, USGS Map, Process Flow Diagrams, Off Permit Change, 2019 Annual Compliance Certification

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FORM A1
Stationary Source (General Information)

GENERAL INFORMATION		
1. Permittee:		
Permittee Name: Matanuksa Electric Association, Inc.		
Mailing Address Line 1: P.O. Box 2929		
Mailing Address Line 2:		
City: Palmer	State: AK	Zip Code: 99645
2. Stationary Source Name: Eklutna Generation Station		
3. Stationary Source Physical Address:		
Physical Address Line 1: 28705 Dena'ina Elders Road		
Physical Address Line 2:		
City: Chugiak	State: AK	Zip Code: 99567
4. Location: 28705 Dena'ina Elders Road, Chugiak, AK 99567	Latitude: 61° 27' 34.5" N	Longitude: 149° 20' 33.9" W
5. Primary SIC Code: 4911	SIC Code Description: Electrical Power Generation	***Primary NAICS Code:*** 221112
6. Current/Previous Title V Air Permit No.: AQ1086TVP01		Expiration Date: January 27, 2022
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: Matanuska Electric Association, Inc.	Name/Title: Matanuska Electric Association, Inc.
Mailing Address Line 1: P.O. Box 2929	Mailing Address Line 1: P.O. Box 2929
Mailing Address Line 2:	Mailing Address Line 2:
City: Palmer State: AK Zip Code: 99645	City: Palmer State: AK Zip Code: 99645
Permittee's Responsible Official:	***Designated Agent:***
Name/Title: Joshua Crowell, Eklutna Generation Station Plant Manager	Name/Title: Joshua Crowell, Eklutna Generation Station Plant Manager
Mailing Address Line 1: P.O. Box 2929	Mailing Address Line 1: P.O. Box 2929
Mailing Address Line 2:	Mailing Address Line 2:
City: Palmer State: AK Zip Code: 99645	City: Palmer State: AK Zip Code: 99645
Stationary Source and Building Contact:	***Fee Contact:***
Name/Title: Traci Bradford, Environmental Engineer	Name/Title: Traci Bradford, Environmental Engineer
Mailing Address Line 1: P.O. Box 2929	Mailing Address Line 1: P.O. Box 2929
Mailing Address Line 2:	Mailing Address Line 2:
City: Palmer State: AK Zip Code: 99645	City: Palmer State: AK Zip Code: 99645
Phone: 907-761-9374 Email: traci.bradford@mea.coop	Phone: 907-761-9374 Email: traci.bradford@mea.coop
Permit Contact:	***Person or Firm that Prepared Application:***
Name/Title: Traci Bradford, Environmental Engineer	Name/Title: Jeanette Brena, SLR International Corp.
Mailing Address Line 1: P.O. Box 2929	Mailing Address Line 1: 2700 Gambell Street, Suite 200
Mailing Address Line 2:	Mailing Address Line 2:
City: Palmer State: AK Zip Code: 99645	City: Anchorage State: AK Zip Code: 99503
Phone: 907-761-9374 Email: traci.bradford@mea.coop	Phone: 907-222-1112 Email: jbrena@slrconsulting.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): Joshua Crowell	Title: Eklutna Generation Station Plant Manager
X Signature (blue ink):	Date: 12/11/2020

FORM A2
Stationary Source Description

Permit Number: AQ1086TVP02A

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. The Eklutna Generation Station (EGS) is classified as electric power generation with a Standard Industrial Classification (SIC) code of 4911 and a North American Industrial Classification System (NAICS) code of 221112. EGS operates under Air Quality Title V Permit AQ1086TVP01. The stationary source is permitted with ten dual fuel engines each equipped with a selective catalytic reduction and catalytic oxidation emissions control system to reduce emissions of nitrogen oxides (NO_X), carbon monoxide (CO), and volatile organic compounds (VOCs). Additionally, the stationary source has one diesel-fired firewater pump engine, two diesel-fired black start generator engines, a natural gas-fired fuel heater, two dual fuel auxiliary boilers, and two diesel storage tanks. Pipeline-quality natural gas is supplied to the stationary source from the ENSTAR Natural Gas Company pipeline. The natural gas is then distributed directly to the EGS gas-fired combustion equipment. Diesel-fired emission units at the stationary source burn ultra low sulfur diesel (ULSD). Major support facilities at EGS include a main office, vehicle shop, and warehouses.	
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: See attached.

6. Attach regional map: See attached.

7. Attach USGS map: See attached.

FORM A3
Operating Scenario Description

Permit Number: AQ1086TVP02A

1.	Operating scenario ID	1
2.	Operating scenario description: The Eklutna Generation Station (EGS) has one operating scenario. Under this scenario, the plant will operate the following units: o Ten dual fuel-fired Wartsila 18V50DF generator engines, EU IDs 1 – 10, rated at 17.1 MW, each. These engines are each equipped with a selective catalytic reduction and catalytic oxidation emissions control system to reduce emissions of nitrogen oxides (NO_X), carbon monoxide (CO), and volatile organic compound (VOC). o One diesel-fired John Deere JU6H-UFADN0 firewater pump engine, EU ID 11, rated at 197 hp. o Two diesel-fired Cummins 1000DQFAD black start generator engines, EU IDs 12 and 18, rated at 1,490 hp, each. o Two dual fuel-fired Cleaver-Brooks FLX200-1650 auxiliary boilers, EU IDs 13 and 14, rated at 15.75 MMBtu/hr, each. o Two insignificant diesel storage tanks, EU IDs 15 and 16, with a capacity of 509,000 gallons, each. o One natural gas-fired Aether C5-G30 heater, EU ID 17, rated at 9.3 MMBtu/hr. Potential pollutants emitted under this scenario include NO_X, CO, VOC, particulate matter with an aerodynamic diameter less than 10 microns (PM_{10}), particulate matter with an aerodynamic diameter less than 2.5 microns ($PM_{2.5}$), sulfur dioxide (SO_2), greenhouse gases (GHG) shown as carbon dioxide equivalent (CO_2e), and hazardous air pollutants (HAPs).	
3.	List the emissions units involved in this operating scenario.	EU IDs 1 – 18
4.	Operating schedule: hours/day	24
	days/week	7
	weeks/year	52
5.	Seasonal variation (%): December – February	25 percent
	March – May	25 percent
	June – August	25 percent
	September – November	25 percent

6. Attach process flow diagram: See attached.

FORM A4
Title V Air Operating Permit Renewal Application Information

Permit Number: AQ1086TVP02A

1.	Permit Contact: Name	Traci Bradford
	Title	Environmental Engineer
	Mailing Address Line 1	P.O. Box 2929
	Mailing Address Line 2	N/A
	Phone Number	907-761-9374
	Email	traci.bradford@mea.coop
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 - see Form A2.
4.	Were there any off-permit changes? Reference any notifications provided to the Department, and attach copies of the notifications.	Yes - an off-permit change was submitted on August 30, 2017, to revise the rating of EU ID 17.
	If yes, integrate changes into renewal permit? [if no, explain]	Yes
5.	Have any Alaska Title I permits been issued to the stationary source since the most recent Title V permit or revision issuance?	No
	If yes, integrate changes into renewal permit? [If yes, please list. If no, explain]	N/A
6.	Will there be any changes to the operating scenario(s)? [if yes, describe and attach Form A3]	No - see Form A3.
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 - see attached Form Series B, C, D, and E.
8.	Are the current emissions units correctly identified and defined in the permit? [if no, attach appropriate forms from Form Series B, C, D, and E]	No - see the off-permit change submitted on August 20, 2017, to revise the rating of EU ID 17, and attached Series B, C, D, and E Forms.
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 - see attached Series E Forms.

12.	Are there any requested changes in the assessable potential to emit other than those identified in item 9 above? [if yes, answer the following]	Yes - see Series D Forms and the attached emissions spreadsheet.
	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.]	Yes - see Series D Forms and the attached emissions spreadsheet.
	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 - the source is in compliance with all conditions of the permit. The 2019 Annual Compliance Certification is attached for reference.
14.	Are there any requested changes to testing and/or monitoring conditions? [if yes, identify the condition, the requested change, and the reason. Attach additional information as necessary to fully document.]	Yes - see Form E3.
15.	Are there any requested changes to monitoring conditions other than those being replaced by CAM? [if yes, identify the condition, the requested change, and the reason. Attach additional information as necessary to fully document.]	No
16.	Are there any requested changes to recordkeeping conditions? [if yes, identify the condition, the requested change, and the reason. Attach additional information as necessary to fully document.]	Yes - see Form E3.
17.	Are there any requested changes to reporting conditions? [if yes, identify the condition, the requested change, and the reason. Attach additional information as necessary to fully document.]	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	Yes - see Form E3.

	additional information as necessary to fully document.]	

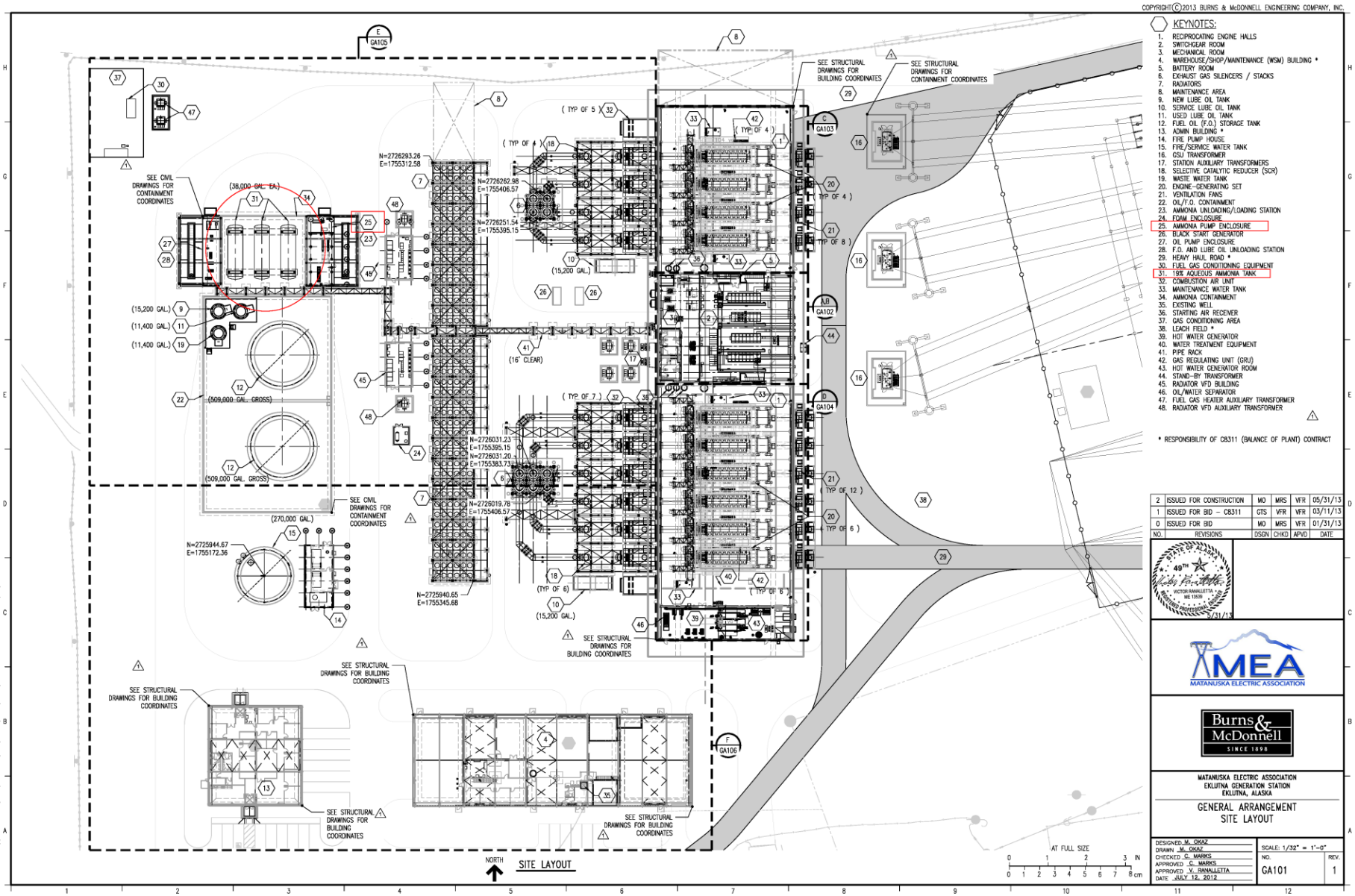
Statement of Certification:

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.

Joshua Crowell	Eklutna Generation Station Plant Manager
Name of Responsible Official	**Title**
Signature (blue ink)	12/11/2020 **Date**

Eklutna Generation Station – Plot Plan

Operating Permit No. AQ1086TVP02A

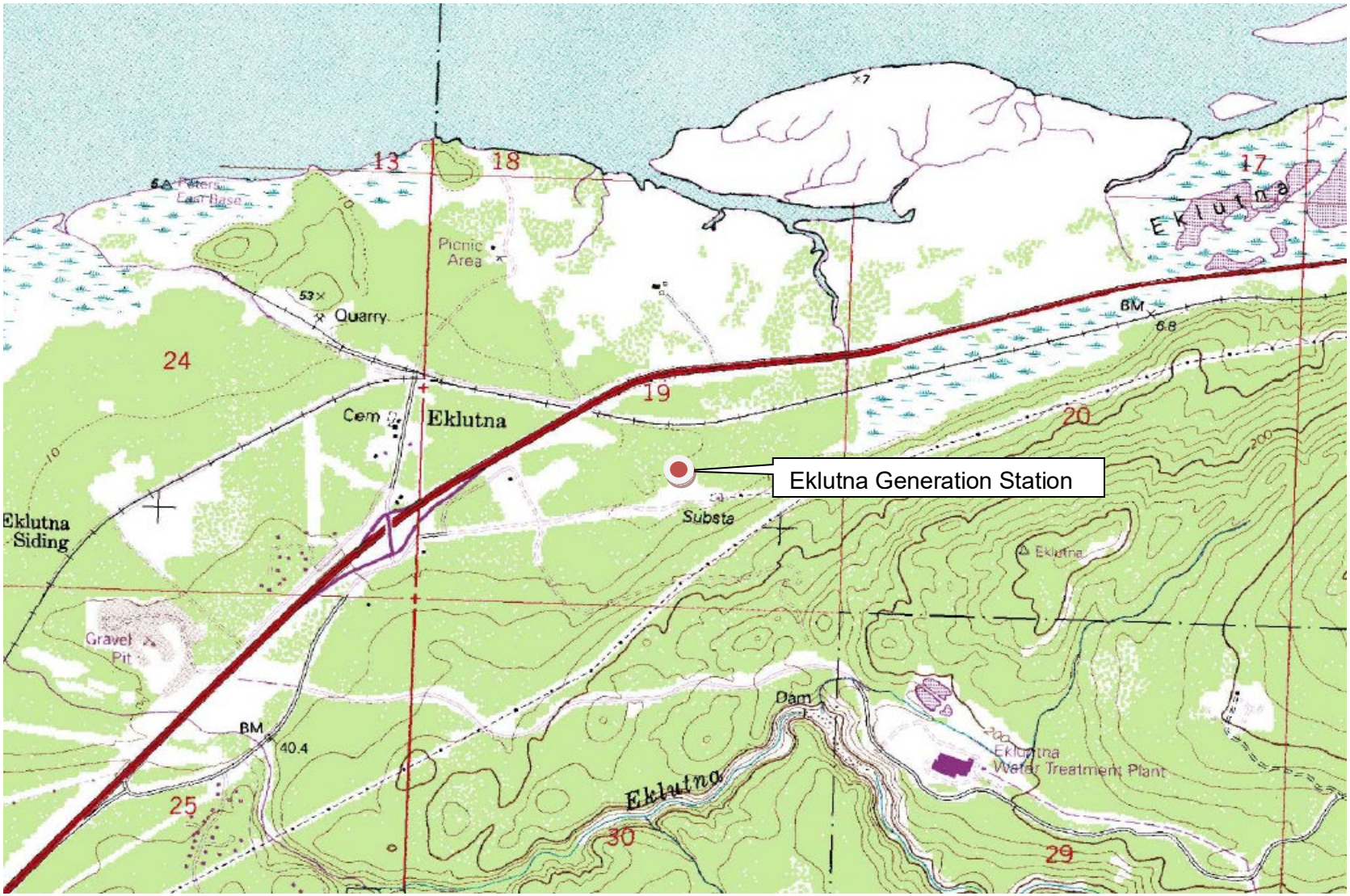


Eklutna Generation Station – Regional Map

Operating Permit No. AQ1086TVP02A

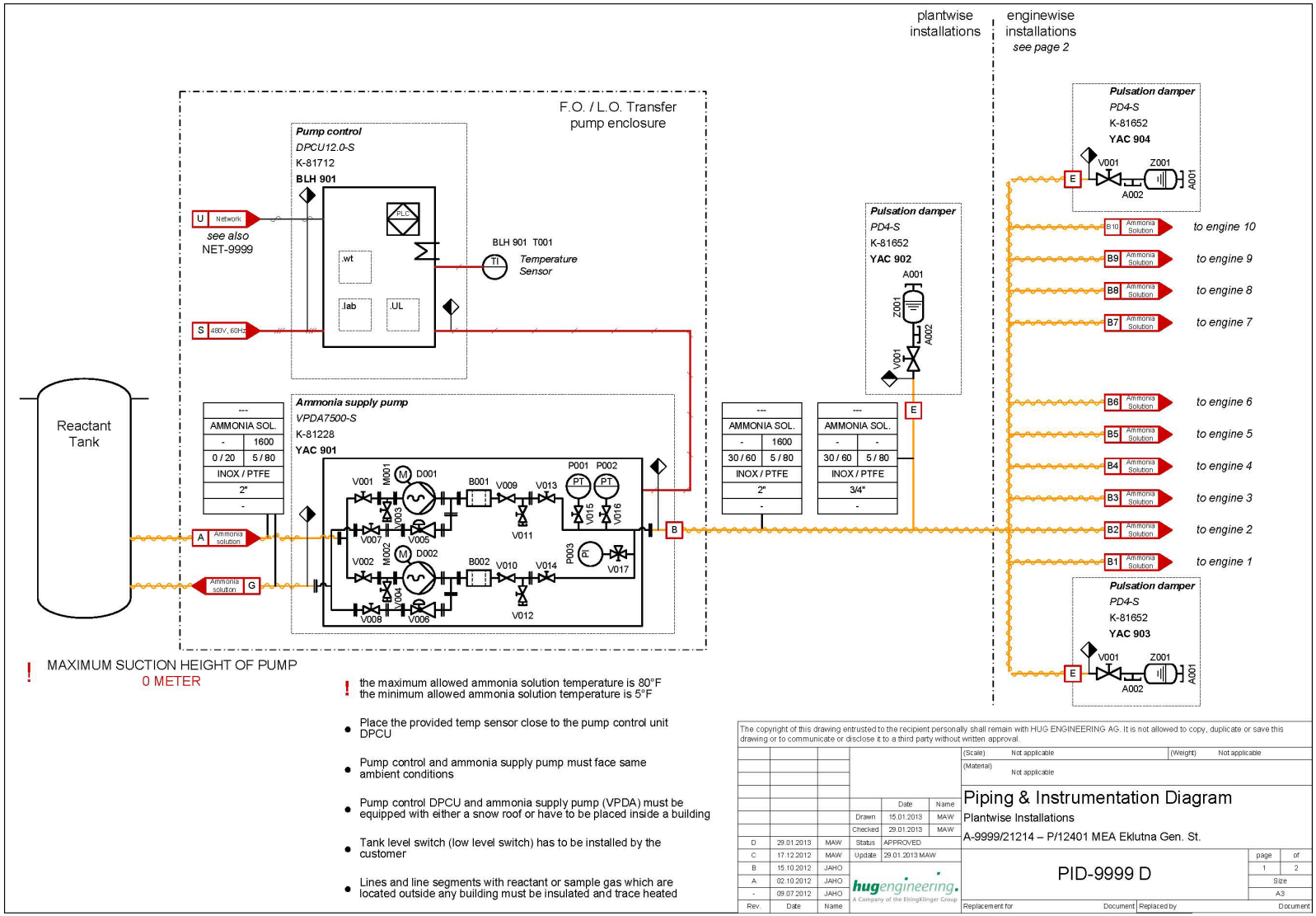
Eklutna Generation Station – USGS Map

Operating Permit No. AQ1086TVP02A



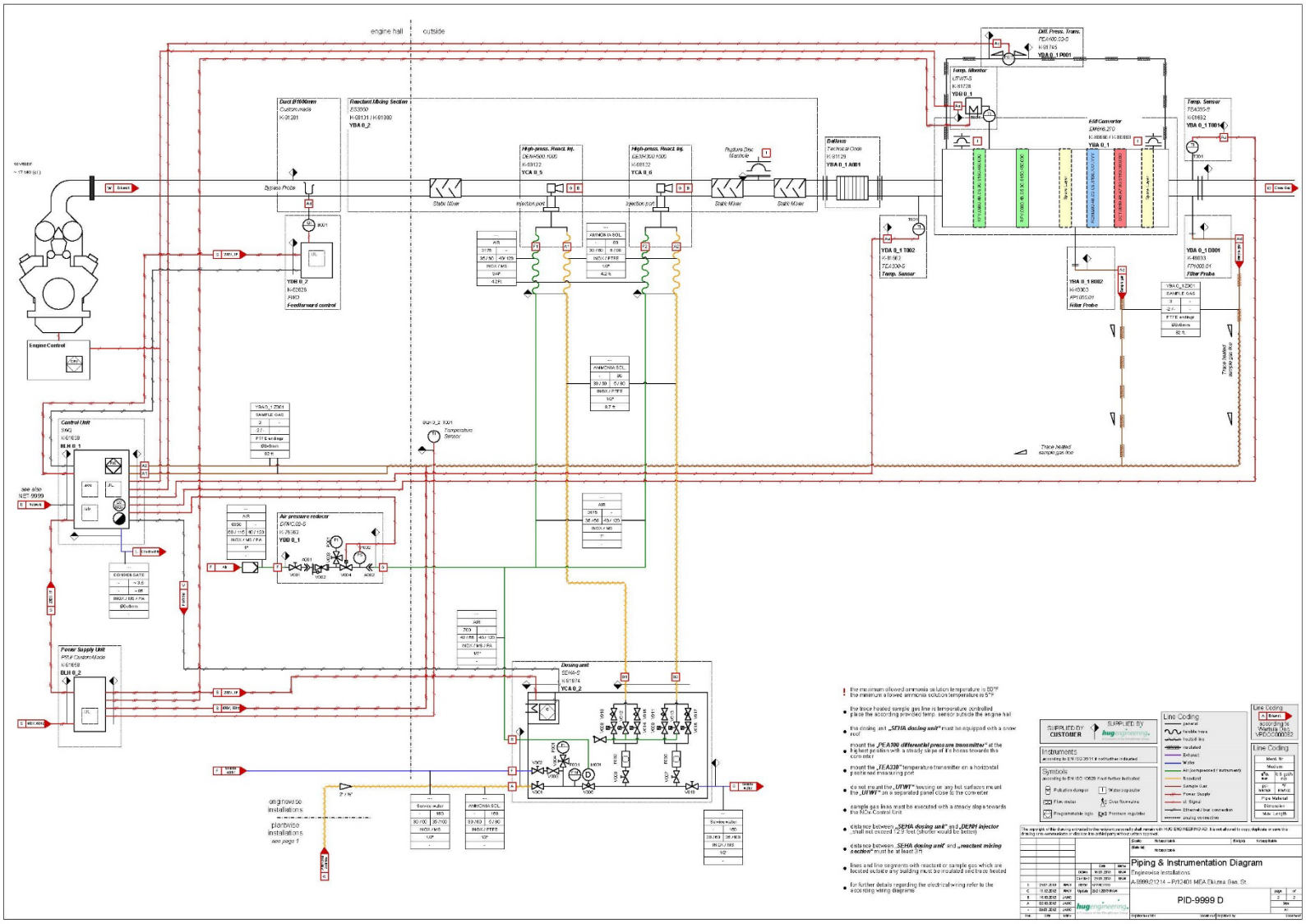
Eklutna Generation Station – Process Flow Diagrams

Operating Permit No. AQ1086TVP02A



Eklutna Generation Station – Process Flow Diagrams

Operating Permit No. AQ1086TVP02A



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MATANUSKA ELECTRIC ASSOCIATION

August 30, 2017

CERTIFIED MAIL: 7015 0640 0005 9919 4152
Return Receipt Requested

Compliance Technician
Alaska Department of Environmental Conservation
Air Permits Program
610 University Avenue
Fairbanks, AK 99709-3643

Subject: **Off Permit Change Notification**
Matanuska Electric Association, Inc. - Eklutna Generation Station
Title V Operating Permit No. AQ1086TVP01

Dear Compliance Technician:

Pursuant to Condition 68.2 of Air Quality Operating Permit No. AQ0186TVP03 and 40 Code of Federal Regulations, (CFR) 71.6(a)(12), Matanuska Electric Association, Inc. (MEA) is submitting this Off Permit Change Notification for the Eklutna Generation Station (EGS).

The required notification elements under Condition 68.2 of Permit No. AQ0186TVP03 and 40 CFR 71.6(a)(12)(ii) are provided below:

Description of Change
Air Quality Operating Permit No. AQ0186TVP03 authorizes one natural gas-fired natural gas fuel heater, emission unit (EU) ID 17, rated at 7.0 million British thermal units per hour (MMBtu/hr). The 7.0 MMBtu/hr natural gas fuel heater was not installed. Instead, MEA has installed a slightly larger natural-gas fired natural gas heater with a maximum heat input rating of 8.3 MMBtu/hr instead of a heater with the 7.0 MMBtu/hr maximum heat input rating. The 8.3 MMBtu/hr natural gas heater is a significant emission unit under 18 (Alaska Administrative Code) AAC 50.326(e).

Date
EU 17 was installed during August 2017 with final commissioning to occur September 5, 2017.

Change in Emissions
The change in emissions is summarized in Tables 1 through 3, attached to this notification. The emissions calculations demonstrate a net decrease in potential emissions for all air pollutants for the new 8.3 MMBtu/hr heater as compared to potential emissions for the original 7.0 MMBtu/hr heater. Vendor data sheets supporting the emission calculations are also attached to this notification.

Pollutants Emitted
The air pollutants expected to be emitted are those air pollutant that are typical natural gas-fired heater emissions. The expected emissions are quantified in the attached potential emissions calculations (Tables 1 through 3).

Any Applicable Requirement that Would Apply as a Result of the Change
As documented in the attached emissions calculations, the project results in a decrease of potential emissions for all air pollutants. Because a decrease in potential emissions occurs for all air pollutants, the project does not exceed Prevention of Significant Deterioration (PSD) or minor air quality permitting thresholds. In addition, the 8.3 MMBtu/hr heater is not subject to any New Source Performance Standards (NSPS) or National Emission Standards for Hazardous Air Pollutants (NESHAP) requirements.

If you have any questions regarding this submittal, please contact Traci Bradford at 907-761-9374 or Jamie Brewer of SLR at 907-264-6984.

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

Sincerely,

Michael Mann
EGS Plant Manager

Enclosures: Potential Emissions Calculations

cc: Director, Air and Waste Management Division, EPA Region 10, 1200 6th Avenue Seattle, WA 98101
Patrick Dunn, ADEC
Tony Izzo, MEA
Gary Kuhn, MEA
Tony Zellers, MEA
Traci Bradford, MEA
Jamie Brewer, SLR

Table 1. Matanuska Electric Association - Eklutna Generation Station
Natural Gas-Fired Heater (EU ID 17) - Proposed Aether Forced Draft Line Heater with Power Flame Burner
Potential Emissions

Pollutant	Emission Factor	Factor Reference[1]	Maximum Heat Input Capacity	Maximum Annual Operation	Potential Emissions
NO_X	0.091 lb/MMBtu	Vendor Data	8.3 MMBtu/hr	8,760 hr/yr	3.31 tpy
CO	0.037 lb/MMBtu	Vendor Data			1.35 tpy
$PM/PM_{10}/PM_{2.5}$	0.0048 lb/MMBtu	Vendor Data			0.17 tpy
VOC	0.025 lb/MMBtu	Vendor Data			0.91 tpy
SO_2	0.0005 lb/MMBtu [2]	Vendor Data			1.8E-02 tpy

Notes:
[1] Emission factors are provided in the Power Flame Burner emission data sheet.
[2] See Footnote 3 of Power Flame Burner emission data sheet.

Conversion: 2,000 lb/ton

Table 2. Matanuska Electric Association - Eklutna Generation Station
Natural Gas-Fired Heater (EU ID 17) - Original ETI Heater
Potential Emissions

Pollutant	Emission Factor[1]	Factor Reference	Maximum Heat Input Capacity	Maximum Annual Operation	Potential Emissions
NO_X	0.78 lb/hr	Vendor Data	7.0 MMBtu/hr	8,760 hr/yr	3.43 tpy
CO	0.78 lb/hr	Vendor Data			3.40 tpy
$PM/PM_{10}/PM_{2.5}$	0.008 lb/MMBtu	Vendor Data			0.25 tpy
VOC	0.48 lb/hr	Vendor Data			2.08 tpy
SO_2	20 ppmv H_2S [2]	Mass Balance			0.12 tpy

Notes:
[1] The original heater potential emissions, except for SO_2 emissions, are based on emission factors from a performance data sheet provided by Engineering Technologies, Incorporated for a natural/forced draft burner with a 7.0 MMBtu/hr rating.
[2] Condition 15.1a of Permit AQ1086MSS03 and Condition 11.1a of Permit AQ1086TVP01 limit natural gas H_2S content to 20 ppmv.

Fuel Consumption: 8,444 scf/hr
Conversion: 2,000 lb/ton

Table 3. Matanuska Electric Association - Eklutna Generation Station
Natural Gas-Fired Heater (EU ID 17)
Potential Emissions Comparison between Proposed Aether Heater with Power Flame Burner and Original ETI Heater

Pollutant	Potential Emissions Proposed Heater	Potential Emissions Original Heater	Difference in Potential Emissions Between Proposed and Original Heater
NO_X	3.31 tpy	3.43 tpy	-0.12 tpy
CO	1.35 tpy	3.40 tpy	-2.06 tpy
$PM/PM_{10}/PM_{2.5}$	0.17 tpy	0.25 tpy	-0.07 tpy
VOC	0.91 tpy	2.08 tpy	-1.18 tpy
SO_2	0.02 tpy	0.12 tpy	-0.11 tpy

ENGINEERING TECHNOLOGY ETI INCORPORATED

5555 E. 71st St., Suite 8100
Tulsa, OK 74136-6553
e-mail: eti@engtechinc.com
Phone: 918-492-0508
Fax: 918-488-9042

Emission Unit 17

COMBUSTION EMISSIONS for NATURAL/FORCED DRAFT BURNERS

Customer: Burns and McDonnell **Date:** 30-Nov-12

Job Site: Alaska **Shop Order:** Estimate

PERFORMANCE DATA:		DESIGN DATA:	
Heater Type:	Indirect	Mixer Type:	FLAMECO
Nom. Duty (MMBTU/hr):	7	Fuel Pressure (psig):	5
Calc Duty (MMBTU/hr):	6.100	Burner Size (in):	5"
Fuel HHV (BTU/scf):calc	1,023	Orifice Size (in):	35/64"
Fuel Usage (scf/d):calc	202,648	Firebox ID (in):	23.5
Assumption ---		Firebox OD (in):	24
Efficiency, GTE (%):	70.608	TOTAL Firebox Length (ft):each	58.5
Efficiency, NTE (%):	78.28	No. of Fireboxs (N):	2
Fuel Gas N2 (%)	3.105	Stack ID (in):	23.5
		Stack OD, (in):	24.0

--- Firebox THERMAL EFFICIENCY ---

Use Figure for Indirect Water Bath Heaters. Use Table below for others.

LoNOx Burner = 1; Normal = 0 **0** INPUT = 1 for Special LoNOx Burner

--- Firebox HEAT FLUX RATE ---

Firebox L/D = 12 x Length/Firebox ID = 29.9

* **Heat Release Rate per Firebox.**

Nom. Heat Release = Nom. Duty/(N*GTE) = 4.957 MM BTU/hr

Cal. Heat Release = Cal. Duty/(N*GTE) = 4.320 MM BTU/hr

* **Heat Flux Rate per Firebox**

Qf(nom) = 1.E6*Nom.Duty/(PI*OD*Length*N) = 9,522 BTU/hr sq ft

Qf(cal) = 1.E6*Cal.Duty/(PI*OD*Length*N) = 8,298 BTU/hr sq ft

* **Heat Release Density**

Qf(nom) = 4.E6*Nom.HeatRelease/(PI*ID^2) = 11.428 K btu/h sq in

Qf(cal) = 4.E6*Cal.HeatRelease/(PI*ID^2) = 9.959 K btu/h sq in

--- NOx, CO, HC STACK GAS EMISSIONS ---

	@ Nominal Duty		@ Calculated Duty	
------ NOx as NO2 at 3% O2 (dry)				
NOx (ppmv) =	59.1		56.7	
NOx (lb/MM BTU) =	0.079		0.076	
NOx (lb/hr) =	0.7820	3.43 = tpy	0.6542	2.87 = tpy
------ CO at 3% O2 (dry)				
CO (ppmv) =	96.4		90.8	
CO (lb/MM BTU) =	0.08		0.07	
CO (lb/hr) =	0.777	3.40 = tpy	0.6377	2.79 = tpy
------ HC as CH4 at 3% O2 (dry)				
HC (ppmv) =	103.4		95.8	
HC (lb/MM BTU) =	0.05		0.04	
HC (lb/hr) =	0.476	2.085 = tpy	0.3844	1.684 = tpy
------ PM10 (Particulate Matter)				
PM10 (lb/MM BTU) =	<0.008	0.245 = tpy	<0.008	0.214 = tpy
------ Partuculate matter				
PM (lb/MM BTU) =	<0.008	0.245 = tpy	<0.008	0.214 = tpy
------ SO2				
SO2 (ppmv) =	<50		<50	

THERMAL EFFICIENCIES:	GTE (%)	NTE (%)
Indirect Water Bath Heater:	65	72
Hot Oil Heater:	60	66
Glycol Dehydrator:	60	66
Salt Bath Heater:	45	50

STD OUT 1.

AS BUILT BURNER SPECIFICATION SHEET

Contact TD/ERC **01/30/2017**

JOB DETAILS

Number	J098078	**Order Number**	B069901 - 1	**Quantity**	1
Customer	ELY ENERGY WAREHOUSE DBA AETHER			**Purchase Order**	55961
Name	1605GM-004				

BURNER DETAILS

Model	C5-G-30	**Serial Number(s)**	011762349	**UL Label**	
Mode Of Operation	MOD			**Code**	Non UL, CSD-1

HEAT EXCHANGER AND SITE DETAILS

Make	Unknown			**Model**	Unknown
Type	WATER BATH HTR	**Combustion Chamber Press.**	0	**Site Altitude**	2000

PRIMARY GAS DETAILS (ALL PRESSURES ARE IN INCHES WC)

High Fire Manif. Press.	3.2	**High Fire Rate**	8300 MBH	**Side Orifice Size**	None		
Gas Reg. Outlet Press.	7.5	**Site Press.**	56 - 140	**Type**	Natural	**Pilot**	Natural
Min. Supply Press.	12.0	**Max. Design Press.**	280	**UL Gas Group**			

SECONDARY GAS DETAILS (ALL PRESSURES ARE IN INCHES WC)

High Fire Manif. Press.		**High Fire Rate**	MBH	**Side Orifice Size**	
Gas Reg. Outlet Press.		**Site Press.**	-	**Type**	
Min. Supply Press.		**Max. Design Press.**			

OIL DETAILS (ALL PRESSURES ARE IN PSI)

Pump Pressure		**High Fire Rate**	GPH	**UL Oil Group**	
Compressor Pressure		**Grade**			

DIAGRAMS

Wiring	G-J098078-1	**General Arrangement**	
Gas Piping	PDG-J098078	**Additional 1**	
Oil Piping		**Additional 2**	
Remote Panel		**Additional 3**	

ELECTRICAL CHARACTERISTICS

Control		**FLA**	
Blower Motor	460V/3PH/60HZ	**FLA**	8.6
Remote Pump		**FLA**	
Compressor		**FLA**	
Clipped Circuit Board Part Number		**Min. Circuit Ampacity**	

BURNER SETTINGS AND MISC.

Gas Ignition System	GAS PILOT	**Gas Inlet Location**	BOTTOM	**Flame Detection**	SCANNER
Oil Ignition System		**Flange Setting**	29	**Diffuser Blade Setting**	5/8

COMMENTS (MAY CONTINUE ON NEXT PAGE)

[1]Approximate operating pressure at the manifold inlet for initial start-up. Final pressure should be determined after checking actual flow with gas meter. Stack temperature, CO, CO_2, O_2, and furnace pressure will help in determining actual input when gas meter is not available for this unit.

[2]All components are rated for the maximum design pressure specified. That pressure must not be exceeded.

Power Flame Incorporated

9/28/2006
Rev. 03/02/2016

Typical Flue Product Emissions
Data for Power Flame Burners

	Natural Gas	L.P. Gas	# 2 Fuel Oil [1]
Carbon Monoxide - CO	.037 lb CO 10^6 BTU input (50 PPM)	.037 lb CO 10^6 BTU input (50 PPM)	.037 lb per 10^6 BTU INPUT (50 PPM)
Sulfur Dioxide - SO_2	(1.05) x (% Sulfur by weight in fuel) = lb SO_2 per 10^6 BTU Input		
Particulate Matter	.0048 lb PM per 10^6 BTU input	.0048 lb PM per 10^6 BTU input	.0143 lb PM per 10^6 BTU input
Hydrocarbons	.025 lb HC's per 10^6 BTU input	.025 lb HC's per 10^6 BTU input	.038 lb HC's per 10^6 BTU input
CO_2	9 % to 10%	10% to 12%	10% to 13%
Nitrogen Oxides - NO_x			
Standard J, FDM & X4 Gas Burners	.091 lb NO_x per 10^6 BTU input (75 PPM)	.095 lb NO_x per 10^6 BTU input (79 PPM)	N/A N/A
Standard C(R) Burners	.091 lb NO_x per 10^6 BTU input (75 PPM)	.095 lb NO_x per 10^6 BTU input (79 PPM)	0.115 lb NO_x per 10^6 BTU Input (90) PPM[2]
LNIC(R) Burners Fire box/Cast Iron boilers	.037 lb NO_x per 10^6 BTU input (30 PPM)	.037 lb NO_x per 10^6 BTU input (30 PPM)	0.115 lb NO_x per 10^6 BTU Input (90) PPM[2]
LNIC(R) Burners Water tube boilers	.037 lb NO_x per 10^6 BTU input (30 PPM)	.037 lb NO_x per 10^6 BTU input (30 PPM)	0.115 lb NO_x per 10^6 BTU Input (90) PPM[2]
LNIAC Burners	.037 lb NO_x per 10^6 BTU input (30 PPM)	.037 lb NO_x per 10^6 BTU input (30 PPM)	0.115 lb NO_x per 10^6 BTU Input (90) PPM
CM Burners	.085 lb NO_x per 10^6 BTU input (70 PPM)[4]	.085 lb NO_x per 10^6 BTU input (70 PPM)[4]	0.141 lb NO_x per 10^6 BTU Input (110) PPM
LNICM Burners Scotch Boiler	.037 lb NO_x per 10^6 BTU input (30) PPM	.037 lb NO_x per 10^6 BTU input (30) PPM	0.115 lb NO_x per 10^6 BTU Input (90) PPM
LNICM Burners Fire box/Cast Iron boilers	.030 lb NO_x per 10^6 BTU input (25) PPM	.030 lb NO_x per 10^6 BTU input (25) PPM	0.115 lb NO_x per 10^6 BTU Input (90) PPM
LNICM Burners Water tube boilers	.024 lb NO_x per 10^6 BTU input (20) PPM	.030 lb NO_x per 10^6 BTU input (25) PPM	0.115 lb NO_x per 10^6 BTU Input (90) PPM
NPM Premix Burners	.030 lb NO_x per 10^6 BTU input (25) PPM	.030 lb NO_x per 10^6 BTU input (25) PPM	N/A N/A
Nova Plus Burners NVC AND NP2	.010 lb NO_x per 10^6 BTU input (9) PPM	.015 lb NO_x per 10^6 BTU input (12) PPM	N/A N/A

(1) NOx emissions at 3 % 02 will vary based on the percent of fuel bound nitrogen (these are based on .02%) and boiler or heat exchanger configurations

(2) 90 PPM NOx on cast iron sectional, fire box and water tube boiler, 120 PPM on fire tube boilers. (.159 lb NOx per 10^6 BTU Input)

(3) Burning natural gas the VOC are estimated at 0.003 # per million BTU and SO_x are 0.0005 # per million BTU.

(4) In some applications the CMAX will achieve less than 60 PPM without flue gas recirculation - consult factory.

These emission rates are general estimates and do not constitute guarantees by Power Flame Inc.
In instances where guarantees are required, please consult the factory with the specific application information.
All NOx numbers stated are corrected to 3% O_2

MATANUSKA ELECTRIC ASSOCIATION

March 17, 2020

Certified Mail 7016 3010 0000 6810 7190
Return Receipt Requested

Alaska Department of Environmental Conservation
Air Permits Program
610 University Avenue
Fairbanks, AK 99709-3643
ATTN: Compliance Technician

Subject: Matanuska Electric Association - Eklutna Generation Station
2019 Annual Compliance Certification
Air Quality Operating Permit No. AQ1086TVP01

Dear Compliance Technician,

Matanuska Electric Association (MEA) is submitting the enclosed 2019 Annual Compliance Certification report for the Eklutna Generation Station (EGS) for the reporting period of January 1, 2019 through December 31, 2019 in accordance with Condition 64 of Air Quality Operating Permit AQ1086TVP01. In addition, one copy of the Annual Compliance Certification report is being submitted directly to the U.S. Environmental Protection Agency (EPA) – Region 10 Office of Air Quality.

If you have any questions regarding the Annual Compliance Certification report, please contact Traci Bradford at 907-761-9374 or by email at traci.bradford@mea.coop.

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

Sincerely,

Michael Mann
Plant Manager
Eklutna Generation Station

cc: EPA - Region 10, Office of Air Quality
Tony Izzo, MEA
Tony Zellers, MEA
Traci Bradford, MEA
Jeanette Brena, SLR

Enclosure: Annual Compliance Certification

Matanuska Electric Association, Inc. - Eklutna Generation Station
2019 Annual Compliance Certification
Air Quality Operating Permit No. AQ1086TVP01
Reporting Period: January 1, 2019 to December 31, 2019

Condition	Permit Condition	Compliance Status	Compliance Determination Method
Section 3. State Requirements			
1	**Industrial Process and Fuel-Burning Equipment Visible Emissions.** The Permittee shall not cause or allow visible emissions, excluding condensed water vapor, emitted from EU IDs 1 through 14, 17, and 18 listed in Table A to reduce visibility through the exhaust effluent by more than 20 percent averaged over any six consecutive minutes.	Continuous	HSE Document Review Facility Operating/Maintenance Records Review
1.1	For EU IDs 1 through 10, 13, and 14, use natural gas as primary fuel. Monitoring for these emission units shall consist of a statement in each operating report under Condition 63 indicating whether each of these EUs fired natural gas as the primary fuel during the period covered by the report. If exclusive operation on ULSD occurred during the period covered by the report, the Permittee shall monitor, record, and report according to Condition 9.	Continuous	HSE Document Review Facility Operating/Maintenance Records Review
1.2	For EU ID 17, burn only natural gas as fuel. Monitoring for this emission unit shall consist of a statement in each operating report under Condition 63 indicating whether the emission unit fired only natural gas during the period covered by the report. Report under Condition 62 if any fuel other than natural gas is burned.	Continuous	HSE Document Review Facility Operating/Maintenance Records Review
1.3	For EU ID 11, as long as the emission unit does not exceed the operational hour limit in Condition 13, monitoring shall consist of an annual compliance certification under Condition 64 with the visible emission standard. Otherwise, monitor, record and report visible emissions in accordance with Conditions 2 through 4 for the remainder of the permit term.	Continuous	HSE Document Review Facility Operating/Maintenance Records Review
1.4	For EU IDs 12 and 18, monitor, record, and report in accordance with Conditions 2 through 4.	Continuous	HSE Document Review
2	**Visible Emissions Monitoring.** When required by any of Condition 1.3 or 1.4, or in the event of replacement during the permit term, the Permittee shall observe the exhaust of EU IDs 11, 12, and 18 for visible emissions using either the Method 9 Plan under Condition 2.1 or the Smoke/No-Smoke Plan under Condition 2.2. The Permittee may change visible emissions plans for an emission unit at any time unless prohibited from doing so by Condition 2.3. The Permittee may, for each unit, elect to continue the visible emissions monitoring schedule in effect from a previous permit, if applicable.	Continuous	HSE Document Review Facility Operating/Maintenance Records Review
2.1, 2.1a	**Method 9 Plan.** For all 18-minute observations in this plan, observe exhaust, following 40 C.F.R. 60, Appendix A-4, Method 9, adopted by reference in 18 AAC 50.040(a), for 18 minutes to obtain 72 consecutive 15-second opacity observations. a. First Method 9 Observation. Except as provided in Condition 2.3.c(ii), for EU IDs 11, 12 and 18, observe exhaust for 18 minutes within six months after the issue date of this permit or during the next scheduled operation following issuance of this permit, whichever is later. For any unit, observe exhaust for 18 minutes within 14 calendar days after changing from the Smoke/No-Smoke Plan of Condition 2.2. (i) For any unit replaced during the term of this permit, observe exhaust for 18 minutes within 30 days of startup.	Continuous	HSE Document Review Facility Operating/Maintenance Records Review
2.1b	Monthly Method 9 Observations. After the first Method 9 observation, perform 18-minute observations at least once in each calendar month that an emission unit operates.	Continuous	HSE Document Review Three monthly visible emission observations were conducted on EU IDs 12 and 18 on 6/14/2017, 7/14/2017 and 8/16/2017.
2.1c	Semiannual Method 9 Observations. After observing emissions for three consecutive operating months under Condition 2.1.b, unless a six-minute average is greater than 15 percent and one or more observations are greater than 20 percent, perform 18-minute observations: (i) Within six months after the preceding observation, or (ii) For an emission unit with intermittent operations, during the next scheduled operation immediately following six months after the preceding observation.	Continuous	HSE Document Review Two semi-annual visible emission observations were conducted on EU IDs 12 and 18 on 2/8/2018 and 7/26/2018.
2.1d	Annual Method 9 Observations. After at least two semiannual 18-minute observations, unless a six-minute average is greater than 15 percent and one or more individual observations are greater than 20 percent, perform 18-minute observations: (i) Within twelve months after the preceding observation; or (ii) For an emission unit with intermittent operations, during the next scheduled operation immediately following twelve months after the preceding observation	Continuous	HSE Document Review One annual visible emission observation was conducted on EU IDs 12 and 18 on 8/14/19.
2.1e	Increased Method 9 Frequency. If a six-minute average opacity is observed during the most recent set of observations to be greater than 15 percent and one or more observations are greater than 20 percent, then increase or maintain the 18-minute observation frequency for that emission unit to at least monthly intervals as described in Condition 2.1.b, until the criteria in Condition 2.1.c for semiannual monitoring are met.	Continuous	HSE Document Review

Condition	Permit Condition	Compliance Status	Compliance Determination Method
2.2	**Smoke/No Smoke Plan.** Observe the exhaust for the presence or absence of visible emissions, excluding condensed water vapor. a. Initial Monitoring Frequency. Observe the exhaust during each calendar day that an emission unit operates. b. Reduced Monitoring Frequency. After the emission unit has been observed on 30 consecutive operating days, if the emission unit operated without visible smoke in the exhaust for those 30 days, then observe emissions at least once in every calendar month that an emission unit operates. c. Smoke Observed. If smoke is observed, either begin the Method 9 Plan of Condition 2.1 or perform the corrective action required under Condition 2.3	Continuous	Not Applicable Method 9 readings are used to determine compliance with the visible emission standard.
2.3	**Corrective Actions Based on Smoke/No Smoke Observations.** If visible emissions are present in the exhaust during an observation performed under the Smoke/No Smoke Plan of Condition 2.2, then the Permittee shall either follow the Method 9 plan of Condition 2.1 or a. initiate actions to eliminate smoke from the emission unit within 24 hours of the observation; b. keep a written record of the starting date, the completion date, and a description of the actions taken to reduce smoke; and c. after completing the actions required under Condition 2.3.a, (i) take smoke/no smoke observations in accordance with Condition 2.2. (A) at least once per day for the next seven operating days and until the initial 30 day observation period is completed; and (B) continue as described in Condition 2.2.b; or (ii) if the actions taken under Condition 2.3.a do not eliminate the smoke, or if subsequent smoke is observed under the schedule of Condition 2.3.c(i)(A), then observe the exhaust using the Method 9 Plan unless the Department gives written approval to resume observations under the Smoke/No Smoke Plan; after observing smoke and making observations under the Method 9 Plan, the Permittee may at any time take corrective action that eliminates smoke and restart the Smoke/No Smoke Plan under Condition 2.2.a.	Continuous	Not Applicable Method 9 readings are used to determine compliance with the visible emission standard.
3	**Visible Emissions Recordkeeping.** When required by any of Condition 1.3 or 1.4, or in the event of replacement of any of EU IDs 11, 12, and 18 during the permit term, the Permittee shall keep records as follows:	Continuous	HSE Document Review
3.1, 3.1a	If using the Method 9 Plan of Condition 2.1, a. the observer shall record (i) the name of the stationary source, emission unit and location, emission unit type, observer's name and affiliation, and the date on the Visible Emission Observation Form in Section 11; (ii) the time, estimated distance to the emissions location, sun location, approximate wind direction, estimated wind speed, description of the sky condition (presence and color of clouds), plume background, and operating rate (load or fuel consumption rate or best estimate if unknown) on the sheet at the time opacity observations are initiated and completed; (iii) the presence or absence of an attached or detached plume and the approximate distance from the emissions outlet to the point in the plume at which the observations are made; (iv) opacity observations to the nearest five percent at 15-second intervals on the Visible Emission Observation Form in Section 11, and (v) the minimum number of observations required by the permit; each momentary observation recorded shall be deemed to represent the average opacity of emissions for a 15-second period.	Continuous	HSE Document Review
3.1b, 3.1c	b. To determine the six-minute average opacity, divide the observations recorded on the record sheet into sets of 24 consecutive observations; sets need not be consecutive in time and in no case shall two sets overlap; for each set of 24 observations, calculate the average by summing the opacity of the 24 observations and dividing this sum by 24; record the average opacity on the sheet. c. Calculate and record the highest 6-minute and 18-consecutive-minute averages observed.	Continuous	HSE Document Review
3.2	If using the Smoke/No Smoke Plan of Condition 2.2, record the following information in a written log for each observation and submit copies of the recorded information upon request of the Department: a. the date and time of the observation; b. from Table A, the ID of the emission unit observed; c. whether visible emissions are present or absent in the exhaust; d. a description of the background to the exhaust during the observation; e. if the emission unit starts operation on the day of the observation, the startup time of the emission unit; f. name and title of the person making the observation; and g. operating rate (load or fuel consumption rate).	Continuous	Not Applicable Method 9 readings are used to determine compliance with the visible emission standard.

Condition	Permit Condition	Compliance Status	Compliance Determination Method
4	**Visible Emissions Reporting.** When required by any of Condition 1.3 or 1.4, or in the event of replacement of any of EU IDs 11, 12, and 18 during the permit term, the Permittee shall report visible emissions as follows:	Continuous	HSE Document Review
4.1	Include in each operating report required under Condition 63: a. which visible-emissions plan of Condition 2 was used for each emission unit; if more than one plan was used, give the time periods covered by each plan; b. for each emission unit under the Method 9 Plan, (i) copies of the observation results (i.e. opacity observations) for each emission unit that used the Method 9 Plan, except for the observations the Permittee has already supplied to the Department; and (ii) a summary to include: (A) number of days observations were made; (B) highest six-minute average observed; and (C) dates when one or more observed six-minute averages were greater than 20 percent; c. for each emission unit under the Smoke/No Smoke Plan, the number of days that smoke/no smoke observations were made and which days, if any, that smoke was observed; and d. a summary of any monitoring or recordkeeping required under Conditions 2 and 3 that was not done;	Continuous	HSE Document Review
4.2	Report under Condition 62: a. the results of Method 9 observations that exceed an average of 20 percent opacity for any six-minute period; and b. if any monitoring under Condition 2 was not performed when required, report within three days of the date the monitoring was required.	Continuous	HSE Document Review
5	**Industrial Process and Fuel-Burning Equipment Particulate Matter.** The Permittee shall not cause or allow particulate matter (PM) emitted from EU IDs 1 through 14, 17, and 18 listed in Table A to exceed 0.05 grains per cubic foot of exhaust gas corrected to standard conditions and averaged over three hours.	Continuous	HSE Document Review Facility Operating/Maintenance Records Review
5.1	For EU IDs 1 through 10, 13, and 14, use natural gas as primary fuel. Monitoring for these emission units shall consist of a statement in each operating report under Condition 63 indicating whether each of these EUs fired natural gas as the primary fuel during the period covered by the report. If exclusive operation on ULSD occurred during the period covered by the report, the Permittee shall monitor, record, and report according to Condition 9.	Continuous	HSE Document Review Facility Operating/Maintenance Records Review
5.2	For EU ID 17, burn only natural gas as fuel. Monitoring for this emission unit shall consist of a statement in each operating report under Condition 63 indication whether this emission unit fired only natural gas during the period covered by the report. Report under Condition 62 if any fuel other than natural gas is burned.	Continuous	HSE Document Review Facility Operating/Maintenance Records Review
5.3	For EU ID 11, as long as the emission unit does not exceed the operational hour limit in Condition 13, monitoring shall consist of an annual compliance certification under Condition 64 with the particulate matter standard. Otherwise, monitor, record and report particulate matter emissions in accordance with Conditions 6 through 8 for the remainder of the permit term.	Continuous	HSE Document Review Facility Operating/Maintenance Records Review
5.4	For EU IDs 12 and 18, monitor, record, and report in accordance with Conditions 6 through 8.	Continuous	HSE Document Review Facility Operating/Maintenance Records Review
6, 6.1	**Particulate Matter Monitoring for Diesel Engines.** When required by any of Condition 5.3 or 5.4, the Permittee shall conduct source tests on diesel engines, EU IDs 11, 12 and 18 to determine the concentration of particulate matter (PM) in the exhaust of an emission unit as follows: 6.1. Except as allowed under Condition 6.4, within six months of exceeding the criteria of Condition 6.2.a or 6.2.b, either a. conduct a PM source test according to requirements set out in Section 6; or b. make repairs so that emissions no longer exceed the criteria of Condition 6.2; to show that emissions are below those criteria, observe emissions as described in Condition 2.1 under load conditions comparable to those when the criteria were exceeded.	Continuous	HSE Document Review Facility Operating/Maintenance Records Review

Condition	Permit Condition	Compliance Status	Compliance Determination Method
6.2	Conduct the PM source test or make repairs according to Condition 6.1 if a. 18 consecutive minutes of Method 9 observations result in an 18-minute average opacity greater than 20 percent; or b. for an emission unit with an exhaust stack diameter that is less than 18 inches, 18 consecutive minutes of Method 9 observations result in an 18-minute average opacity that is greater than 15 percent and not more than 20 percent, unless the Department has waived this requirement in writing.	Continuous	HSE Document Review
6.3	During each one-hour PM source test run, observe the exhaust for 60 minutes in accordance with Method 9 and calculate the average opacity measured during each one-hour test run. Submit a copy of these observations with the source test report.	Continuous	HSE Document Review
6.4	The automatic PM source test requirement in Conditions 6.1 and 6.2 is waived for an emissions unit if a PM source test on that unit has shown compliance with the PM standard during this permit term.	Continuous	HSE Document Review
7	**Particulate Matter Recordkeeping for Diesel Engines.** Within 180 calendar days after the effective date of this permit, the Permittee shall record the exhaust stack diameter of EU IDs 11, 12 and 18. Report the stack diameter(s) in the next operating report under Condition 63.	Continuous	HSE Document Review The stack diameter was included in the 1H2017 facility operating report.
8, 8.1	**Particulate Matter Reporting for Diesel Engines.** The Permittee shall report as follows: 8.1. Report under Condition 62 a. the results of any PM source test that exceed the PM emissions limit; or b. if one of the criteria of Condition 6.2 was exceeded and the Permittee did not comply with either Condition 6.1.a or 6.1.b, this must be reported by the day following the day compliance with Condition 6.1 was required;	Continuous	HSE Document Review
8.2	Report observations in excess of the threshold of Condition 6.2.b within 30 days of the end of the month in which the observations occur.	Continuous	HSE Document Review
8.3	In each operating report under Condition 63, include: a. the dates, EU ID(s), and results when an observed 18-minute average was greater than an applicable threshold in Condition 6.2; b. a summary of the results of any PM testing under Condition 6; and c. copies of any visible emissions observation results (opacity observations) greater than the thresholds of Condition 6.2, if they were not already submitted.	Continuous	HSE Document Review
9	The Permittee shall monitor, record, and report the monthly hours of operation when operating exclusively on ULSD.	Continuous	HSE Document Review Facility Operating/Maintenance Records Review
9.1	For any of EU IDs 1 through 10, 13, and 14 that does not exceed 400 hours of operation per calendar year on ULSD, monitoring of compliance for visible and particulate matter emissions is not required for that EU and monitoring shall consist of an annual certification under Condition 64.	Continuous	HSE Document Review Facility Operating/Maintenance Records Review
9.2	For any of EU IDs 1 through 10, 13, and 14, notify the Department and begin monitoring the affected emission unit(s) according to Condition 9.3 no later than 15 days after the end of a calendar month in which the cumulative hours of operation for the calendar year exceed any multiple of 400 hours on ULSD exclusively. If the observation exceeds the limit in Condition 1, monitor as described in Condition 6. If the observation does not exceed the limit in Condition 1, no additional monitoring is required until the cumulative hours of operation exceed each subsequent multiple of 400 hours on ULSD during a calendar year.	Continuous	HSE Document Review Facility Operating/Maintenance Records Review
9.3	When required to do so by Condition 9.2, observe the exhaust, following 40 C.F.R. 60, Appendix A-4 Method 9, adopted by reference in 18 AAC 50.040(a), for 18-minutes to obtain 72 consecutive 15-second opacity observations.	Continuous	HSE Document Review
9.4	Keep records and report in accordance with Conditions 3, 4, 7, and/or 8, as applicable.	Continuous	HSE Document Review Facility Operating/Maintenance Records Review

Condition	Permit Condition	Compliance Status	Compliance Determination Method
9.5	Report under Condition 62 if the Permittee fails to comply with Condition 9.2, 9.3 or 9.4.	Continuous	HSE Document Review
10	**Sulfur Compound Emissions.** In accordance with 18 AAC 50.055(c), the Permittee shall not cause or allow sulfur compound emissions, expressed as SO_2, from EU IDs 1 through 14, 17, and 18 to exceed 500 ppm averaged over three hours.	Continuous	HSE Document Review Facility Operating/Maintenance Records Review
10.1	**Sulfur Compound MR&R for Oil-Fired Emission Units.** For EU IDs 1 through 10, 13, and 14 (when operating exclusively on ULSD) and EU IDs 11, 12, and 18, to ensure compliance with Condition 10, the Permittee shall comply with the fuel sulfur content limit and associated monitoring, recordkeeping, and reporting (MR&R) requirements in Condition 11.2.	Continuous	HSE Document Review Operating Practices Review
10.2	**Sulfur Compound MR&R for Gas-Fired Emission Units.** For EU IDs 1 through 10, 13, and 14 (when operating on natural gas) and EU ID 17, to ensure compliance with Condition 10, the Permittee shall comply with the fuel sulfur content limit and associated MR&R requirements in Condition 11.1.	Continuous	HSE Document Review Operating Practices Review
11	**Fuel Sulfur Requirements.** The Permittee shall monitor the sulfur content of the ULSD and hydrogen sulfide (H_2S) content of the natural gas burned as follows.	Continuous	HSE Document Review Facility Operating/Maintenance Records Review
11.1	The H_2S content of the natural gas burned in EU IDs 1 through 10, 13, 14, and 17 shall not exceed 20 parts per million by volume (ppmv). a. Monitor and record the H_2S content of the natural gas monthly by obtaining and keeping a current certified letter, valid purchase contract, tariff sheet, or transportation contract from the supplier stipulating that the natural gas supplied during the month does not contain more than 20 ppmv H_2S. b. Report in the operating report under Condition 63 the monthly H_2S content of the natural gas. Report under Condition 62 if the H_2S content of the natural gas exceeds 20 ppmv.	Continuous	HSE Document Review Facility Operating/Maintenance Records Review
11.2	The sulfur content of the diesel fuel burned in EU IDs 1 through 10, 13, and 14 (when burning diesel) and in EU IDs 11, 12, and 18 shall not exceed 15 parts per million by weight (ppmw) of sulfur. a. Monitor and record monthly the sulfur content of the diesel fuel burned by obtaining and keeping a current certified letter or fuel receipts from the diesel fuel supplier that the diesel fuel supplied during the month was ULSD. b. Report in the operating report under Condition 63 the type of diesel fuel received for each shipment. Report under Condition 62 if the fuel received was not ULSD.	Continuous	HSE Document Review Facility Operating/Maintenance Records Review
12	**Operational Hour Limits for EU IDs 1 through 10.** The Permittee shall limit the combined hours of operation of EU IDs 1 through 10 to no more than 1,680 hours per 12-month rolling period when firing ultra-low sulfur diesel (ULSD) exclusively.	Continuous	HSE Document Review Facility Operating/Maintenance Records Review
12.1	The Permittee shall burn only natural gas and ULSD in EU IDs 1 through 10.	Continuous	Operating Practices Review
12.2	Install and maintain a non-resettable hour meter on EU IDs 1 through 10.	Continuous	Facility Operating/Maintenance Records Review
12.3	Monitor and record the hours of operation each month for each of EU IDs 1 through 10 when firing ULSD exclusively.	Continuous	HSE Document Review Facility Operating/Maintenance Records Review
12.4	By the end of each calendar month, calculate and record the combined hours of operation for EU IDs 1 through 10 during the previous month, then calculate the 12-month rolling combined hours for EU IDs 1 through 10 when firing ULSD exclusively.	Continuous	HSE Document Review
12.5	Report in the operating report under Condition 63 the rolling 12-month combined hours of operation for EU IDs 1 through 10 when firing ULSD exclusively.	Continuous	HSE Document Review
12.6	Notify the Department under Condition 62 if the consecutive 12-month combined hours of operation for EU IDs 1 through 10, when firing ULSD exclusively, exceed 1,680 hours.	Continuous	HSE Document Review
13	**Operational Hour Limits for EU ID 11:** The Permittee shall limit the operation of EU ID 11 to no more than 500 hours per year.	Continuous	HSE Document Review Facility Operating/Maintenance Records Review
13.1	Install and maintain a non-resettable hour meter on EU ID 11.	Continuous	Facility Operating/Maintenance Records Review

Condition	Permit Condition	Compliance Status	Compliance Determination Method
13.2	Monitor and record the monthly hours of operation for EU ID 11.	Continuous	HSE Document Review Facility Operating/Maintenance Records Review
13.3	By the end of each month, calculate and record the operating hours of EU ID 11 for the previous month.	Continuous	HSE Document Review
13.4	Report in the operating report under Condition 63 the rolling 12-month hours of operation for EU ID 11.	Continuous	HSE Document Review
13.5	Notify the Department under Condition 62 if the rolling 12-month hours of operation for EU ID 11 exceed 500 hours.	Continuous	HSE Document Review
14	**Operational Hour Limits for EU IDs 13 and 14:** The Permittee shall limit the combined hours of operation of EU IDs 13 and 14 to no more than 1,000 hours per rolling 12-month period when firing ULSD exclusively.	Continuous	HSE Document Review Facility Operating/Maintenance Records Review
14.1	The Permittee shall fire only natural gas and ULSD in EU IDs 13 and 14.	Continuous	Operating Practices Review
14.2	Install and maintain a non-resettable hour meter on each of EU IDs 13 and 14.	Continuous	Facility Operating/Maintenance Records Review
14.3	Monitor and record the monthly operating hours for each of EU IDs 13 and 14 when firing ULSD exclusively.	Continuous	HSE Document Review Facility Operating/Maintenance Records Review
14.4	By the end of each month, calculate and record the combined operating hours of EU IDs 13 and 14 during the previous month, then calculate the rolling 12-month combined hours for EU IDs 13 and 14 when firing ULSD exclusively.	Continuous	HSE Document Review
14.5	Report in the operating report under Condition 63 the rolling 12-month combined operating hours for EU IDs 13 and 14 when firing ULSD exclusively.	Continuous	HSE Document Review
14.6	Notify the Department under Condition 62 if the rolling 12-month combined hours of operation for EU IDs 13 and 14, when firing ULSD exclusively, exceed 1,000 hours.	Continuous	HSE Document Review
15	**Control Equipment:** The Permittee shall operate and maintain a combined selective catalytic reduction (SCR) and catalytic oxidation (CATOX) control equipment downstream of each of EU IDs 1 through 10 according to the manufacturer's instructions and as follows:	Intermittent	HSE Document Review Facility Operating/Maintenance Records Review Operating Practices Review *See Condition 15.1a*
15.1, 15.1a	For the combined control equipment, while operating on natural gas, monitor and record hourly: a. the rate of injection of the reducing aqueous ammonia reagent into the flue gas leaving the emission unit. The 3-hour rolling average ammonia injection rate shall be no less than 1.0 gallons per hour (gal/hr) and no more than 38.5 gal/hr, except during startup and shutdown.	Continuous	HSE Document Review
15.1b	the temperature of the flue gas leaving the combined control equipment. The 3-hour rolling average temperature of the flue gas leaving the combined control equipment shall be no less than 536°F and no more than 997°F, except during startup and shutdown.	Continuous	HSE Document Review
15.1c	the pressure drop across the combined control equipment. The 3-hour rolling average pressure drop shall be no less than 1.5 inches of water and no more than 10 inches of water, except during startup and shutdown.	Intermittent	HSE Document Review One permit deviation occurred from 8/15/19 through 8/26/19 for a control equipment malfunction on EU ID 2 resulting in the inability to collect differential pressure data while EU was running.
15.2	Keep on site the necessary manufacturer-recommended spare parts, reagents, catalysts, and operation manual for the control equipment.	Continuous	Operating Practices Review

Condition	Permit Condition	Compliance Status	Compliance Determination Method
15.3	In case of equipment malfunction, implement manufacturer-recommended corrective actions and record: a. complete description of the corrective action; and b. date(s) of the corrective action	Continuous	HSE Document Review Facility Operating/Maintenance Records Review
15.4	Keep records of: a. all control equipment system repairs; b. hourly operating parameters established in Condition 15.1, dates and times each control equipment is started up or shut down; c. system alarm logs including time and date of occurrence; and d. receipts for all aqueous ammonia purchases (with dates and quantities).	Continuous	HSE Document Review Facility Operating/Maintenance Records Review
15.5	Report under Condition 62 all: a. control equipment malfunctions and associated corrective actions; b. operating parameters that are outside the ranges in Condition 15.1; and c. periods (starting and ending hour) during which a control equipment was not operating within the ranges established in Condition 15.1 while its associated generator was operating.	Continuous	HSE Document Review
16	**Formaldehyde (CH2O) Emission Limit:** The Permittee shall limit CH_2O emissions from EU IDs 1 through 10 while firing natural gas to no more than 9.6 tpy during any consecutive 12 months by operating and maintaining the control equipment as described in Condition 15.	Continuous	HSE Document Review Facility Operating/Maintenance Records Review Operating Practices Review
17	**Annual NO_2 Ambient Air Quality Protection:** To protect the annual NO_2 ambient air quality standard, the Permittee shall: 17.1. For EU IDs 1 through 10, the Permittee shall maintain a release height for each stack that equals or exceeds 30.0 meters above grade.	Continuous	Operating Practices Review
18	**Annual NO_2 and 24-hr PM-10 Ambient Air Quality Protection:** To protect the annual NO_2 and 24-hr PM-10, the combined operating hours for EU IDs 12 and 18 shall not exceed 1,000 hours per rolling 12-month period.	Continuous	HSE Document Review Facility Operating/Maintenance Records Review
18.1	Install and maintain a non-resettable hour meter on each of EU IDs 12 and 18.	Continuous	Facility Operating/Maintenance Records Review
18.2	Monitor and record the hours of operation of each emission unit and the combined hours of operation for EU IDs 12 and 18 for each month.	Continuous	HSE Document Review Facility Operating/Maintenance Records Review
18.3	At the end of each month, calculate and record for the previous month, the combined hours of operation for EU ID 12 and EU ID 18 during the month, then calculate the combined 12-month rolling total hours of operation by adding the hours of operation for the previous 11 months.	Continuous	HSE Document Review
18.4	Report in the operating report under Condition 63 the combined rolling 12-month hours of operation for EU IDs 12 and 18.	Continuous	HSE Document Review
18.5	Notify the Department under Condition 62 should the combined consecutive 12-month operating hours for EU IDs 12 and 18 exceed 1,000 hours.	Continuous	HSE Document Review
19, 19.1	For emission units at the stationary source that are insignificant as defined in 18 AAC 50.326(d)-(i) that are not listed in this permit, the following apply: 19.1. The Permittee shall not cause or allow visible emissions, excluding condensed water vapor, emitted from an industrial process, fuel-burning equipment, or an incinerator to reduce visibility through the exhaust effluent by more than 20 percent averaged over any six consecutive minutes.	Continuous	HSE Document Review Facility Operating/Maintenance Records Review
19.2	The Permittee shall not cause or allow particulate matter emitted from an industrial process or fuel-burning equipment to exceed 0.05 grains per cubic foot of exhaust gas corrected to standard conditions and averaged over three hours.	Continuous	HSE Document Review Facility Operating/Maintenance Records Review
19.3	The Permittee shall not cause or allow sulfur compound emissions, expressed as SO_2, from an industrial process or fuel-burning equipment, to exceed 500 ppm averaged over three hours.	Continuous	HSE Document Review Facility Operating/Maintenance Records Review

Condition	Permit Condition	Compliance Status	Compliance Determination Method
19.4	General MR&R for Insignificant Emission Units a. The Permittee shall submit the certification of compliance of Condition 64 based on reasonable inquiry; b. The Permittee shall comply with the requirements of Condition 45; c. The Permittee shall report in the operating report required under Condition 63 if an emission unit is insignificant because of actual emissions less than the thresholds of 18 AAC 50.326(e) and actual emissions become greater than any of those thresholds; and d. No other monitoring, recordkeeping or reporting is required.	Continuous	HSE Document Review Facility Operating/Maintenance Records Review
Section 4. Federal Requirements			
20	**NSPS Subpart A Notification.** For any affected facility or existing facility regulated under NSPS requirements in 40 C.F.R. 60, the Permittee shall furnish the Department and EPA written notification or, if acceptable to both the EPA and the Permittee, electronic notification as follows:	Continuous	HSE Document Review
20.1	A notification of the date that construction (or reconstruction as defined under 40 C.F.R. 60.15) of an affected facility is commenced postmarked no later than 30 days after such date. This requirement shall not apply in the case of mass-produced facilities which are purchased in complete form.	Continuous	HSE Document Review
20.2	A notification of the actual date of initial startup of an affected facility postmarked within 15 days after such date.	Continuous	HSE Document Review
20.3	A notification of any physical or operational change to an existing facility which may increase the emission rate of any air pollutant to which a standard applies unless that change is specifically exempted under an applicable subpart or in 40 C.F.R. 60.14(e). This notice shall be postmarked 60 days or as soon as practicable before the change is commenced and shall include: a. information describing the precise nature of the change, b. present and proposed emission control systems, c. productive capacity of the facility before and after the change, and d. the expected completion date of the change;	Continuous	HSE Document Review
20.4	A notification of the date upon which demonstration of the continuous monitoring system performance commences in accordance with 40 C.F.R. 60.13(c). Notification shall be postmarked not less than 30 days prior to such date.	Continuous	HSE Document Review
20.5	A notification of the anticipated date for conducting the opacity observations required by 40 C.F.R. 60.11(e)(1). The notifications shall also include, if appropriate, a request for the EPA to provide a visible emissions reader during a performance test. The notification shall be postmarked not less than 30 days prior to such date.	Continuous	HSE Document Review
20.6	If an owner or operator of an existing facility proposes to replace components, and the fixed capital cost of the new components exceeds 50 percent of the fixed capital cost that would be required to construct a comparable entirely new facility, he shall notify EPA and the Department of the proposed replacements. The notice must be postmarked as soon as practicable, but no less than 60 days before commencement of replacement, and must include the following information: a. name and address of owner or operator, b. the location of the existing facility, c. a brief description of the existing facility and the components that are to be replaced, d. a description of the existing and proposed air pollution control equipment, e. an estimate of the fixed capital cost of the replacements, and of constructing a comparable entirely new facility, f. the estimated life of the existing facility after the replacements, and g. a discussion of any economic or technical limitations the facility may have in complying with the applicable standards of performance after the proposed replacements.	Continuous	HSE Document Review
21	**NSPS Subpart A Startup, Shutdown, & Malfunction Requirements.** The Permittee shall maintain records of the occurrence and duration of any start-up, shutdown, or malfunction in the operation of EU ID(s) 1 through 14 and 18, any malfunction of the air-pollution control equipment, or any periods during which a continuous monitoring system or monitoring device for EU ID(s) 1 through 14 and 18 is inoperative.	Continuous	HSE Document Review Facility Operating/Maintenance Records Review
22	**NSPS Subpart A Performance (Source) Tests.** The Permittee shall conduct source tests according to Section 6 and as required in this condition on any affected facility.	Continuous	HSE Document Review Source tests were conducted on EU IDs 7 and 8 on June 25, 2019.
22.1	Except as specified in paragraphs (a)(1), (a)(2), (a)(3), and (a)(4) of 40 C.F.R. 60.8, within 60 days after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial startup of such facility, or at such other times specified by 40 C.F.R. Part 60, and at such other times as may be required by EPA, the owner or operator of such facility shall conduct performance test(s) and furnish EPA and the Department a written report of the results of such performance test(s).	Continuous	HSE Document Review Source tests were conducted on EU IDs 7 and 8 on June 25, 2019.

Condition	Permit Condition	Compliance Status	Compliance Determination Method
22.2	Conduct source tests and reduce data as set out in 40 C.F.R. 60.8(b), and provide the Department copies of any EPA waivers or approvals of alternative methods.	Continuous	HSE Document Review
22.3	Conduct source tests under conditions specified by EPA to be based on representative performance of EU ID(s) 1 through 10. Operations during periods of startup, shutdown, and malfunction shall not constitute representative conditions for the purpose of a performance test nor shall emissions in excess of the level of the applicable emission limit during periods of startup, shutdown, and malfunction be considered a violation of the applicable emission limit unless otherwise specified in the applicable standard.	Continuous	HSE Document Review Source tests were conducted on EU IDs 7 and 8 on June 25, 2019.
22.4	Provide the EPA and the Department at least 30 days prior notice of any performance test, except as specified under other subparts, to afford the EPA and the Department the opportunity to have an observer present. If after a 30 day notice for an initially scheduled performance test, there is a delay (due to operational problems, etc.) in conducting the scheduled performance test, the Permittee shall notify the EPA and the Department as soon as possible of any delay in the original test date, either by providing at least 7 days prior notice of the rescheduled date of the performance test, or by arranging a rescheduled date with the EPA and the Department by mutual agreement.	Continuous	HSE Document Review One source test notification was submitted for EU IDs 7 and 8 on 5/22/2019.
22.5	Provide or cause to be provided, performance testing facilities as follows: a. Sampling ports adequate for test methods applicable to EU ID(s) 1 through 14 and 18. This includes (i) constructing the air pollution control system such that volumetric flow rates and pollutant emission rates can be accurately determined by applicable test methods and procedures and (ii) providing a stack or duct free of cyclonic flow during performance tests, as demonstrated by applicable test methods and procedures. b. Safe sampling platform(s), c. Safe access to sampling platform(s), and d. Utilities for sampling and testing equipment.	Continuous	HSE Document Review Operating Practices Review Source tests were conducted on EU IDs 7 and 8 on June 25, 2019.
22.6	Unless otherwise specified in the applicable subpart, each performance test shall consist of three separate runs using the applicable test method. Each run shall be conducted for the time and under the conditions specified in the applicable standard. For the purpose of determining compliance with an applicable standard, the arithmetic means of results of the three runs shall apply. In the event that a sample is accidentally lost or conditions occur in which one of the three runs must be discontinued because of forced shutdown, failure of an irreplaceable portion of the sample train, extreme meteorological conditions, or other circumstances, beyond the owner or operator's control, compliance may, upon the EPA's approval, be determined using the arithmetic mean of the results of the two other runs.	Continuous	HSE Document Review Source tests were conducted on EU IDs 7 and 8 on June 25, 2019.
23	**NSPS Subpart A Good Air Pollution Control Practice.** At all times, including periods of startup, shutdown, and malfunction, the Permittee shall, to the extent practicable, maintain and operate EU ID(s) 13 and 14 including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions. The Administrator will determine whether acceptable operating and maintenance procedures are being used based on information available, which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance records, and inspections of EU ID(s) 13 and 14.	Continuous	Facility Operating/Maintenance Records Review
24	**NSPS Subpart A Credible Evidence.** For the purpose of submitting compliance certifications or establishing whether or not the Permittee has violated or is in violation of the standards set forth in Condition 26, 27, or 28 nothing in 40 C.F.R. Part 60 shall preclude the use, including the exclusive use, of any credible evidence or information, relevant to whether EU IDs 1 through 14 and 18 would have been in compliance with applicable requirements of 40 C.F.R. Part 60 if the appropriate performance or compliance test or procedure had been performed.	Continuous	Advisory Provision
25	**NSPS Subpart A Concealment of Emissions.** The Permittee shall not build, erect, install, or use any article, machine, equipment or process, the use of which conceals an emission which would otherwise constitute a violation of a standard set forth in Condition 26, 27, or 28. Such concealment includes, but is not limited to, the use of gaseous diluents to achieve compliance with an opacity standard or with a standard that is based on the concentration of a pollutant in the gases discharged to the atmosphere.	Continuous	Facility Operating/Maintenance Records Review Operating Practices Review
26	For EU IDs 13 and 14, the Permittee shall comply with any applicable requirement in 40 C.F.R. 60 Subpart Dc for small steam generating units for which construction is commenced after June 9, 1989 and that has a maximum design capacity of 100 MMBtu/hr or less but greater than or equal to 10 MMBtu/hr.	Continuous	HSE Document Review Facility Operating/Maintenance Records Review Operating Practices Review

Matanuska Electric Association, Inc. - Eklutna Generation Station
2019 Annual Compliance Certification
Air Quality Operating Permit No. AQ1086TVP01
Reporting Period: January 1, 2019 to December 31, 2019

Condition	Permit Condition	Compliance Status	Compliance Determination Method
26.1	At all times, including periods of startup, shutdown, and malfunction, when EU IDs 13 and 14 combust fuel oil, the Permittee shall either: a. emit no more than 0.5 lb SO_2/MMBtu (215 ng/J) heat input from fuel oil combusted, or b. combust fuel oil that contains no more than 0.5 percent sulfur by weight.	Continuous	HSE Document Review Facility Operating/Maintenance Records Review Operating Practices Review
26.2	Compliance with the emission limits or fuel oil sulfur limits under Condition 26.1 shall be determined based on a certification from the fuel supplier and demonstrated by complying with Condition 11.2.	Continuous	HSE Document Review Facility Operating/Maintenance Records Review
26.3	The Permittee shall maintain records consistent with Condition 58 and shall submit reports to EPA as follows: a. Include the calendar dates covered in the reporting period and a certified statement signed by the owner or operator of the affected facility that the records of fuel supplier certifications submitted represent all of the fuel combusted during the reporting period. b. Fuel supplier certification shall include the following information: (i) The name of the oil supplier; (ii) A statement from the oil supplier that the oil complies with the specifications under the definition of distillate oil in 40 C.F.R. 60.41c; and (iii) The sulfur content or maximum sulfur content of the oil. c. The reporting period for the reports required under Condition 26.3 is each six month period. All reports shall be submitted to the EPA and shall be postmarked by the 30th day following the end of the reporting period.	Continuous	HSE Document Review
26.4	Except as provided under Condition 26.5, for each of EU IDs 13 and 14, the Permittee shall record the amount of each fuel combusted during each operating day and maintain the records consistent with Condition 58.	Continuous	HSE Document Review Facility Operating/Maintenance Records Review
26.5	As an alternative to meeting the requirements of Condition 26.4, the Permittee may elect to record and maintain records of the amount of each fuel combusted during each calendar month.	Continuous	HSE Document Review Facility Operating/Maintenance Records Review
27	For EU IDs 11, 12, and 18, listed in Table A, the Permittee shall comply with all applicable requirements in 40 C.F.R. 60 Subpart IIII for stationary compression ignition (CI) internal combustion engine (ICE) whose construction commences after July 11, 2005 where the stationary CI ICE is manufactured after April 1, 2006 (for emergency units, EU IDs 12 and 18) and manufactured as a certified National Fire Protection Association (NFPA) fire pump engine after July 1, 2006 (for fire pump engine, EU ID 11).	Continuous	HSE Document Review Facility Operating/Maintenance Records Review Operating Practices Review
27.1	Comply with the applicable requirements of 40 C.F.R. 60.4208 for importing or installing stationary CI ICE.	Continuous	Facility Operating/Maintenance Records Review
27.2	Except as permitted under Condition 27.3, operate and maintain the stationary CI ICE and control device according to the manufacturer's written instructions over the entire life of the engine. In addition, the Permittee may only change those settings that are permitted by the manufacturer.	Continuous	Operating Practices Review
27.3	If you do not install, configure, operate, and maintain your engine and control device according to the manufacturer's emission-related written instructions, or you change emission-related settings in a way that is not permitted by the manufacturer, you must demonstrate compliance as follows: a. For EU IDs 11, 12, and 18, you must keep a maintenance plan and records of conducted maintenance and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions. In addition, you must conduct an initial performance test to demonstrated compliance with the applicable emission standards within 1 year of startup, or within 1 year after an engine and control device is no longer installed, configured, operated, and maintained in accordance with the manufacturer's emission-related written instructions, or within 1 year after you change emission-related settings in a way that is not permitted by the manufacturer. b. For EU IDs 12 and 18, conduct subsequent performance testing every 8,760 hours of engine operation or 3 years, whichever comes first, thereafter to demonstrate compliance with the applicable emission standards.	Continuous	Operating Practices Review

Condition	Permit Condition	Compliance Status	Compliance Determination Method
27.4	Operate EU IDs 11, 12, and 18 according to the requirements in 40 C.F.R. 60.4211(f)(1) through 40 C.F.R. 60.4211(f)(3). In order for the engine to be considered an emergency stationary ICE under NSPS Subpart IIII, any operation other than emergency operation, maintenance and testing, emergency demand response, and operation in non-emergency situations for 50 hours per year, as described in 40 C.F.R. 60.4211(f)(1) through 40 C.F.R. 60.4211(f)(3), is prohibited. If you do not operate the engine according to the requirements in 40 C.F.R. 60.4211(f)(1) through 40 C.F.R. 60.4211(f)(3), the engine will not be considered an emergency engine under 40 C.F.R. 60 Subpart IIII and must meet all requirements for non-emergency engines.	Continuous	HSE Document Review Facility Operating/Maintenance Records Review Operating Practices Review
27.5	Comply with the applicable provisions of NSPS Subpart A as specified in Table 8 to Subpart IIII.	Continuous	HSE Document Review
27.6	For EU IDs 11, 12, and 18, the Permittee must use diesel fuel that meets the requirements of 40 C.F.R. 80.510(b) for nonroad diesel fuel with the following specifications: a. a maximum sulfur content of 15 ppmw, b. cetane index or aromatic content, as follows (i) a minimum cetane number of 40, or (ii) a maximum aromatic content of 35 percent by volume.	Continuous	HSE Document Review Facility Operating/Maintenance Records Review
27.7	The Permittee shall comply with the emission standards in Conditions 27.8 and 27.9 by purchasing an engine certified according to the emission standards specified in 40 C.F.R. 60.4205(b) (for EU IDs 12 and 18) and 60.4205(c) (for EU ID 11), as applicable, for the same model year and maximum (or in the case of fire pumps, NFPA nameplate) engine power. The engine must be installed and configured according to the manufacturer's emission-related specifications, except as permitted under Condition 27.3.10.	Continuous	HSE Document Review Facility Operating/Maintenance Records Review
27.8	For EU IDs 12 and 18, the Permittee shall not exceed the following applicable exhaust emission standards for new nonroad CI engines in 40 C.F.R. 89.112 and 89.113 for all pollutants, for the same displacement and maximum engine power (i.e., Tier 2 emission standards): a. 6.4 g/kW-hr for NMHC + NO_X; b. 3.5 g/KW-hr for CO; c. 0.2 g/kW-hr for PM; and d. Exhaust opacity from EU IDs 12 and 18 must not exceed: (i) 20 percent during the acceleration mode; (ii) 15 percent during the lugging mode; and (iii) 50 percent during the peaks in either the acceleration or lugging modes.	Continuous	HSE Document Review Facility Operating/Maintenance Records Review
27.9	For EU ID 11, the Permittee shall comply with the applicable emission standards in Table 4 to NSPS Subpart IIII, for all pollutants. a. 4.0 g/kW-hr for NMHC + NO_X; b. 3.5 g/kW-hr for CO; and c. 0.20 g/kW-hr for PM	Continuous	HSE Document Review Facility Operating/Maintenance Records Review
27.10	For EU IDs 11, 12, and 18, the Permittee shall meet the monitoring and recordkeeping requirements as follows: a. If you are an owner or operator of an emergency stationary CI internal combustion engine that does not meet the standards applicable to non-emergency engines, you must install a non-resettable hour meter prior to startup of the engine, if one is not already installed. b. If you are an owner or operator of an emergency stationary CI internal combustion engine equipped with a diesel particulate filter to comply with the emission standards in Conditions 27.7 and 27.9, the diesel particulate filter must be installed with a backpressure monitor that notifies the owner or operator when the high backpressure limit of the engine is approached. (i) Keep records of any corrective action taken after the backpressure monitor has notified the owner or operator that the high backpressure limit of the engine is approached. c. If the emergency engine does not meet the standards applicable to non-emergency engines in the applicable model year, the owner or operator must keep records of the operation of the engine in emergency and non-emergency service that are recorded through the non-resettable hour meter. The owner must record the time of operation of the engine and the reason the engine was in operation during that time.	Continuous	HSE Document Review Facility Operating/Maintenance Records Review
27.11	Include with the operating report under Condition 63 records of the operational hours and the reason the engine was in operation as required in Condition 27.10.c for the period covered by the report.	Continuous	HSE Document Review
27.12	Report in accordance with Condition 62 if any of the requirements in Conditions 27.1 through 27.10 were not met.	Continuous	HSE Document Review
28	For EU IDs 1 through 10, the Permittee shall comply with all applicable requirements of NSPS Subpart JJJJ for stationary spark ignition (SI) internal combustion engine whose construction, modification, or reconstruction commences after June 12, 2006.	Continuous	HSE Document Review Facility Operating/Maintenance Records Review Operating Practices Review

Condition	Permit Condition	Compliance Status	Compliance Determination Method
28.1	Operate and maintain stationary SI ICE that achieve the emission standards as required in Condition 28.4 over the entire life of the engine.	Continuous	HSE Document Review Facility Operating/Maintenance Records Review Operating Practices Review
28.2	Comply with the applicable provisions of NSPS Subpart A as specified in Table 3 to Subpart JJJJ.	Continuous	HSE Document Review Facility Operating/Maintenance Records Review
28.3	For EU ID 1 through 10, the Permittee shall comply with the following: a. You must keep a maintenance plan and records of conducted maintenance and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions. In addition, you must conduct an initial performance test within 1 year of engine startup and conduct subsequent performance testing every 8,760 hours or 3 years, whichever comes first, thereafter to demonstrate compliance with the emission standards in Condition 28.4.	Continuous	HSE Document Review Facility Operating/Maintenance Records Review EPA Engine Testing Waiver Source tests were conducted on EU IDs 7 and 8 on 6/25/2019.
28.4	For EU IDs 1 through 10, the Permittee must meet the following emission standards: a. 1.0 g/hp-hr (82 ppmvd at 15 percent O_2) for NO_X b. 2.0 g/hp-hr (270 ppmvd at 15 percent O_2) for CO c. 0.7 g/hp-hr (60 ppmvd at 15 percent O_2) for VOC	Continuous	HSE Document Review Facility Operating/Maintenance Records Review
28.5, 28.5a, 28.5a(i), 28.5a(ii), 28.5a(iii)	For EU ID 1 through 10, the Permittee shall comply with the following: a. Owners and operators of stationary SI ICE who conduct performance tests must follow the procedures in Conditions 28.5.a(i) through 28.5.a(vii) below. (i) Each performance test must be conducted within 10 percent of 100 percent peak (or the highest achievable) load and according to the requirements in 40 C.F.R. 60.8 and under the specific conditions that are specified by Table 2 to NSPS Subpart JJJJ. (ii) You may not conduct performance tests during periods of startup, shutdown, or malfunction, as specified in 40 C.F.R. 60.8(c). If your stationary SI internal combustion engine is non-operational, you do not need to startup the engine solely to conduct a performance test; however, you must conduct the performance test immediately upon startup of the engine. (iii) You must conduct three separate test runs for each performance test required in this section, as specified in 40 C.F.R. 60.8(f). Each test run must be conducted within 10 percent of 100 percent peak (or the highest achievable) load and last at least 1 hour.	Continuous	HSE Document Review Source tests were conducted on EU IDs 7 and 8 on 6/25/2019.
28.5a(iv), 28.5(v), 28.5(vi), 28.5(vii)	(iv) To determine compliance with the NO_X mass per unit output emission limitation, convert the concentration of NO_X in the engine exhaust using Equation 1 of 40 C.F.R. 60.4244. (v) To determine compliance with the CO mass per unit output emission limitation, convert the concentration of CO in the engine exhaust using Equation 2 of 40 C.F.R. 60.4244. (vi) For purposes of NSPS Subpart JJJJ, when calculating emissions of VOC, emissions of formaldehyde should not be included. To determine compliance with the VOC mass per unit output emission limitation, convert the concentration of VOC in the engine exhaust using Equation 3 of 40 C.F.R. 60.4244. (vii) If the owner/operator chooses to measure VOC emissions using either Method 18 of 40 CFR part 60, appendix A, or Method 320 of 40 CFR part 63, appendix A, then it has the option of correcting the measured VOC emissions to account for the potential differences in measured values between these methods and Method 25A. The results from Method 18 and Method 320 can be corrected for response factor differences using Equations 4 and 5 of 40 C.F.R. 60.4244. The corrected VOC concentration can then be placed on a propane basis using Equation 6 of 40 C.F.R. 60.4244.	Continuous	HSE Document Review Source tests were conducted on EU IDs 7 and 8 on 6/25/2019.

Condition	Permit Condition	Compliance Status	Compliance Determination Method
28.6	For EU ID 1 through 10, the Permittee must meet the following notification, reporting and recordkeeping requirements. a. Owners and operators of all stationary SI ICE must keep records of the information in Conditions 28.6.a(i) through 28.6.a(iii) of this permit. (i) All notifications submitted to comply with NSPS Subpart JJJJ and all documentation supporting any notification. (ii) Maintenance conducted on the engine. (iii) If the stationary SI ICE is not a certified engine, documentation that the engine meets the emission standards. b. Owners and operators of stationary SI ICE that are subject to performance testing must submit a copy of each performance test as conducted in Condition 28.6.a within 60 days after the test has been completed. Performance test reports using EPA Method 18, EPA Method 320, or ASTM D6348-03 (incorporated by reference - see 40 CFR 60.17) to measure VOC require reporting of all QA/QC data. For Method 18, report results from sections 8.4 and 11.1.1.4; for Method 320, report results from sections 8.6.2, 9.0, and 13.0; and for ASTM D6348-03 report results of all QA/QC procedures in Annexes 1-7.	Continuous	HSE Document Review
28.7	Report in accordance with Condition 62 if any of the requirements in Conditions 28.1 through 28.6 were not met.	Continuous	HSE Document Review
29	**NESHAP Subpart ZZZZ Applicability.** For EU IDs 1 through 12 and 18, the Permittee shall comply with all applicable requirements of NESHAP Subpart ZZZZ for stationary reciprocating internal combustion engines (RICE) located at an area source of hazardous air pollutant (HAP) emissions.	Continuous	HSE Document Review Facility Operating/Maintenance Records Review Operating Practices Review
29.1	For EU IDs 11, 12, and 18, the Permittee shall meet the requirements of 40 C.F.R. 63 by meeting the requirements of 40 C.F.R. 60 Subpart IIII, for CI ICE, as set out in Conditions 27.1 through 27.12. No further requirements apply for EU IDs 11, 12, and 18 under 40 C.F.R. 63.	Continuous	HSE Document Review
29.2	For EU IDs 1 through 10, the Permittee shall meet the requirements of 40 C.F.R. 63 by meeting the requirements of 40 C.F.R. 60 Subpart JJJJ, for SI ICE, as set out in Conditions 28.1 through 28.6. No further requirements apply for EU IDs 1 through 10 under 40 C.F.R. 63.	Continuous	HSE Document Review
30	The Permittee shall comply with the requirements set forth in 40 C.F.R. 61.145, 61.150, and 61.152 of Subpart M, and the applicable sections set forth in 40 C.F.R. 61, Subpart A and Appendix A.	Continuous	HSE Document Review
31	The Permittee shall comply with the standards for recycling and emission reduction of refrigerants set forth in 40 C.F.R. 82, Subpart F.	Continuous	Facility Operating/Maintenance Records Review Operating Practices Review
32	The Permittee shall comply with the applicable prohibitions set out in 40 C.F.R. 82.174 (b)-(d) (Protection of Stratospheric Ozone Subpart G – Significant New Alternatives Policy Program).	Continuous	Facility Operating/Maintenance Records Review Operating Practices Review
33	The Permittee shall comply with the applicable prohibitions set out in 40 C.F.R. 82.270 (b)-(f) (Protection of Stratospheric Ozone Subpart H – Halon Emission Reduction).	Continuous	Facility Operating/Maintenance Records Review Operating Practices Review
34	**NESHAP Applicability Determinations.** The Permittee shall determine rule applicability and designation of affected sources under National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Source Categories (40 C.F.R. 63) in accordance with the procedures described in 40 C.F.R. 63.1(b) and 63.10(b)(3). If a source becomes affected by an applicable subpart of 40 C.F.R. 63, the Permittee shall comply with such standard by the compliance date established by the Administrator in the applicable subpart, in accordance with 40 C.F.R. 63.6(c).	Continuous	HSE Document Review
34.1	After the effective date of any relevant standard promulgated by the Administrator under this part, an owner or operator who constructs a new affected source that is not major-emitting or reconstructs an affected source that is not major-emitting that is subject to such standard, or reconstructs a source such that the source becomes an affected source subject to the standard, must notify the Administrator and the Department of the intended construction or reconstruction. The notification must be submitted in accordance with the procedures in 40 C.F.R. 63.9(b).	Continuous	HSE Document Review

Condition	Permit Condition	Compliance Status	Compliance Determination Method
35	**NSPS and NESHAP Reports.** The Permittee shall: 35.1. **Reports:** Except for federal reports and notices submitted through EPA's CDX/CEDRI on-line reporting system, attach to the operating report required under Condition 63 for the period covered by the report, a copy of any NSPS and NESHAPs reports submitted to the U.S. Environmental Protection Agency (EPA) Region 10; and 35.2. **Waivers:** Upon request by the Department, provide a written copy of any EPA-granted alternative monitoring requirement, custom monitoring schedule or waiver of the federal emission standards, recordkeeping, monitoring, performance testing, or reporting requirements. The Permittee shall keep a copy of each U.S. EPA issued monitoring waiver or custom monitoring schedule with the permit.	Continuous	HSE Document Review
Section 5. General Conditions			
36	Each permit term and condition is independent of the permit as a whole and remains valid regardless of a challenge to any other part of the permit.	Continuous	Advisory Provision
37	The permit may be modified, reopened, revoked and reissued, or terminated for cause. A request by the Permittee for modification, revocation and re-issuance, or termination or a notification of planned changes or anticipated noncompliance does not stay any permit condition.	Continuous	Advisory Provision
38	The permit does not convey any property rights of any sort, nor any exclusive privilege.	Continuous	Advisory Provision
39	**Administration Fees.** The Permittee shall pay to the Department all assessed permit administration fees. Administration fee rates are set out in 18 AAC 50.400-403.	Continuous	Accounting Records Review
40	**Assessable Emissions.** The Permittee shall pay to the Department annual emission fees based on the stationary source's assessable emissions as determined by the Department under 18 AAC 50.410. The assessable emission fee rate is set out in 18 AAC 50.410. The Department will assess fees per ton of each air pollutant that the stationary source emits or has the potential to emit in quantities 10 tons per year or greater. The quantity for which fees will be assessed is the lesser of 40.1. the stationary source's assessable potential to emit of 796 tpy; or 40.2. the stationary source's projected annual rate of emissions that will occur from July 1 to the following June 30, based upon credible evidence of actual annual emissions emitted during the most recent calendar year or another 12-month period approved in writing by the Department, when demonstrated by the most representative of one or more of the following methods: a. an enforceable test method described in 18 AAC 50.220; b. material balance calculations; c. emission factors from EPA's publication AP-42, Vol. I, adopted by reference in 18 AAC 50.035; or d. other methods and calculations approved by the Department, including appropriate vendor-provided emissions factors when sufficient documentation is provided.	Continuous	Accounting Records Review
41	**Assessable Emission Estimates.** Emission fees will be assessed as follows: 41.1. no later than March 31 of each year, the Permittee may submit an estimate of the stationary source's assessable emissions to ADEC, Air Permits Program, ATTN: Assessable Emissions Estimate, 410 Willoughby Ave., P.O. Box 111800, Juneau, AK 99811-1800; the submittal must include all of the assumptions and calculations used to estimate the assessable emissions in sufficient detail so the Department can verify the estimates; or 41.2. if no estimate is submitted on or before March 31 of each year, emission fees for the next fiscal year will be based on the potential to emit set out in Condition 40.1.	Continuous	HSE Document Review
42	**Good Air Pollution Control Practice.** The Permittee shall do the following for EU IDs 13, 14, and 17: 42.1. perform regular maintenance considering the manufacturer's or the operator's maintenance procedures; 42.2. keep records of any maintenance that would have a significant effect on emissions; the records may be kept in electronic format; and 42.3. keep a copy of either the manufacturer's or the operator's maintenance procedures.	Continuous	HSE Document Review Facility Operating/Maintenance Records Review
43	**Dilution.** The Permittee shall not dilute emissions with air to comply with this permit. Monitoring shall consist of an annual certification that the Permittee does not dilute emissions to comply with this permit.	Continuous	Operating Practices Review
44	**Stack Injection.** The Permittee shall not release materials other than process emissions, products of combustion, or materials introduced to control pollutant emissions from a stack at a source constructed or modified after November 1, 1982, except as authorized by a construction permit, Title V permit, or air quality control permit issued before October 1, 2004.	Continuous	Operating Practices Review
45	**Air Pollution Prohibited.** No person may permit any emission which is injurious to human health or welfare, animal or plant life, or property, or which would unreasonably interfere with the enjoyment of life or property.	Continuous	Operating Practices Review

Condition	Permit Condition	Compliance Status	Compliance Determination Method
45.1	Monitoring, Recordkeeping, and Reporting for Condition 45: a. If emissions present a potential threat to human health or safety, the Permittee shall report any such emissions according to Condition 62. b. As soon as practicable after becoming aware of a complaint that is attributable to emissions from the stationary source, the Permittee shall investigate the complaint to identify emissions that the Permittee believes have caused or are causing a violation of Condition 45.	Continuous	HSE Document Review
45.2	The Permittee shall initiate and complete corrective action necessary to eliminate any violation identified by a complaint or investigation as soon as practicable if a. after an investigation because of a complaint or other reason, the Permittee believes that emissions from the stationary source have caused or are causing a violation of Condition 45; or b. the Department notifies the Permittee that it has found a violation of Condition 45.	Continuous	HSE Document Review Facility Operating/Maintenance Records Review
45.3	The Permittee shall keep records of a. the date, time, and nature of all emissions complaints received; b. the name of the person or persons that complained, if known; c. a summary of any investigation, including reasons the Permittee does or does not believe the emissions have caused a violation of Condition 45; and d. any corrective actions taken or planned for complaints attributable to emissions from the stationary source.	Continuous	HSE Document Review Facility Operating/Maintenance Records Review
45.4	With each operating report under Condition 63, the Permittee shall include a brief summary report which must include a. the number of complaints received; b. the number of times the Permittee or the Department found corrective action necessary; c. the number of times action was taken on a complaint within 24 hours; and d. the status of corrective actions the Permittee or Department found necessary that were not taken within 24 hours.	Continuous	HSE Document Review
45.5	The Permittee shall notify the Department of a complaint that is attributable to emissions from the stationary source within 24 hours after receiving the complaint, unless the Permittee has initiated corrective action within 24 hours of receiving the complaint.	Continuous	HSE Document Review
46	**Technology-Based Emission Standard.** If an unavoidable emergency, malfunction, or nonroutine repair, as defined in 18 AAC 50.235(d), causes emissions in excess of a technology-based emission standard listed in Condition 26, 27, 28, or 31 (refrigerants), the Permittee shall take all reasonable steps to minimize levels of emissions that exceed the standard. Excess emissions reporting under Condition 62 requires information on the steps taken to minimize emissions. Monitoring of compliance for this condition consists of the report required under Condition 62.	Continuous	HSE Document Review Operating Practices Review
47	**Open Burning.** If the Permittee conducts open burning at this stationary source, the Permittee shall comply with the requirements of 18 AAC 50.065. 47.1. The Permittee shall keep written records to demonstrate that the Permittee complies with the limitations in this condition and the requirements of 18 AAC 50.065. Upon request by the Department, submit copies of the records. 47.2. Compliance with this condition shall be an annual certification conducted under Condition 64.	Continuous	HSE Document Review Facility Operating/Maintenance Records Review Operating Practices Review
Section 6. General Source Testing and Monitoring Requirements			
48	**Requested Source Tests.** In addition to any source testing explicitly required by the permit, the Permittee shall conduct source testing as requested by the Department to determine compliance with applicable permit requirements.	Continuous	HSE Document Review EPA Engine Testing Waiver Source tests were conducted on EU IDs 7 and 8 on 6/25/2019.
49	**Operating Conditions.** Unless otherwise specified by an applicable requirement or test method, the Permittee shall conduct source testing 49.1. at a point or points that characterize the actual discharge into the ambient air; and 49.2. at the maximum rated burning or operating capacity of the emission unit or another rate determined by the Department to characterize the actual discharge into the ambient air.	Continuous	HSE Document Review Source tests were conducted on EU IDs 7 and 8 on 6/25/2019.

Condition	Permit Condition	Compliance Status	Compliance Determination Method
50	**Reference Test Methods.** The Permittee shall use the following test methods when conducting source testing for compliance with this permit: 50.1. Source testing for compliance with requirements adopted by reference in 18 AAC 50.040(c) must be conducted in accordance with the source test methods and procedures specified in 40 C.F.R. 63. 50.2. Source testing for the reduction in visibility through the exhaust effluent must be conducted in accordance with the procedures set out in Reference Method 9 and may use the form in Section 11 to record data. 50.3. Source testing for emissions of total particulate matter, sulfur compounds, nitrogen compounds, carbon monoxide, lead, volatile organic compounds, fluorides, sulfuric acid mist, municipal waste combustor organics, metals, and acid gases must be conducted in accordance with the methods and procedures specified in 40 C.F.R. 60, Appendix A. 50.4. Source testing for emissions of PM-10 must be conducted in accordance with the procedures specified in 40 C.F.R. 51, Appendix M, Methods 201 or 201A and 202. 50.5. Source testing for emissions of any pollutant may be determined using an alternative method approved by the Department in accordance with 40 C.F.R. 63 Appendix A, Method 301.	Continuous	HSE Document Review Source tests were conducted on EU IDs 7 and 8 on 6/25/2019.
51	**Excess Air Requirements.** To determine compliance with this permit, standard exhaust gas volumes must include only the volume of gases formed from the theoretical combustion of the fuel, plus the excess air volume normal for the specific emission unit type, corrected to standard conditions (dry gas at 68° F and an absolute pressure of 760 millimeters of mercury).	Continuous	HSE Document Review Source tests were conducted on EU IDs 7 and 8 on 6/25/2019.
52	**Test Exemption.** The Permittee is not required to comply with Conditions 54, 55 and 56 when the exhaust is observed for visible emissions by Method 9 Plan (Condition 2.1) or Smoke/No Smoke Plan (Condition 2.2).	Continuous	Advisory Provision
53	**Test Deadline Extension.** The Permittee may request an extension to a source test deadline established by the Department. The Permittee may delay a source test beyond the original deadline only if the extension is approved in writing by the Department's appropriate division director or designee.	Continuous	HSE Document Review
54	**Test Plans.** Except as provided in Condition 52, before conducting any source tests, the Permittee shall submit a plan to the Department. The plan must include the methods and procedures to be used for sampling, testing, and quality assurance and must specify how the emission unit will operate during the test and how the Permittee will document that operation. The Permittee shall submit a complete plan within 60 days after receiving a request under Condition 48 and at least 30 days before the scheduled date of any test unless the Department agrees in writing to some other time period. Retesting may be performed without resubmitting the plan.	Continuous	HSE Document Review One source test plan was submitted for EU IDs 7 and 8 on 5/22/2019.
55	**Test Notification.** Except as provided in Condition 52, at least 10 days before conducting a source test, the Permittee shall give the Department written notice of the date and the time the source test will begin.	Continuous	HSE Document Review One source test notification was submitted for EU IDs 7 and 8 on 5/22/2019.
56	**Test Reports.** Except as provided in Condition 52, within 60 days after completing a source test, the Permittee shall submit two copies of the results in the format set out in the Source Test Report Outline, adopted by reference in 18 AAC 50.030. The Permittee shall certify the results in the manner set out in Condition 59. If requested in writing by the Department, the Permittee must provide preliminary results in a shorter period of time specified by the Department.	Continuous	HSE Document Review Two copies of the source test results were submitted for EU IDs 7 and 8 on 7/23/2019.

Condition	Permit Condition	Compliance Status	Compliance Determination Method
57	**Particulate Matter Calculations.** In source testing for compliance with the particulate matter standards in Conditions 5 and 19.2, the three-hour average is determined using the average of three one-hour test runs. The source testing must account for those emissions caused by soot blowing, grate cleaning, or other routine maintenance activities by ensuring that at least one test run includes the emissions caused by the routine maintenance activity and is conducted under conditions that lead to representative emissions from that activity. The emissions must be quantified using the following equation: $E = E_M[(A + B) \times S/R \times A] + E_{NM}[(R-S/R)-B \times S/R \times S]$ Where: E = the total PM emissions of the emission unit in grains per dry standard cubic foot ((gr.)/dscf) E_M = the PM emissions in (gr.)/dscf measured during the test that included the routine maintenance activity E_{NM} = the arithmetic average of PM emissions in (gr.)/dscf measured during the test runs that did not include the maintenance activity A = the period of routine maintenance activity occurring during the test run that included routine maintenance activity, expressed to the nearest hundredth of an hour B = the total period of the test run, less A R = the maximum period of emission unit operation per 24 hours, expressed to the nearest hundredth of an hour S = the maximum period of routine maintenance activity per 24 hours, expressed to the nearest hundredth of an hour	Continuous	HSE Document Review
Section 7. General Recordkeeping and Reporting Requirements			
58	**Recordkeeping Requirements.** The Permittee shall keep all records required by this permit for at least five years after the date of collection, including: 58.1. Copies of all reports and certifications submitted pursuant to this section of the permit; and 58.2. Records of all monitoring required by this permit, and information about the monitoring including: a. the date, place, and time of sampling or measurements; b. the date(s) analyses were performed; c. the company or entity that performed the analyses; d. the analytical techniques or methods used; e. the results of such analyses; and, f. the operating conditions as existing at the time of sampling or measurement.	Continuous	HSE Document Review Facility Operating/Maintenance Records Review
59	**Certification.** The Permittee shall certify any permit application, report, affirmation, or compliance certification submitted to the Department and required under the permit by including the signature of a responsible official for the permitted stationary source following the statement: "Based on information and belief formed after reasonable inquiry, I certify that the statements and information in and attached to this document are true, accurate, and complete." Excess emission reports must be certified either upon submittal or with an operating report required for the same reporting period. All other reports and other documents must be certified upon submittal. 59.1. The Department may accept an electronic signature on an electronic application or other electronic record required by the Department if a. a certifying authority registered under AS 09.25.510 verifies that the electronic signature is authentic; and b. the person providing the electronic signature has made an agreement, with the certifying authority described in Condition 59.1.a, that the person accepts or agrees to be bound by an electronic record executed or adopted with that signature.	Continuous	HSE Document Review
60	**Submittals.** Unless otherwise directed by the Department or this permit, the Permittee shall submit one copy of each report, compliance certification, and/or other submittal required by this permit, certified in accordance with Condition 59, to ADEC, Air Permits Program, 610 University Ave., Fairbanks, AK 99709-3643, ATTN: Compliance Technician. The documents may be submitted either by hard copy or electronically. 60.1. Electronic submittals may be provided, upon consultation with the Compliance Technician or Department website regarding software compatibility, as follows: a. send by E-mail under a cover letter using dec.aq.airreports@alaska.gov; or b. use the Department's Air Online Services at http://dec.alaska.gov/applications/air/airtoolsweb/.	Continuous	HSE Document Review
61	**Information Requests.** The Permittee shall furnish to the Department, within a reasonable time, any information the Department requests in writing to determine whether cause exists to modify, revoke and reissue, or terminate the permit or to determine compliance with the permit. Upon request, the Permittee shall furnish to the Department copies of records required to be kept by the permit. The Department may require the Permittee to furnish copies of those records directly to the Federal Administrator.	Continuous	HSE Document Review

Condition	Permit Condition	Compliance Status	Compliance Determination Method
62, 62.1, 62.1a, 62.1b	**Excess Emissions and Permit Deviation Reports.** 62.1. Except as provided in Condition 45, the Permittee shall report all emissions or operations that exceed or deviate from the requirements of this permit as follows: a. in accordance with 18 AAC 50.240(c), as soon as possible after the event commenced or is discovered, report (i) emissions that present a potential threat to human health or safety; and (ii) excess emissions that the Permittee believes to be unavoidable; b. in accordance with 18 AAC 50.235(a), within two working days after the event commenced or was discovered, report an unavoidable emergency, malfunction, or non-routine repair that causes emissions in excess of a technology based emission standard;	Continuous	HSE Document Review
62.1c, 62.1c(i)	c. report all other excess emissions and permit deviations (i) within 30 days of the end of the month in which the excess emissions or deviation occurred, except as provided in Conditions 62.1.c(ii) and 62.1.c(iii);	Continuous	HSE Document Review
62.1c(ii), 62.1c(iii)	(ii) if a continuous or recurring excess emissions is not corrected within 48 hours of discovery, within 72 hours of discovery unless the Department provides written permission to report under Condition 62.1.c(i); and (iii) for failure to monitor, as required in other applicable conditions of this permit.	Continuous	HSE Document Review
62.2, 62.3	62.2. When reporting excess emissions or permit deviations, the Permittee shall report using either the Department's on-line form, which can be found at http://www.dec.state.ak.us/air/ap/site.htm or if the Permittee prefers, the form contained in Section 12 of this permit. The Permittee must provide all information called for by the form that is used. 62.3. If requested by the Department, the Permittee shall provide a more detailed written report as requested to follow up an excess emissions report.	Continuous	HSE Document Review
63	**Operating Reports.** During the life of this permit[13], the Permittee shall submit to the Department an operating report by August 1 for the period January 1 to June 30 of the current year and by February 1 for the period July 1 to December 31 of the previous year. 63.1. The operating report must include all information required to be in operating reports by other conditions of this permit, for the period covered by the report. 63.2. When excess emissions or permit deviations that occurred during the reporting period are not included with the operating report under Condition 63.1, the Permittee shall identify a. the date of the deviation; b. the equipment involved; c. the permit condition affected; d. a description of the excess emissions or permit deviation; and e. any corrective action or preventive measures taken and the date(s) of such actions; or 63.3. when excess emissions or permit deviations have already been reported under Condition 62 the Permittee shall cite the date or dates of those reports. 63.4. The operating report must include a listing of emissions monitored under Conditions 2.1.e and 2.2.c, which trigger additional testing or monitoring, whether or not the emissions monitored exceed an emission standard. The Permittee shall include in the report. a. the date of the emissions; b. the equipment involved; c. the permit condition affected; and d. the monitoring result which triggered the additional monitoring.	Continuous	HSE Document Review
64	**Annual Compliance Certification.** Each year by March 31, the Permittee shall compile and submit to the Department an annual compliance certification report. 64.1. Certify the compliance status of the stationary source over the preceding calendar year consistent with the monitoring required by this permit, as follows: a. identify each term or condition set forth in Section 3 through Section 9, that is the basis of the certification; b. briefly describe each method used to determine the compliance status c. state whether compliance is intermittent or continuous; and d. identify each deviation and take it into account in the compliance certification; 64.2. In addition, submit a copy of the report directly to the EPA-Region 10, Office of Air Quality, M/S OAQ-107, 1200 Sixth Avenue, Seattle, WA 98101.	Continuous	HSE Document Review

Condition	Permit Condition	Compliance Status	Compliance Determination Method
65	**Emission Inventory Reporting.** The Permittee shall submit to the Department reports of actual emissions, by emission unit, of CO, NH_3, NO_X, PM-10, PM-2.5, SO_2, VOCs and Lead (Pb) (and lead compounds) using the form in Section 13 of this permit, as follows: 65.1. Each year by April 30, if the stationary source's potential to emit for the previous calendar year equals or exceeds: a. 250 tons per year (tpy) of NH_3, PM-10, PM-2.55 or VOCs; or b. 2500 tpy of CO, NO_X or SO_2. 65.2. Every third year by April 30 if the stationary source's potential to emit for the previous calendar year equals or exceeds: a. 5 tons per year of lead (Pb), or b. 1000 tpy of CO; or c. 100 tpy of SO_2, NH_3, PM-10, PM-2.55, NO_X or VOCs. 65.3. For reporting under Condition 65, the Permittee shall report in 2015 for calendar year 2014, 2018 for calendar year 2017, 2021 for calendar year 2020, etc., in accordance with the Environmental Protection Agency set schedule. 65.4. Include in the report required by this condition, the required data elements contained within the form in Section 13 or those contained in Table 2A of Appendix A to Subpart A of 40 C.F.R. 51 for each stack associated with an emission unit.	Continuous	HSE Document Review
Section 8. Permit Changes and Renewal			
66	**Permit Applications and Submittals.** The Permittee shall comply with the following requirements for submitting application information to the EPA Region 10: 66.1. The Permittee shall provide a copy of each application for modification or renewal of this permit, including any compliance plan, or application addenda, at the time the application or addendum is submitted to the Department14; 66.2. The information shall be submitted to the same address as in Condition 64.2. 66.3. To the extent practicable, the Permittee shall provide to EPA applications in portable document format (PDF); MS Word format (.doc); or other computer-readable format compatible with EPA's national database management system; and 66.4. The Permittee shall maintain records as necessary to demonstrate compliance with this condition.	Continuous	HSE Document Review
67	**Emissions Trading.** No permit revision shall be required under any approved economic incentives, marketable permits, emissions trading and other similar programs or processes for changes that are provided for in the permit.	Continuous	Advisory Provision
68	**Off Permit Changes.** The Permittee may make changes that are not addressed or prohibited by this permit other than those subject to the requirements of 40 C.F.R. Part 72 through 78 or those that are modifications under any provision of Title I of the Act to be made without a permit revision, provided that the following requirements are met: 68.1. Each such change shall meet all applicable requirements and shall not violate any existing permit term or condition; 68.2. Provide contemporaneous written notice to EPA and the Department of each such change, except for changes that qualify as insignificant under 18 AAC 50.326(d) – (i). Such written notice shall describe each such change, including the date, any change in emissions, pollutants emitted, and any applicable requirement that would apply as a result of the change; 68.3. The change shall not qualify for the shield under 40 C.F.R. 71.6(f); 68.4. The Permittee shall keep a record describing changes made at the stationary source that result in emissions of a regulated air pollutant subject to an applicable requirement, but not otherwise regulated under the permit, and the emissions resulting from those changes.	Continuous	HSE Document Review
69	**Operational Flexibility.** The Permittee may make Section 502(b)(10)15 changes within the permitted stationary source without requiring a permit revision if the changes are not modifications under any provision of Title I of the Act and the changes do not exceed the emissions allowable under this permit (whether expressed therein as a rate of emissions or in terms of total emissions): 69.1. The Permittee shall provide EPA and the Department with a notification no less than 7 days in advance of the proposed change. 69.2. For each such change, the written notification required above shall include a brief description of the change within the permitted stationary source, the date on which the change will occur, any change in emissions, and any permit term or condition that is no longer applicable as a result of the change. 69.3. The permit shield described in 40 C.F.R. 71.6(f) shall not apply to any change made pursuant to Condition 69.	Continuous	HSE Document Review

Condition	Permit Condition	Compliance Status	Compliance Determination Method
70	**Permit Renewal.** To renew this permit, the Permittee shall submit an application under 18 AAC 50.326 no sooner than July 26, 2020 and no later than July 26, 2021. The renewal application shall be complete before the permit expiration date listed on the cover page of this permit. Permit expiration terminates the stationary source's right to operate unless a timely and complete renewal application has been submitted consistent with 40 C.F.R. 71.7(b) and 71.5(a)(1)(iii).	Continuous	The permit renewal application cannot be submitted until July 26, 2020.
Section 9. Compliance Requirements			
71	Compliance with permit terms and conditions is considered to be compliance with those requirements that are 71.1. included and specifically identified in the permit; or 71.2. determined in writing in the permit to be inapplicable.	Continuous	Advisory Provision
72	The Permittee must comply with each permit term and condition. Noncompliance with a permit term or condition constitutes a violation of AS 46.14, 18 AAC 50, and, except for those terms or conditions designated in the permit as not federally enforceable, the Clean Air Act, and is grounds for a. an enforcement action; b. permit termination, revocation and reissuance, or modification in accordance with AS 46.14.280; or c. denial of an operating permit renewal application.	Intermittent	Advisory Provision Intermittent compliance with any permit condition automatically triggers intermittent compliance with this permit condition.
73	For applicable requirements with which the stationary source is in compliance, the Permittee shall continue to comply with such requirements.	Continuous	Advisory Provision
74	It is not a defense in an enforcement action to claim that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with a permit term or condition.	Continuous	Advisory Provision
75	The Permittee shall allow the Department or an inspector authorized by the Department, upon presentation of credentials and at reasonable times with the consent of the owner or operator to 75.1. enter upon the premises where a source subject to the permit is located or where records required by the permit are kept; 75.2. have access to and copy any records required by the permit; 75.3. inspect any stationary source, equipment, practices, or operations regulated by or referenced in the permit; and 75.4. sample or monitor substances or parameters to assure compliance with the permit or other applicable requirements.	Continuous	Advisory Provision

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SECTION B
EMISSION UNITS

Form B: Emission Unit Listing for This Application

Forms B2: Emission Unit Detail Form - Internal Combustion Equipment

Forms B1: Emission Unit Detail Form - External Combustion Equipment

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FORM B
Emission Unit Listing For This Application

Permit Number: AQ1086TVP02A

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**
1	Generator Engine	Wartsila 18V50DF	17.1 MW	March 2012
2	Generator Engine	Wartsila 18V50DF	17.1 MW	March 2012
3	Generator Engine	Wartsila 18V50DF	17.1 MW	March 2012
4	Generator Engine	Wartsila 18V50DF	17.1 MW	March 2012
5	Generator Engine	Wartsila 18V50DF	17.1 MW	March 2012
6	Generator Engine	Wartsila 18V50DF	17.1 MW	March 2012
7	Generator Engine	Wartsila 18V50DF	17.1 MW	March 2012
8	Generator Engine	Wartsila 18V50DF	17.1 MW	March 2012
9	Generator Engine	Wartsila 18V50DF	17.1 MW	March 2012
10	Generator Engine	Wartsila 18V50DF	17.1 MW	March 2012
11	Firewater Pump	John Deere JU6H-UFADN0	197 hp	June 2012
12	Black Start Generator	Cummins 1000DQFAD	1.490 hp	June 2013
13	Auxiliary Boiler	Cleaver-Brooks FLX200-1650	15.75 MMBtu/hr	June 2013
14	Auxiliary Boiler	Cleaver-Brooks FLX200-1650	15.75 MMBtu/hr	June 2013
17	Natural Gas Fuel Heater	Aether C5-G30	8.3 MMBtu/hr	September 2016
18	Black Start Generator	Cummins 1000DQFAD	1.490 hp	June 2013

INSIGNIFICANT EMISSION UNIT LISTING: Insignificant Title V permitted emission units that have not been modified				
Unit Name	**Brief Emission Unit Description**	**Rating/Size**	**Construction Date**	**Basis for Insignificant Status**
15	Diesel Storage Tank – Rockford 071301	509,000 gal	Mar 2013	18 AAC 50.326(e)
16	Diesel Storage Tank – Rockford 071301	509,000 gal	Mar 2013	18 AAC 50.326(e)
N/A	Lube Oil Storage Tank	18,784 gal	Nov 2012	18 AAC 50.326(e), (f)(82)
N/A	Used Lube Oil Storage Tank	14,898 gal	Nov 2012	18 AAC 50.326(e), (f)(82)
N/A	Service Lube Oil Storage Tank (2)	19,474 gal (each)	Nov 2012	18 AAC 50.326(e), (f)(82)
N/A	Wastewater/Lube Oil Storage Tank	14,898 gal	Nov 2012	18 AAC 50.326(e), (f)(82)
N/A	Diesel Storage Tank (2)	1,000 gal (each)	Nov 2012	18 AAC 50.326(e), (g)(3)
N/A	Diesel Storage Tank	300 gal	Jun 2013	18 AAC 50.326(e), (g)(3)
N/A	Diesel Storage Tank (2)	660 gal (each)	Jun 2013	18 AAC 50.326(e), (g)(3)
N/A	Diesel Engine Lube Oil Reservoirs (10)	3,500 gal (each)	Mar 2012	18 AAC 50.326(e), (g)(3)

FORM B2

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

Permit Number: AQ1086TVP02A

1.	Emission Unit ID Number // Operating Scenario	1 // 1
2.	Date installation/construction commenced[1]	March 8, 2012
3.	Date installed	March 27, 2015
4.	Emission Unit serial number	PAAE201768
5.	Special control requirements? [if yes, describe]	Yes, selective catalytic reduction and catalytic oxidation
6.	Manufacturer and model number	Wartsila 18V50DF
7.	Type of combustion device	Dual fuel fired engine
8.	Rated design capacity (horsepower rating for engines)	N/A
9.	Rated design capacity (heat input, MMBtu/hr rating for turbines)	N/A
10.	If used for power generation, electrical output (kW)	17.1 MW

1. See page 2 of the Form B instructions regarding installation/construction date and consult regulations under 40 CFR 60 (NSPS) and 40 CFR 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)
99% Natural Gas; 1% Diesel	Approximately 129,548 scf/hr; 13.1 gal/hr
100% Diesel	Approximately 1,114.6 gal/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
TVP01 – Cond 1	18 AAC 50.055(a)(1)	Visible Emissions	Do not cause or allow visible emissions to reduce visibility by more than 20 percent averaged over any six consecutive minutes.	Yes	Monitor, record, and report in accordance with Conditions 1.1 and 9.
TVP01 – Cond 5	18 AAC 50.055(b)(1)	Particulate Matter	Do not cause or allow particulate matter to exceed 0.05 grains per cubic foot of exhaust gas averaged over three hours.	Yes	Monitor, record, and report in accordance with Conditions 5.1 and 9.
TVP01 – Cond 10	18 AAC 50.055(c)	Sulfur Compound Emissions	Do not cause or allow sulfur compound emissions, expressed as SO_2, to exceed 500 ppm averaged over three hours.	Yes	Monitor, record, and report in accordance with Conditions 10.1 and 10.2.
TVP01 – Cond 11	MSS03 – Cond 15	Fuel Sulfur Requirements	The H_2S content of natural gas burned in this unit shall not exceed 20 ppm by volume. The S content of diesel burned in this unit shall not exceed 15 ppm by weight.	Yes	Monitor, record, and report in accordance with Conditions 11.1a, 11.1b, 11.2a, and 11.2b.
TVP01 – Cond 12	MSS03 – Cond 5	Operational Hour Limits	Limit the operation of EU IDs 1 – 10 to no more than 1,680 hours per 12-month rolling period when firing ULSD exclusively. 12.1 Burn only natural gas and ULSD. 12.2 Install and maintain a non-resettable hour meters.	Yes	Monitor, record, and report in accordance with Conditions 12.3 through 12.6.
TVP01 – Cond 15	MSS03 – Cond 8	Control Equipment	Operate and maintain a combined selective catalytic reduction (SCR) and catalytic oxidation (CATOX) control equipment downstream of each of EU IDs 1 – 10 according to the manufacturer's instructions and as follows.	Yes	Monitor, record, and report in accordance with Conditions 15.1 through 15.5.
TVP01 – Cond 16	MSS03 – Cond 9	Formaldehyde (CH_2O) Emission Limit	Limit CH_2O emissions from EU IDs 1 – 10 while firing natural gas to no more than 9.6 tpy during any consecutive 12 months by operating and maintaining the control equipment as described in Condition 15.	Yes	Record review and reasonable inquiry. Certify compliance via the Annual Compliance certification of Condition 64.

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
TVP01 – Cond 17	MSS03 – Cond 13	Annual NO_2 Ambient Air Quality Protection	Maintain a release height for each stack that equals or exceeds 30.0 meters above grade.	Yes	Record review and reasonable inquiry. Certify compliance via the Annual Compliance certification of Condition 64.
TVP01 – Cond 20	40 CFR 60.7(a)	NSPS Subpart A General Provisions	For any affected facility or existing facility regulated under NSPS requirements in 40 CFR 60, the Permittee shall furnish the Department and EPA written notification or, if acceptable to both the EPA and the Permittee, electronic Notification.	Yes	Record review and reasonable inquiry. Certify compliance via the Annual Compliance certification of Condition 64.
TVP01 – Cond 21	40 CFR 60.7(b)	NSPS Subpart A Startup, Shutdown, & Malfunction Requirements	Maintain records of any start-up, shutdown, or malfunction of the unit, any malfunction of the air-pollution control equipment, or any periods during which a continuous monitoring system or device is inoperative.	Yes	Record review and reasonable inquiry. Certify compliance via the Annual Compliance certification of Condition 64.
TVP01 – Cond 22	40 CFR 60.8	NSPS Subpart A Performance (Source) Tests	Conduct source tests as required by Section 6 and as required in this condition.	Yes	Record review and reasonable inquiry. Certify compliance via the Annual Compliance certification of Condition 64.
TVP01 – Cond 24	40 CFR 60.11(g)	NSPS Subpart A Credible Evidence	For the purpose of submitting compliance certifications or establishing whether or not the Permittee has violated or is in violation of the standards set forth in Condition 26, 27, or 28 nothing in 40 CFR Part 60 shall preclude the use, including the exclusive use, of any credible evidence or information, relevant to whether EU IDs 1 – 14 and 18 would have been in compliance with applicable requirements of 40 CFR Part 60 if the appropriate performance or compliance test or procedure had been performed.	Yes	Record review and reasonable inquiry. Certify compliance via the Annual Compliance certification of Condition 64.

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
TVP01 – Cond 25	40 CFR 60.12	NSPS Subpart A Concealment of Emissions	Do not build, erect, install, or use any article, machine, equipment or process, the use of which conceals an emission which would otherwise constitute a violation of a standard set forth in Condition 26, 27, or 28. Such concealment includes, but is not limited to, the use of gaseous diluents to achieve compliance with an opacity standard or with a standard that is based on the concentration of a pollutant in the gases discharged to the atmosphere.	Yes	Record review and reasonable inquiry. Certify compliance via the Annual Compliance certification of Condition 64.
TVP01 – Cond 28	40 CFR 60.4230	NSPS Subpart JJJJ	Comply with all applicable requirements of Subpart JJJJ for stationary spark ignition (SI) internal combustion engine whose construction, modification, or reconstruction commences after June 12, 2006.	Yes	Monitor, record, and report in accordance with Conditions 28.1 through 28.7
TVP01 – Cond 29	40 CFR 63.6590(c)	NESHAP Subpart ZZZZ	Comply with all applicable requirements of NESHAP Subpart ZZZZ for stationary reciprocating internal combustion engines (RICE) located at an area source of hazardous air pollutant (HAP) emissions. 29.2 Meet the requirements of 40 CFR 63 by meeting the requirements of 40 CFR 60 Subpart JJJJ, for SI ICE, as set out in Conditions 28.1 through 28.6.	Yes	Record review and reasonable inquiry. Certify compliance via the Annual Compliance certification of Condition 64.

[1] Citations must be specific. Include sub-paragraph level detail [e.g. 18 AAC 50.055(a)(1), or 40 CFR 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 60 Subpart IIII – Standards of Performance for Stationary CI ICE	Unit is dual fuel, spark ignition engines, not compression ignition.

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

FORM B2

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

Permit Number: AQ1086TVP02A

1.	Emission Unit ID Number // Operating Scenario	2 // 1
2.	Date installation/construction commenced[1]	March 8, 2012
3.	Date installed	March 27, 2015
4.	Emission Unit serial number	PAAE201767
5.	Special control requirements? [if yes, describe]	Yes, selective catalytic reduction and catalytic oxidation
6.	Manufacturer and model number	Wartsila 18V50DF
7.	Type of combustion device	Dual fuel fired engine
8.	Rated design capacity (horsepower rating for engines)	N/A
9.	Rated design capacity (heat input, MMBtu/hr rating for turbines)	N/A
10.	If used for power generation, electrical output (kW)	17.1 MW

1. See page 2 of the Form B instructions regarding installation/construction date and consult regulations under 40 CFR 60 (NSPS) and 40 CFR 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)
99% Natural Gas; 1% Diesel	Approximately 129,548 scf/hr; 13.1 gal/hr
100% Diesel	Approximately 1,114.6 gal/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
TVP01 – Cond 1	18 AAC 50.055(a)(1)	Visible Emissions	Do not cause or allow visible emissions to reduce visibility by more than 20 percent averaged over any six consecutive minutes.	Yes	Monitor, record, and report in accordance with Conditions 1.1 and 9.
TVP01 – Cond 5	18 AAC 50.055(b)(1)	Particulate Matter	Do not cause or allow particulate matter to exceed 0.05 grains per cubic foot of exhaust gas averaged over three hours.	Yes	Monitor, record, and report in accordance with Conditions 5.1 and 9.
TVP01 – Cond 10	18 AAC 50.055(c)	Sulfur Compound Emissions	Do not cause or allow sulfur compound emissions, expressed as SO_2, to exceed 500 ppm averaged over three hours.	Yes	Monitor, record, and report in accordance with Conditions 10.1 and 10.2.
TVP01 – Cond 11	MSS03 – Cond 15	Fuel Sulfur Requirements	The H_2S content of natural gas burned in this unit shall not exceed 20 ppm by volume. The S content of diesel burned in this unit shall not exceed 15 ppm by weight.	Yes	Monitor, record, and report in accordance with Conditions 11.1a, 11.1b, 11.2a, and 11.2b.
TVP01 – Cond 12	MSS03 – Cond 5	Operational Hour Limits	Limit the operation of EU IDs 1 – 10 to no more than 1,680 hours per 12-month rolling period when firing ULSD exclusively. 12.1 Burn only natural gas and ULSD. 12.2 Install and maintain a non-resettable hour meters.	Yes	Monitor, record, and report in accordance with Conditions 12.3 through 12.6.
TVP01 – Cond 15	MSS03 – Cond 8	Control Equipment	Operate and maintain a combined selective catalytic reduction (SCR) and catalytic oxidation (CATOX) control equipment downstream of each of EU IDs 1 – 10 according to the manufacturer's instructions and as follows.	Yes	Monitor, record, and report in accordance with Conditions 15.1 through 15.5.
TVP01 – Cond 16	MSS03 – Cond 9	Formaldehyde (CH_2O) Emission Limit	Limit CH_2O emissions from EU IDs 1 – 10 while firing natural gas to no more than 9.6 tpy during any consecutive 12 months by operating and maintaining the control equipment as described in Condition 15.	Yes	Record review and reasonable inquiry. Certify compliance via the Annual Compliance certification of Condition 64.

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
TVP01 – Cond 17	MSS03 – Cond 13	Annual NO_2 Ambient Air Quality Protection	Maintain a release height for each stack that equals or exceeds 30.0 meters above grade.	Yes	Record review and reasonable inquiry. Certify compliance via the Annual Compliance certification of Condition 64.
TVP01 – Cond 20	40 CFR 60.7(a)	NSPS Subpart A General Provisions	For any affected facility or existing facility regulated under NSPS requirements in 40 CFR 60, the Permittee shall furnish the Department and EPA written notification or, if acceptable to both the EPA and the Permittee, electronic Notification.	Yes	Record review and reasonable inquiry. Certify compliance via the Annual Compliance certification of Condition 64.
TVP01 – Cond 21	40 CFR 60.7(b)	NSPS Subpart A Startup, Shutdown, & Malfunction Requirements	Maintain records of any start-up, shutdown, or malfunction of the unit, any malfunction of the air-pollution control equipment, or any periods during which a continuous monitoring system or device is inoperative.	Yes	Record review and reasonable inquiry. Certify compliance via the Annual Compliance certification of Condition 64.
TVP01 – Cond 22	40 CFR 60.8	NSPS Subpart A Performance (Source) Tests	Conduct source tests as required by Section 6 and as required in this condition.	Yes	Record review and reasonable inquiry. Certify compliance via the Annual Compliance certification of Condition 64.
TVP01 – Cond 24	40 CFR 60.11(g)	NSPS Subpart A Credible Evidence	For the purpose of submitting compliance certifications or establishing whether or not the Permittee has violated or is in violation of the standards set forth in Condition 26, 27, or 28 nothing in 40 CFR Part 60 shall preclude the use, including the exclusive use, of any credible evidence or information, relevant to whether EU IDs 1 – 14 and 18 would have been in compliance with applicable requirements of 40 CFR Part 60 if the appropriate performance or compliance test or procedure had been performed.	Yes	Record review and reasonable inquiry. Certify compliance via the Annual Compliance certification of Condition 64.

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
TVP01 – Cond 25	40 CFR 60.12	NSPS Subpart A Concealment of Emissions	Do not build, erect, install, or use any article, machine, equipment or process, the use of which conceals an emission which would otherwise constitute a violation of a standard set forth in Condition 26, 27, or 28. Such concealment includes, but is not limited to, the use of gaseous diluents to achieve compliance with an opacity standard or with a standard that is based on the concentration of a pollutant in the gases discharged to the atmosphere.	Yes	Record review and reasonable inquiry. Certify compliance via the Annual Compliance certification of Condition 64.
TVP01 – Cond 28	40 CFR 60.4230	NSPS Subpart JJJJ	Comply with all applicable requirements of Subpart JJJJ for stationary spark ignition (SI) internal combustion engine whose construction, modification, or reconstruction commences after June 12, 2006.	Yes	Monitor, record, and report in accordance with Conditions 28.1 through 28.7
TVP01 – Cond 29	40 CFR 63.6590(c)	NESHAP Subpart ZZZZ	Comply with all applicable requirements of NESHAP Subpart ZZZZ for stationary reciprocating internal combustion engines (RICE) located at an area source of hazardous air pollutant (HAP) emissions. 29.2 Meet the requirements of 40 CFR 63 by meeting the requirements of 40 CFR 60 Subpart JJJJ, for SI ICE, as set out in Conditions 28.1 through 28.6.	Yes	Record review and reasonable inquiry. Certify compliance via the Annual Compliance certification of Condition 64.

[1] Citations must be specific. Include sub-paragraph level detail [e.g. 18 AAC 50.055(a)(1), or 40 CFR 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 60 Subpart IIII – Standards of Performance for Stationary CI ICE	Unit is dual fuel, spark ignition engines, not compression ignition.

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

FORM B2

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

Permit Number: AQ1086TVP02A

1.	Emission Unit ID Number // Operating Scenario	3 // 1
2.	Date installation/construction commenced[1]	March 8, 2012
3.	Date installed	March 27, 2015
4.	Emission Unit serial number	PAAE201770
5.	Special control requirements? [if yes, describe]	Yes, selective catalytic reduction and catalytic oxidation
6.	Manufacturer and model number	Wartsila 18V50DF
7.	Type of combustion device	Dual fuel fired engine
8.	Rated design capacity (horsepower rating for engines)	N/A
9.	Rated design capacity (heat input, MMBtu/hr rating for turbines)	N/A
10.	If used for power generation, electrical output (kW)	17.1 MW

1. See page 2 of the Form B instructions regarding installation/construction date and consult regulations under 40 CFR 60 (NSPS) and 40 CFR 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)
99% Natural Gas; 1% Diesel	Approximately 129,548 scf/hr; 13.1 gal/hr
100% Diesel	Approximately 1,114.6 gal/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
TVP01 – Cond 1	18 AAC 50.055(a)(1)	Visible Emissions	Do not cause or allow visible emissions to reduce visibility by more than 20 percent averaged over any six consecutive minutes.	Yes	Monitor, record, and report in accordance with Conditions 1.1 and 9.
TVP01 – Cond 5	18 AAC 50.055(b)(1)	Particulate Matter	Do not cause or allow particulate matter to exceed 0.05 grains per cubic foot of exhaust gas averaged over three hours.	Yes	Monitor, record, and report in accordance with Conditions 5.1 and 9.
TVP01 – Cond 10	18 AAC 50.055(c)	Sulfur Compound Emissions	Do not cause or allow sulfur compound emissions, expressed as SO_2, to exceed 500 ppm averaged over three hours.	Yes	Monitor, record, and report in accordance with Conditions 10.1 and 10.2.
TVP01 – Cond 11	MSS03 – Cond 15	Fuel Sulfur Requirements	The H_2S content of natural gas burned in this unit shall not exceed 20 ppm by volume. The S content of diesel burned in this unit shall not exceed 15 ppm by weight.	Yes	Monitor, record, and report in accordance with Conditions 11.1a, 11.1b, 11.2a, and 11.2b.
TVP01 – Cond 12	MSS03 – Cond 5	Operational Hour Limits	Limit the operation of EU IDs 1 – 10 to no more than 1,680 hours per 12-month rolling period when firing ULSD exclusively. 12.1 Burn only natural gas and ULSD. 12.2 Install and maintain a non-resettable hour meters.	Yes	Monitor, record, and report in accordance with Conditions 12.3 through 12.6.
TVP01 – Cond 15	MSS03 – Cond 8	Control Equipment	Operate and maintain a combined selective catalytic reduction (SCR) and catalytic oxidation (CATOX) control equipment downstream of each of EU IDs 1 – 10 according to the manufacturer's instructions and as follows.	Yes	Monitor, record, and report in accordance with Conditions 15.1 through 15.5.
TVP01 – Cond 16	MSS03 – Cond 9	Formaldehyde (CH_2O) Emission Limit	Limit CH_2O emissions from EU IDs 1 – 10 while firing natural gas to no more than 9.6 tpy during any consecutive 12 months by operating and maintaining the control equipment as described in Condition 15.	Yes	Record review and reasonable inquiry. Certify compliance via the Annual Compliance certification of Condition 64.

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
TVP01 – Cond 17	MSS03 – Cond 13	Annual NO_2 Ambient Air Quality Protection	Maintain a release height for each stack that equals or exceeds 30.0 meters above grade.	Yes	Record review and reasonable inquiry. Certify compliance via the Annual Compliance certification of Condition 64.
TVP01 – Cond 20	40 CFR 60.7(a)	NSPS Subpart A General Provisions	For any affected facility or existing facility regulated under NSPS requirements in 40 CFR 60, the Permittee shall furnish the Department and EPA written notification or, if acceptable to both the EPA and the Permittee, electronic Notification.	Yes	Record review and reasonable inquiry. Certify compliance via the Annual Compliance certification of Condition 64.
TVP01 – Cond 21	40 CFR 60.7(b)	NSPS Subpart A Startup, Shutdown, & Malfunction Requirements	Maintain records of any start-up, shutdown, or malfunction of the unit, any malfunction of the air-pollution control equipment, or any periods during which a continuous monitoring system or device is inoperative.	Yes	Record review and reasonable inquiry. Certify compliance via the Annual Compliance certification of Condition 64.
TVP01 – Cond 22	40 CFR 60.8	NSPS Subpart A Performance (Source) Tests	Conduct source tests as required by Section 6 and as required in this condition.	Yes	Record review and reasonable inquiry. Certify compliance via the Annual Compliance certification of Condition 64.
TVP01 – Cond 24	40 CFR 60.11(g)	NSPS Subpart A Credible Evidence	For the purpose of submitting compliance certifications or establishing whether or not the Permittee has violated or is in violation of the standards set forth in Condition 26, 27, or 28 nothing in 40 CFR Part 60 shall preclude the use, including the exclusive use, of any credible evidence or information, relevant to whether EU IDs 1 – 14 and 18 would have been in compliance with applicable requirements of 40 CFR Part 60 if the appropriate performance or compliance test or procedure had been performed.	Yes	Record review and reasonable inquiry. Certify compliance via the Annual Compliance certification of Condition 64.

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
TVP01 – Cond 25	40 CFR 60.12	NSPS Subpart A Concealment of Emissions	Do not build, erect, install, or use any article, machine, equipment or process, the use of which conceals an emission which would otherwise constitute a violation of a standard set forth in Condition 26, 27, or 28. Such concealment includes, but is not limited to, the use of gaseous diluents to achieve compliance with an opacity standard or with a standard that is based on the concentration of a pollutant in the gases discharged to the atmosphere.	Yes	Record review and reasonable inquiry. Certify compliance via the Annual Compliance certification of Condition 64.
TVP01 – Cond 28	40 CFR 60.4230	NSPS Subpart JJJJ	Comply with all applicable requirements of Subpart JJJJ for stationary spark ignition (SI) internal combustion engine whose construction, modification, or reconstruction commences after June 12, 2006.	Yes	Monitor, record, and report in accordance with Conditions 28.1 through 28.7
TVP01 – Cond 29	40 CFR 63.6590(c)	NESHAP Subpart ZZZZ	Comply with all applicable requirements of NESHAP Subpart ZZZZ for stationary reciprocating internal combustion engines (RICE) located at an area source of hazardous air pollutant (HAP) emissions. 29.2 Meet the requirements of 40 CFR 63 by meeting the requirements of 40 CFR 60 Subpart JJJJ, for SI ICE, as set out in Conditions 28.1 through 28.6.	Yes	Record review and reasonable inquiry. Certify compliance via the Annual Compliance certification of Condition 64.

[1] Citations must be specific. Include sub-paragraph level detail [e.g. 18 AAC 50.055(a)(1), or 40 CFR 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 60 Subpart IIII – Standards of Performance for Stationary CI ICE	Unit is dual fuel, spark ignition engines, not compression ignition.

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

FORM B2

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

Permit Number: AQ1086TVP02A

1.	Emission Unit ID Number // Operating Scenario	4 // 1
2.	Date installation/construction commenced[1]	March 8, 2012
3.	Date installed	March 27, 2015
4.	Emission Unit serial number	PAAE201774
5.	Special control requirements? [if yes, describe]	Yes, selective catalytic reduction and catalytic oxidation
6.	Manufacturer and model number	Wartsila 18V50DF
7.	Type of combustion device	Dual fuel fired engine
8.	Rated design capacity (horsepower rating for engines)	N/A
9.	Rated design capacity (heat input, MMBtu/hr rating for turbines)	N/A
10.	If used for power generation, electrical output (kW)	17.1 MW

1. See page 2 of the Form B instructions regarding installation/construction date and consult regulations under 40 CFR 60 (NSPS) and 40 CFR 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)
99% Natural Gas; 1% Diesel	Approximately 129,548 scf/hr; 13.1 gal/hr
100% Diesel	Approximately 1,114.6 gal/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
TVP01 – Cond 1	18 AAC 50.055(a)(1)	Visible Emissions	Do not cause or allow visible emissions to reduce visibility by more than 20 percent averaged over any six consecutive minutes.	Yes	Monitor, record, and report in accordance with Conditions 1.1 and 9.
TVP01 – Cond 5	18 AAC 50.055(b)(1)	Particulate Matter	Do not cause or allow particulate matter to exceed 0.05 grains per cubic foot of exhaust gas averaged over three hours.	Yes	Monitor, record, and report in accordance with Conditions 5.1 and 9.
TVP01 – Cond 10	18 AAC 50.055(c)	Sulfur Compound Emissions	Do not cause or allow sulfur compound emissions, expressed as SO_2, to exceed 500 ppm averaged over three hours.	Yes	Monitor, record, and report in accordance with Conditions 10.1 and 10.2.
TVP01 – Cond 11	MSS03 – Cond 15	Fuel Sulfur Requirements	The H_2S content of natural gas burned in this unit shall not exceed 20 ppm by volume. The S content of diesel burned in this unit shall not exceed 15 ppm by weight.	Yes	Monitor, record, and report in accordance with Conditions 11.1a, 11.1b, 11.2a, and 11.2b.
TVP01 – Cond 12	MSS03 – Cond 5	Operational Hour Limits	Limit the operation of EU IDs 1 – 10 to no more than 1,680 hours per 12-month rolling period when firing ULSD exclusively. 12.1 Burn only natural gas and ULSD. 12.2 Install and maintain a non-resettable hour meters.	Yes	Monitor, record, and report in accordance with Conditions 12.3 through 12.6.
TVP01 – Cond 15	MSS03 – Cond 8	Control Equipment	Operate and maintain a combined selective catalytic reduction (SCR) and catalytic oxidation (CATOX) control equipment downstream of each of EU IDs 1 – 10 according to the manufacturer's instructions and as follows.	Yes	Monitor, record, and report in accordance with Conditions 15.1 through 15.5.
TVP01 – Cond 16	MSS03 – Cond 9	Formaldehyde (CH_2O) Emission Limit	Limit CH_2O emissions from EU IDs 1 – 10 while firing natural gas to no more than 9.6 tpy during any consecutive 12 months by operating and maintaining the control equipment as described in Condition 15.	Yes	Record review and reasonable inquiry. Certify compliance via the Annual Compliance certification of Condition 64.

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
TVP01 – Cond 17	MSS03 – Cond 13	Annual NO_2 Ambient Air Quality Protection	Maintain a release height for each stack that equals or exceeds 30.0 meters above grade.	Yes	Record review and reasonable inquiry. Certify compliance via the Annual Compliance certification of Condition 64.
TVP01 – Cond 20	40 CFR 60.7(a)	NSPS Subpart A General Provisions	For any affected facility or existing facility regulated under NSPS requirements in 40 CFR 60, the Permittee shall furnish the Department and EPA written notification or, if acceptable to both the EPA and the Permittee, electronic Notification.	Yes	Record review and reasonable inquiry. Certify compliance via the Annual Compliance certification of Condition 64.
TVP01 – Cond 21	40 CFR 60.7(b)	NSPS Subpart A Startup, Shutdown, & Malfunction Requirements	Maintain records of any start-up, shutdown, or malfunction of the unit, any malfunction of the air-pollution control equipment, or any periods during which a continuous monitoring system or device is inoperative.	Yes	Record review and reasonable inquiry. Certify compliance via the Annual Compliance certification of Condition 64.
TVP01 – Cond 22	40 CFR 60.8	NSPS Subpart A Performance (Source) Tests	Conduct source tests as required by Section 6 and as required in this condition.	Yes	Record review and reasonable inquiry. Certify compliance via the Annual Compliance certification of Condition 64.
TVP01 – Cond 24	40 CFR 60.11(g)	NSPS Subpart A Credible Evidence	For the purpose of submitting compliance certifications or establishing whether or not the Permittee has violated or is in violation of the standards set forth in Condition 26, 27, or 28 nothing in 40 CFR Part 60 shall preclude the use, including the exclusive use, of any credible evidence or information, relevant to whether EU IDs 1 – 14 and 18 would have been in compliance with applicable requirements of 40 CFR Part 60 if the appropriate performance or compliance test or procedure had been performed.	Yes	Record review and reasonable inquiry. Certify compliance via the Annual Compliance certification of Condition 64.

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
TVP01 – Cond 25	40 CFR 60.12	NSPS Subpart A Concealment of Emissions	Do not build, erect, install, or use any article, machine, equipment or process, the use of which conceals an emission which would otherwise constitute a violation of a standard set forth in Condition 26, 27, or 28. Such concealment includes, but is not limited to, the use of gaseous diluents to achieve compliance with an opacity standard or with a standard that is based on the concentration of a pollutant in the gases discharged to the atmosphere.	Yes	Record review and reasonable inquiry. Certify compliance via the Annual Compliance certification of Condition 64.
TVP01 – Cond 28	40 CFR 60.4230	NSPS Subpart JJJJ	Comply with all applicable requirements of Subpart JJJJ for stationary spark ignition (SI) internal combustion engine whose construction, modification, or reconstruction commences after June 12, 2006.	Yes	Monitor, record, and report in accordance with Conditions 28.1 through 28.7
TVP01 – Cond 29	40 CFR 63.6590(c)	NESHAP Subpart ZZZZ	Comply with all applicable requirements of NESHAP Subpart ZZZZ for stationary reciprocating internal combustion engines (RICE) located at an area source of hazardous air pollutant (HAP) emissions. 29.2 Meet the requirements of 40 CFR 63 by meeting the requirements of 40 CFR 60 Subpart JJJJ, for SI ICE, as set out in Conditions 28.1 through 28.6.	Yes	Record review and reasonable inquiry. Certify compliance via the Annual Compliance certification of Condition 64.

[1] Citations must be specific. Include sub-paragraph level detail [e.g. 18 AAC 50.055(a)(1), or 40 CFR 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 60 Subpart IIII – Standards of Performance for Stationary CI ICE	Unit is dual fuel, spark ignition engines, not compression ignition.

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

FORM B2

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

Permit Number: AQ1086TVP02A

1.	Emission Unit ID Number // Operating Scenario	5 // 1
2.	Date installation/construction commenced[1]	March 8, 2012
3.	Date installed	March 27, 2015
4.	Emission Unit serial number	PAAE233705
5.	Special control requirements? [if yes, describe]	Yes, selective catalytic reduction and catalytic oxidation
6.	Manufacturer and model number	Wartsila 18V50DF
7.	Type of combustion device	Dual fuel fired engine
8.	Rated design capacity (horsepower rating for engines)	N/A
9.	Rated design capacity (heat input, MMBtu/hr rating for turbines)	N/A
10.	If used for power generation, electrical output (kW)	17.1 MW

1. See page 2 of the Form B instructions regarding installation/construction date and consult regulations under 40 CFR 60 (NSPS) and 40 CFR 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)
99% Natural Gas; 1% Diesel	Approximately 129,548 scf/hr; 13.1 gal/hr
100% Diesel	Approximately 1,114.6 gal/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
TVP01 – Cond 1	18 AAC 50.055(a)(1)	Visible Emissions	Do not cause or allow visible emissions to reduce visibility by more than 20 percent averaged over any six consecutive minutes.	Yes	Monitor, record, and report in accordance with Conditions 1.1 and 9.
TVP01 – Cond 5	18 AAC 50.055(b)(1)	Particulate Matter	Do not cause or allow particulate matter to exceed 0.05 grains per cubic foot of exhaust gas averaged over three hours.	Yes	Monitor, record, and report in accordance with Conditions 5.1 and 9.
TVP01 – Cond 10	18 AAC 50.055(c)	Sulfur Compound Emissions	Do not cause or allow sulfur compound emissions, expressed as SO_2, to exceed 500 ppm averaged over three hours.	Yes	Monitor, record, and report in accordance with Conditions 10.1 and 10.2.
TVP01 – Cond 11	MSS03 – Cond 15	Fuel Sulfur Requirements	The H_2S content of natural gas burned in this unit shall not exceed 20 ppm by volume. The S content of diesel burned in this unit shall not exceed 15 ppm by weight.	Yes	Monitor, record, and report in accordance with Conditions 11.1a, 11.1b, 11.2a, and 11.2b.
TVP01 – Cond 12	MSS03 – Cond 5	Operational Hour Limits	Limit the operation of EU IDs 1 – 10 to no more than 1,680 hours per 12-month rolling period when firing ULSD exclusively. 12.1 Burn only natural gas and ULSD. 12.2 Install and maintain a non-resettable hour meters.	Yes	Monitor, record, and report in accordance with Conditions 12.3 through 12.6.
TVP01 – Cond 15	MSS03 – Cond 8	Control Equipment	Operate and maintain a combined selective catalytic reduction (SCR) and catalytic oxidation (CATOX) control equipment downstream of each of EU IDs 1 – 10 according to the manufacturer's instructions and as follows.	Yes	Monitor, record, and report in accordance with Conditions 15.1 through 15.5.
TVP01 – Cond 16	MSS03 – Cond 9	Formaldehyde (CH_2O) Emission Limit	Limit CH_2O emissions from EU IDs 1 – 10 while firing natural gas to no more than 9.6 tpy during any consecutive 12 months by operating and maintaining the control equipment as described in Condition 15.	Yes	Record review and reasonable inquiry. Certify compliance via the Annual Compliance certification of Condition 64.

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
TVP01 – Cond 17	MSS03 – Cond 13	Annual NO_2 Ambient Air Quality Protection	Maintain a release height for each stack that equals or exceeds 30.0 meters above grade.	Yes	Record review and reasonable inquiry. Certify compliance via the Annual Compliance certification of Condition 64.
TVP01 – Cond 20	40 CFR 60.7(a)	NSPS Subpart A General Provisions	For any affected facility or existing facility regulated under NSPS requirements in 40 CFR 60, the Permittee shall furnish the Department and EPA written notification or, if acceptable to both the EPA and the Permittee, electronic Notification.	Yes	Record review and reasonable inquiry. Certify compliance via the Annual Compliance certification of Condition 64.
TVP01 – Cond 21	40 CFR 60.7(b)	NSPS Subpart A Startup, Shutdown, & Malfunction Requirements	Maintain records of any start-up, shutdown, or malfunction of the unit, any malfunction of the air-pollution control equipment, or any periods during which a continuous monitoring system or device is inoperative.	Yes	Record review and reasonable inquiry. Certify compliance via the Annual Compliance certification of Condition 64.
TVP01 – Cond 22	40 CFR 60.8	NSPS Subpart A Performance (Source) Tests	Conduct source tests as required by Section 6 and as required in this condition.	Yes	Record review and reasonable inquiry. Certify compliance via the Annual Compliance certification of Condition 64.
TVP01 – Cond 24	40 CFR 60.11(g)	NSPS Subpart A Credible Evidence	For the purpose of submitting compliance certifications or establishing whether or not the Permittee has violated or is in violation of the standards set forth in Condition 26, 27, or 28 nothing in 40 CFR Part 60 shall preclude the use, including the exclusive use, of any credible evidence or information, relevant to whether EU IDs 1 – 14 and 18 would have been in compliance with applicable requirements of 40 CFR Part 60 if the appropriate performance or compliance test or procedure had been performed.	Yes	Record review and reasonable inquiry. Certify compliance via the Annual Compliance certification of Condition 64.

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
TVP01 – Cond 25	40 CFR 60.12	NSPS Subpart A Concealment of Emissions	Do not build, erect, install, or use any article, machine, equipment or process, the use of which conceals an emission which would otherwise constitute a violation of a standard set forth in Condition 26, 27, or 28. Such concealment includes, but is not limited to, the use of gaseous diluents to achieve compliance with an opacity standard or with a standard that is based on the concentration of a pollutant in the gases discharged to the atmosphere.	Yes	Record review and reasonable inquiry. Certify compliance via the Annual Compliance certification of Condition 64.
TVP01 – Cond 28	40 CFR 60.4230	NSPS Subpart JJJJ	Comply with all applicable requirements of Subpart JJJJ for stationary spark ignition (SI) internal combustion engine whose construction, modification, or reconstruction commences after June 12, 2006.	Yes	Monitor, record, and report in accordance with Conditions 28.1 through 28.7
TVP01 – Cond 29	40 CFR 63.6590(c)	NESHAP Subpart ZZZZ	Comply with all applicable requirements of NESHAP Subpart ZZZZ for stationary reciprocating internal combustion engines (RICE) located at an area source of hazardous air pollutant (HAP) emissions. 29.2 Meet the requirements of 40 CFR 63 by meeting the requirements of 40 CFR 60 Subpart JJJJ, for SI ICE, as set out in Conditions 28.1 through 28.6.	Yes	Record review and reasonable inquiry. Certify compliance via the Annual Compliance certification of Condition 64.

[1] Citations must be specific. Include sub-paragraph level detail [e.g. 18 AAC 50.055(a)(1), or 40 CFR 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 60 Subpart IIII – Standards of Performance for Stationary CI ICE	Unit is dual fuel, spark ignition engines, not compression ignition.

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

FORM B2

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

Permit Number: AQ1086TVP02A

1.	Emission Unit ID Number // Operating Scenario	6 // 1
2.	Date installation/construction commenced[1]	March 8, 2012
3.	Date installed	March 27, 2015
4.	Emission Unit serial number	PAAE201773
5.	Special control requirements? [if yes, describe]	Yes, selective catalytic reduction and catalytic oxidation
6.	Manufacturer and model number	Wartsila 18V50DF
7.	Type of combustion device	Dual fuel fired engine
8.	Rated design capacity (horsepower rating for engines)	N/A
9.	Rated design capacity (heat input, MMBtu/hr rating for turbines)	N/A
10.	If used for power generation, electrical output (kW)	17.1 MW

1. See page 2 of the Form B instructions regarding installation/construction date and consult regulations under 40 CFR 60 (NSPS) and 40 CFR 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)
99% Natural Gas; 1% Diesel	Approximately 129,548 scf/hr; 13.1 gal/hr
100% Diesel	Approximately 1,114.6 gal/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
TVP01 – Cond 1	18 AAC 50.055(a)(1)	Visible Emissions	Do not cause or allow visible emissions to reduce visibility by more than 20 percent averaged over any six consecutive minutes.	Yes	Monitor, record, and report in accordance with Conditions 1.1 and 9.
TVP01 – Cond 5	18 AAC 50.055(b)(1)	Particulate Matter	Do not cause or allow particulate matter to exceed 0.05 grains per cubic foot of exhaust gas averaged over three hours.	Yes	Monitor, record, and report in accordance with Conditions 5.1 and 9.
TVP01 – Cond 10	18 AAC 50.055(c)	Sulfur Compound Emissions	Do not cause or allow sulfur compound emissions, expressed as SO_2, to exceed 500 ppm averaged over three hours.	Yes	Monitor, record, and report in accordance with Conditions 10.1 and 10.2.
TVP01 – Cond 11	MSS03 – Cond 15	Fuel Sulfur Requirements	The H_2S content of natural gas burned in this unit shall not exceed 20 ppm by volume. The S content of diesel burned in this unit shall not exceed 15 ppm by weight.	Yes	Monitor, record, and report in accordance with Conditions 11.1a, 11.1b, 11.2a, and 11.2b.
TVP01 – Cond 12	MSS03 – Cond 5	Operational Hour Limits	Limit the operation of EU IDs 1 – 10 to no more than 1,680 hours per 12-month rolling period when firing ULSD exclusively. 12.1 Burn only natural gas and ULSD. 12.2 Install and maintain a non-resettable hour meters.	Yes	Monitor, record, and report in accordance with Conditions 12.3 through 12.6.
TVP01 – Cond 15	MSS03 – Cond 8	Control Equipment	Operate and maintain a combined selective catalytic reduction (SCR) and catalytic oxidation (CATOX) control equipment downstream of each of EU IDs 1 – 10 according to the manufacturer's instructions and as follows.	Yes	Monitor, record, and report in accordance with Conditions 15.1 through 15.5.
TVP01 – Cond 16	MSS03 – Cond 9	Formaldehyde (CH_2O) Emission Limit	Limit CH_2O emissions from EU IDs 1 – 10 while firing natural gas to no more than 9.6 tpy during any consecutive 12 months by operating and maintaining the control equipment as described in Condition 15.	Yes	Record review and reasonable inquiry. Certify compliance via the Annual Compliance certification of Condition 64.

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
TVP01 – Cond 17	MSS03 – Cond 13	Annual NO_2 Ambient Air Quality Protection	Maintain a release height for each stack that equals or exceeds 30.0 meters above grade.	Yes	Record review and reasonable inquiry. Certify compliance via the Annual Compliance certification of Condition 64.
TVP01 – Cond 20	40 CFR 60.7(a)	NSPS Subpart A General Provisions	For any affected facility or existing facility regulated under NSPS requirements in 40 CFR 60, the Permittee shall furnish the Department and EPA written notification or, if acceptable to both the EPA and the Permittee, electronic Notification.	Yes	Record review and reasonable inquiry. Certify compliance via the Annual Compliance certification of Condition 64.
TVP01 – Cond 21	40 CFR 60.7(b)	NSPS Subpart A Startup, Shutdown, & Malfunction Requirements	Maintain records of any start-up, shutdown, or malfunction of the unit, any malfunction of the air-pollution control equipment, or any periods during which a continuous monitoring system or device is inoperative.	Yes	Record review and reasonable inquiry. Certify compliance via the Annual Compliance certification of Condition 64.
TVP01 – Cond 22	40 CFR 60.8	NSPS Subpart A Performance (Source) Tests	Conduct source tests as required by Section 6 and as required in this condition.	Yes	Record review and reasonable inquiry. Certify compliance via the Annual Compliance certification of Condition 64.
TVP01 – Cond 24	40 CFR 60.11(g)	NSPS Subpart A Credible Evidence	For the purpose of submitting compliance certifications or establishing whether or not the Permittee has violated or is in violation of the standards set forth in Condition 26, 27, or 28 nothing in 40 CFR Part 60 shall preclude the use, including the exclusive use, of any credible evidence or information, relevant to whether EU IDs 1 – 14 and 18 would have been in compliance with applicable requirements of 40 CFR Part 60 if the appropriate performance or compliance test or procedure had been performed.	Yes	Record review and reasonable inquiry. Certify compliance via the Annual Compliance certification of Condition 64.

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
TVP01 – Cond 25	40 CFR 60.12	NSPS Subpart A Concealment of Emissions	Do not build, erect, install, or use any article, machine, equipment or process, the use of which conceals an emission which would otherwise constitute a violation of a standard set forth in Condition 26, 27, or 28. Such concealment includes, but is not limited to, the use of gaseous diluents to achieve compliance with an opacity standard or with a standard that is based on the concentration of a pollutant in the gases discharged to the atmosphere.	Yes	Record review and reasonable inquiry. Certify compliance via the Annual Compliance certification of Condition 64.
TVP01 – Cond 28	40 CFR 60.4230	NSPS Subpart JJJJ	Comply with all applicable requirements of Subpart JJJJ for stationary spark ignition (SI) internal combustion engine whose construction, modification, or reconstruction commences after June 12, 2006.	Yes	Monitor, record, and report in accordance with Conditions 28.1 through 28.7
TVP01 – Cond 29	40 CFR 63.6590(c)	NESHAP Subpart ZZZZ	Comply with all applicable requirements of NESHAP Subpart ZZZZ for stationary reciprocating internal combustion engines (RICE) located at an area source of hazardous air pollutant (HAP) emissions. 29.2 Meet the requirements of 40 CFR 63 by meeting the requirements of 40 CFR 60 Subpart JJJJ, for SI ICE, as set out in Conditions 28.1 through 28.6.	Yes	Record review and reasonable inquiry. Certify compliance via the Annual Compliance certification of Condition 64.

[1] Citations must be specific. Include sub-paragraph level detail [e.g. 18 AAC 50.055(a)(1), or 40 CFR 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 60 Subpart IIII – Standards of Performance for Stationary CI ICE	Unit is dual fuel, spark ignition engines, not compression ignition.

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

FORM B2

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

Permit Number: AQ1086TVP02A

1.	Emission Unit ID Number // Operating Scenario	7 // 1
2.	Date installation/construction commenced[1]	March 8, 2012
3.	Date installed	February 2, 2015
4.	Emission Unit serial number	PAAE201771
5.	Special control requirements? [if yes, describe]	Yes, selective catalytic reduction and catalytic oxidation
6.	Manufacturer and model number	Wartsila 18V50DF
7.	Type of combustion device	Dual fuel fired engine
8.	Rated design capacity (horsepower rating for engines)	N/A
9.	Rated design capacity (heat input, MMBtu/hr rating for turbines)	N/A
10.	If used for power generation, electrical output (kW)	17.1 MW

1. See page 2 of the Form B instructions regarding installation/construction date and consult regulations under 40 CFR 60 (NSPS) and 40 CFR 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)
99% Natural Gas; 1% Diesel	Approximately 129,548 scf/hr; 13.1 gal/hr
100% Diesel	Approximately 1,114.6 gal/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
TVP01 – Cond 1	18 AAC 50.055(a)(1)	Visible Emissions	Do not cause or allow visible emissions to reduce visibility by more than 20 percent averaged over any six consecutive minutes.	Yes	Monitor, record, and report in accordance with Conditions 1.1 and 9.
TVP01 – Cond 5	18 AAC 50.055(b)(1)	Particulate Matter	Do not cause or allow particulate matter to exceed 0.05 grains per cubic foot of exhaust gas averaged over three hours.	Yes	Monitor, record, and report in accordance with Conditions 5.1 and 9.
TVP01 – Cond 10	18 AAC 50.055(c)	Sulfur Compound Emissions	Do not cause or allow sulfur compound emissions, expressed as SO_2, to exceed 500 ppm averaged over three hours.	Yes	Monitor, record, and report in accordance with Conditions 10.1 and 10.2.
TVP01 – Cond 11	MSS03 – Cond 15	Fuel Sulfur Requirements	The H_2S content of natural gas burned in this unit shall not exceed 20 ppm by volume. The S content of diesel burned in this unit shall not exceed 15 ppm by weight.	Yes	Monitor, record, and report in accordance with Conditions 11.1a, 11.1b, 11.2a, and 11.2b.
TVP01 – Cond 12	MSS03 – Cond 5	Operational Hour Limits	Limit the operation of EU IDs 1 – 10 to no more than 1,680 hours per 12-month rolling period when firing ULSD exclusively. 12.1 Burn only natural gas and ULSD. 12.2 Install and maintain a non-resettable hour meters.	Yes	Monitor, record, and report in accordance with Conditions 12.3 through 12.6.
TVP01 – Cond 15	MSS03 – Cond 8	Control Equipment	Operate and maintain a combined selective catalytic reduction (SCR) and catalytic oxidation (CATOX) control equipment downstream of each of EU IDs 1 – 10 according to the manufacturer's instructions and as follows.	Yes	Monitor, record, and report in accordance with Conditions 15.1 through 15.5.
TVP01 – Cond 16	MSS03 – Cond 9	Formaldehyde (CH_2O) Emission Limit	Limit CH_2O emissions from EU IDs 1 – 10 while firing natural gas to no more than 9.6 tpy during any consecutive 12 months by operating and maintaining the control equipment as described in Condition 15.	Yes	Record review and reasonable inquiry. Certify compliance via the Annual Compliance certification of Condition 64.

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
TVP01 – Cond 17	MSS03 – Cond 13	Annual NO_2 Ambient Air Quality Protection	Maintain a release height for each stack that equals or exceeds 30.0 meters above grade.	Yes	Record review and reasonable inquiry. Certify compliance via the Annual Compliance certification of Condition 64.
TVP01 – Cond 20	40 CFR 60.7(a)	NSPS Subpart A General Provisions	For any affected facility or existing facility regulated under NSPS requirements in 40 CFR 60, the Permittee shall furnish the Department and EPA written notification or, if acceptable to both the EPA and the Permittee, electronic Notification.	Yes	Record review and reasonable inquiry. Certify compliance via the Annual Compliance certification of Condition 64.
TVP01 – Cond 21	40 CFR 60.7(b)	NSPS Subpart A Startup, Shutdown, & Malfunction Requirements	Maintain records of any start-up, shutdown, or malfunction of the unit, any malfunction of the air-pollution control equipment, or any periods during which a continuous monitoring system or device is inoperative.	Yes	Record review and reasonable inquiry. Certify compliance via the Annual Compliance certification of Condition 64.
TVP01 – Cond 22	40 CFR 60.8	NSPS Subpart A Performance (Source) Tests	Conduct source tests as required by Section 6 and as required in this condition.	Yes	Record review and reasonable inquiry. Certify compliance via the Annual Compliance certification of Condition 64.
TVP01 – Cond 24	40 CFR 60.11(g)	NSPS Subpart A Credible Evidence	For the purpose of submitting compliance certifications or establishing whether or not the Permittee has violated or is in violation of the standards set forth in Condition 26, 27, or 28 nothing in 40 CFR Part 60 shall preclude the use, including the exclusive use, of any credible evidence or information, relevant to whether EU IDs 1 – 14 and 18 would have been in compliance with applicable requirements of 40 CFR Part 60 if the appropriate performance or compliance test or procedure had been performed.	Yes	Record review and reasonable inquiry. Certify compliance via the Annual Compliance certification of Condition 64.

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
TVP01 – Cond 25	40 CFR 60.12	NSPS Subpart A Concealment of Emissions	Do not build, erect, install, or use any article, machine, equipment or process, the use of which conceals an emission which would otherwise constitute a violation of a standard set forth in Condition 26, 27, or 28. Such concealment includes, but is not limited to, the use of gaseous diluents to achieve compliance with an opacity standard or with a standard that is based on the concentration of a pollutant in the gases discharged to the atmosphere.	Yes	Record review and reasonable inquiry. Certify compliance via the Annual Compliance certification of Condition 64.
TVP01 – Cond 28	40 CFR 60.4230	NSPS Subpart JJJJ	Comply with all applicable requirements of Subpart JJJJ for stationary spark ignition (SI) internal combustion engine whose construction, modification, or reconstruction commences after June 12, 2006.	Yes	Monitor, record, and report in accordance with Conditions 28.1 through 28.7
TVP01 – Cond 29	40 CFR 63.6590(c)	NESHAP Subpart ZZZZ	Comply with all applicable requirements of NESHAP Subpart ZZZZ for stationary reciprocating internal combustion engines (RICE) located at an area source of hazardous air pollutant (HAP) emissions. 29.2 Meet the requirements of 40 CFR 63 by meeting the requirements of 40 CFR 60 Subpart JJJJ, for SI ICE, as set out in Conditions 28.1 through 28.6.	Yes	Record review and reasonable inquiry. Certify compliance via the Annual Compliance certification of Condition 64.

[1] Citations must be specific. Include sub-paragraph level detail [e.g. 18 AAC 50.055(a)(1), or 40 CFR 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 60 Subpart IIII – Standards of Performance for Stationary CI ICE	Unit is dual fuel, spark ignition engines, not compression ignition.

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

FORM B2

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

Permit Number: AQ1086TVP02A

1.	Emission Unit ID Number // Operating Scenario	8 // 1
2.	Date installation/construction commenced[1]	March 8, 2012
3.	Date installed	February 2, 2015
4.	Emission Unit serial number	PAAE201769
5.	Special control requirements? [if yes, describe]	Yes, selective catalytic reduction and catalytic oxidation
6.	Manufacturer and model number	Wartsila 18V50DF
7.	Type of combustion device	Dual fuel fired engine
8.	Rated design capacity (horsepower rating for engines)	N/A
9.	Rated design capacity (heat input, MMBtu/hr rating for turbines)	N/A
10.	If used for power generation, electrical output (kW)	17.1 MW

1. See page 2 of the Form B instructions regarding installation/construction date and consult regulations under 40 CFR 60 (NSPS) and 40 CFR 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)
99% Natural Gas; 1% Diesel	Approximately 129,548 scf/hr; 13.1 gal/hr
100% Diesel	Approximately 1,114.6 gal/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
TVP01 – Cond 1	18 AAC 50.055(a)(1)	Visible Emissions	Do not cause or allow visible emissions to reduce visibility by more than 20 percent averaged over any six consecutive minutes.	Yes	Monitor, record, and report in accordance with Conditions 1.1 and 9.
TVP01 – Cond 5	18 AAC 50.055(b)(1)	Particulate Matter	Do not cause or allow particulate matter to exceed 0.05 grains per cubic foot of exhaust gas averaged over three hours.	Yes	Monitor, record, and report in accordance with Conditions 5.1 and 9.
TVP01 – Cond 10	18 AAC 50.055(c)	Sulfur Compound Emissions	Do not cause or allow sulfur compound emissions, expressed as SO_2, to exceed 500 ppm averaged over three hours.	Yes	Monitor, record, and report in accordance with Conditions 10.1 and 10.2.
TVP01 – Cond 11	MSS03 – Cond 15	Fuel Sulfur Requirements	The H_2S content of natural gas burned in this unit shall not exceed 20 ppm by volume. The S content of diesel burned in this unit shall not exceed 15 ppm by weight.	Yes	Monitor, record, and report in accordance with Conditions 11.1a, 11.1b, 11.2a, and 11.2b.
TVP01 – Cond 12	MSS03 – Cond 5	Operational Hour Limits	Limit the operation of EU IDs 1 – 10 to no more than 1,680 hours per 12-month rolling period when firing ULSD exclusively. 12.1 Burn only natural gas and ULSD. 12.2 Install and maintain a non-resettable hour meters.	Yes	Monitor, record, and report in accordance with Conditions 12.3 through 12.6.
TVP01 – Cond 15	MSS03 – Cond 8	Control Equipment	Operate and maintain a combined selective catalytic reduction (SCR) and catalytic oxidation (CATOX) control equipment downstream of each of EU IDs 1 – 10 according to the manufacturer's instructions and as follows.	Yes	Monitor, record, and report in accordance with Conditions 15.1 through 15.5.
TVP01 – Cond 16	MSS03 – Cond 9	Formaldehyde (CH_2O) Emission Limit	Limit CH_2O emissions from EU IDs 1 – 10 while firing natural gas to no more than 9.6 tpy during any consecutive 12 months by operating and maintaining the control equipment as described in Condition 15.	Yes	Record review and reasonable inquiry. Certify compliance via the Annual Compliance certification of Condition 64.

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
TVP01 – Cond 17	MSS03 – Cond 13	Annual NO_2 Ambient Air Quality Protection	Maintain a release height for each stack that equals or exceeds 30.0 meters above grade.	Yes	Record review and reasonable inquiry. Certify compliance via the Annual Compliance certification of Condition 64.
TVP01 – Cond 20	40 CFR 60.7(a)	NSPS Subpart A General Provisions	For any affected facility or existing facility regulated under NSPS requirements in 40 CFR 60, the Permittee shall furnish the Department and EPA written notification or, if acceptable to both the EPA and the Permittee, electronic Notification.	Yes	Record review and reasonable inquiry. Certify compliance via the Annual Compliance certification of Condition 64.
TVP01 – Cond 21	40 CFR 60.7(b)	NSPS Subpart A Startup, Shutdown, & Malfunction Requirements	Maintain records of any start-up, shutdown, or malfunction of the unit, any malfunction of the air-pollution control equipment, or any periods during which a continuous monitoring system or device is inoperative.	Yes	Record review and reasonable inquiry. Certify compliance via the Annual Compliance certification of Condition 64.
TVP01 – Cond 22	40 CFR 60.8	NSPS Subpart A Performance (Source) Tests	Conduct source tests as required by Section 6 and as required in this condition.	Yes	Record review and reasonable inquiry. Certify compliance via the Annual Compliance certification of Condition 64.
TVP01 – Cond 24	40 CFR 60.11(g)	NSPS Subpart A Credible Evidence	For the purpose of submitting compliance certifications or establishing whether or not the Permittee has violated or is in violation of the standards set forth in Condition 26, 27, or 28 nothing in 40 CFR Part 60 shall preclude the use, including the exclusive use, of any credible evidence or information, relevant to whether EU IDs 1 – 14 and 18 would have been in compliance with applicable requirements of 40 CFR Part 60 if the appropriate performance or compliance test or procedure had been performed.	Yes	Record review and reasonable inquiry. Certify compliance via the Annual Compliance certification of Condition 64.

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
TVP01 – Cond 25	40 CFR 60.12	NSPS Subpart A Concealment of Emissions	Do not build, erect, install, or use any article, machine, equipment or process, the use of which conceals an emission which would otherwise constitute a violation of a standard set forth in Condition 26, 27, or 28. Such concealment includes, but is not limited to, the use of gaseous diluents to achieve compliance with an opacity standard or with a standard that is based on the concentration of a pollutant in the gases discharged to the atmosphere.	Yes	Record review and reasonable inquiry. Certify compliance via the Annual Compliance certification of Condition 64.
TVP01 – Cond 28	40 CFR 60.4230	NSPS Subpart JJJJ	Comply with all applicable requirements of Subpart JJJJ for stationary spark ignition (SI) internal combustion engine whose construction, modification, or reconstruction commences after June 12, 2006.	Yes	Monitor, record, and report in accordance with Conditions 28.1 through 28.7
TVP01 – Cond 29	40 CFR 63.6590(c)	NESHAP Subpart ZZZZ	Comply with all applicable requirements of NESHAP Subpart ZZZZ for stationary reciprocating internal combustion engines (RICE) located at an area source of hazardous air pollutant (HAP) emissions. 29.2 Meet the requirements of 40 CFR 63 by meeting the requirements of 40 CFR 60 Subpart JJJJ, for SI ICE, as set out in Conditions 28.1 through 28.6.	Yes	Record review and reasonable inquiry. Certify compliance via the Annual Compliance certification of Condition 64.

[1] Citations must be specific. Include sub-paragraph level detail [e.g. 18 AAC 50.055(a)(1), or 40 CFR 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 60 Subpart IIII – Standards of Performance for Stationary CI ICE	Unit is dual fuel, spark ignition engines, not compression ignition.

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

FORM B2

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

Permit Number: AQ1086TVP02A

1.	Emission Unit ID Number // Operating Scenario	9 // 1
2.	Date installation/construction commenced[1]	March 8, 2012
3.	Date installed	February 2, 2015
4.	Emission Unit serial number	PAAE233706
5.	Special control requirements? [if yes, describe]	Yes, selective catalytic reduction and catalytic oxidation
6.	Manufacturer and model number	Wartsila 18V50DF
7.	Type of combustion device	Dual fuel fired engine
8.	Rated design capacity (horsepower rating for engines)	N/A
9.	Rated design capacity (heat input, MMBtu/hr rating for turbines)	N/A
10.	If used for power generation, electrical output (kW)	17.1 MW

1. See page 2 of the Form B instructions regarding installation/construction date and consult regulations under 40 CFR 60 (NSPS) and 40 CFR 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)
99% Natural Gas; 1% Diesel	Approximately 129,548 scf/hr; 13.1 gal/hr
100% Diesel	Approximately 1,114.6 gal/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
TVP01 – Cond 1	18 AAC 50.055(a)(1)	Visible Emissions	Do not cause or allow visible emissions to reduce visibility by more than 20 percent averaged over any six consecutive minutes.	Yes	Monitor, record, and report in accordance with Conditions 1.1 and 9.
TVP01 – Cond 5	18 AAC 50.055(b)(1)	Particulate Matter	Do not cause or allow particulate matter to exceed 0.05 grains per cubic foot of exhaust gas averaged over three hours.	Yes	Monitor, record, and report in accordance with Conditions 5.1 and 9.
TVP01 – Cond 10	18 AAC 50.055(c)	Sulfur Compound Emissions	Do not cause or allow sulfur compound emissions, expressed as SO_2, to exceed 500 ppm averaged over three hours.	Yes	Monitor, record, and report in accordance with Conditions 10.1 and 10.2.
TVP01 – Cond 11	MSS03 – Cond 15	Fuel Sulfur Requirements	The H_2S content of natural gas burned in this unit shall not exceed 20 ppm by volume. The S content of diesel burned in this unit shall not exceed 15 ppm by weight.	Yes	Monitor, record, and report in accordance with Conditions 11.1a, 11.1b, 11.2a, and 11.2b.
TVP01 – Cond 12	MSS03 – Cond 5	Operational Hour Limits	Limit the operation of EU IDs 1 – 10 to no more than 1,680 hours per 12-month rolling period when firing ULSD exclusively. 12.1 Burn only natural gas and ULSD. 12.2 Install and maintain a non-resettable hour meters.	Yes	Monitor, record, and report in accordance with Conditions 12.3 through 12.6.
TVP01 – Cond 15	MSS03 – Cond 8	Control Equipment	Operate and maintain a combined selective catalytic reduction (SCR) and catalytic oxidation (CATOX) control equipment downstream of each of EU IDs 1 – 10 according to the manufacturer's instructions and as follows.	Yes	Monitor, record, and report in accordance with Conditions 15.1 through 15.5.
TVP01 – Cond 16	MSS03 – Cond 9	Formaldehyde (CH_2O) Emission Limit	Limit CH_2O emissions from EU IDs 1 – 10 while firing natural gas to no more than 9.6 tpy during any consecutive 12 months by operating and maintaining the control equipment as described in Condition 15.	Yes	Record review and reasonable inquiry. Certify compliance via the Annual Compliance certification of Condition 64.

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
TVP01 – Cond 17	MSS03 – Cond 13	Annual NO_2 Ambient Air Quality Protection	Maintain a release height for each stack that equals or exceeds 30.0 meters above grade.	Yes	Record review and reasonable inquiry. Certify compliance via the Annual Compliance certification of Condition 64.
TVP01 – Cond 20	40 CFR 60.7(a)	NSPS Subpart A General Provisions	For any affected facility or existing facility regulated under NSPS requirements in 40 CFR 60, the Permittee shall furnish the Department and EPA written notification or, if acceptable to both the EPA and the Permittee, electronic Notification.	Yes	Record review and reasonable inquiry. Certify compliance via the Annual Compliance certification of Condition 64.
TVP01 – Cond 21	40 CFR 60.7(b)	NSPS Subpart A Startup, Shutdown, & Malfunction Requirements	Maintain records of any start-up, shutdown, or malfunction of the unit, any malfunction of the air-pollution control equipment, or any periods during which a continuous monitoring system or device is inoperative.	Yes	Record review and reasonable inquiry. Certify compliance via the Annual Compliance certification of Condition 64.
TVP01 – Cond 22	40 CFR 60.8	NSPS Subpart A Performance (Source) Tests	Conduct source tests as required by Section 6 and as required in this condition.	Yes	Record review and reasonable inquiry. Certify compliance via the Annual Compliance certification of Condition 64.
TVP01 – Cond 24	40 CFR 60.11(g)	NSPS Subpart A Credible Evidence	For the purpose of submitting compliance certifications or establishing whether or not the Permittee has violated or is in violation of the standards set forth in Condition 26, 27, or 28 nothing in 40 CFR Part 60 shall preclude the use, including the exclusive use, of any credible evidence or information, relevant to whether EU IDs 1 – 14 and 18 would have been in compliance with applicable requirements of 40 CFR Part 60 if the appropriate performance or compliance test or procedure had been performed.	Yes	Record review and reasonable inquiry. Certify compliance via the Annual Compliance certification of Condition 64.

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
TVP01 – Cond 25	40 CFR 60.12	NSPS Subpart A Concealment of Emissions	Do not build, erect, install, or use any article, machine, equipment or process, the use of which conceals an emission which would otherwise constitute a violation of a standard set forth in Condition 26, 27, or 28. Such concealment includes, but is not limited to, the use of gaseous diluents to achieve compliance with an opacity standard or with a standard that is based on the concentration of a pollutant in the gases discharged to the atmosphere.	Yes	Record review and reasonable inquiry. Certify compliance via the Annual Compliance certification of Condition 64.
TVP01 – Cond 28	40 CFR 60.4230	NSPS Subpart JJJJ	Comply with all applicable requirements of Subpart JJJJ for stationary spark ignition (SI) internal combustion engine whose construction, modification, or reconstruction commences after June 12, 2006.	Yes	Monitor, record, and report in accordance with Conditions 28.1 through 28.7
TVP01 – Cond 29	40 CFR 63.6590(c)	NESHAP Subpart ZZZZ	Comply with all applicable requirements of NESHAP Subpart ZZZZ for stationary reciprocating internal combustion engines (RICE) located at an area source of hazardous air pollutant (HAP) emissions. 29.2 Meet the requirements of 40 CFR 63 by meeting the requirements of 40 CFR 60 Subpart JJJJ, for SI ICE, as set out in Conditions 28.1 through 28.6.	Yes	Record review and reasonable inquiry. Certify compliance via the Annual Compliance certification of Condition 64.

[1] Citations must be specific. Include sub-paragraph level detail [e.g. 18 AAC 50.055(a)(1), or 40 CFR 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 60 Subpart IIII – Standards of Performance for Stationary CI ICE	Unit is dual fuel, spark ignition engines, not compression ignition.

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

FORM B2

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

Permit Number: AQ1086TVP02A

1.	Emission Unit ID Number // Operating Scenario	10 // 1
2.	Date installation/construction commenced[1]	March 8, 2012
3.	Date installed	February 2, 2015
4.	Emission Unit serial number	PAAE201772
5.	Special control requirements? [if yes, describe]	Yes, selective catalytic reduction and catalytic oxidation
6.	Manufacturer and model number	Wartsila 18V50DF
7.	Type of combustion device	Dual fuel fired engine
8.	Rated design capacity (horsepower rating for engines)	N/A
9.	Rated design capacity (heat input, MMBtu/hr rating for turbines)	N/A
10.	If used for power generation, electrical output (kW)	17.1 MW

1. See page 2 of the Form B instructions regarding installation/construction date and consult regulations under 40 CFR 60 (NSPS) and 40 CFR 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)
99% Natural Gas; 1% Diesel	Approximately 129,548 scf/hr; 13.1 gal/hr
100% Diesel	Approximately 1,114.6 gal/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
TVP01 – Cond 1	18 AAC 50.055(a)(1)	Visible Emissions	Do not cause or allow visible emissions to reduce visibility by more than 20 percent averaged over any six consecutive minutes.	Yes	Monitor, record, and report in accordance with Conditions 1.1 and 9.
TVP01 – Cond 5	18 AAC 50.055(b)(1)	Particulate Matter	Do not cause or allow particulate matter to exceed 0.05 grains per cubic foot of exhaust gas averaged over three hours.	Yes	Monitor, record, and report in accordance with Conditions 5.1 and 9.
TVP01 – Cond 10	18 AAC 50.055(c)	Sulfur Compound Emissions	Do not cause or allow sulfur compound emissions, expressed as SO_2, to exceed 500 ppm averaged over three hours.	Yes	Monitor, record, and report in accordance with Conditions 10.1 and 10.2.
TVP01 – Cond 11	MSS03 – Cond 15	Fuel Sulfur Requirements	The H_2S content of natural gas burned in this unit shall not exceed 20 ppm by volume. The S content of diesel burned in this unit shall not exceed 15 ppm by weight.	Yes	Monitor, record, and report in accordance with Conditions 11.1a, 11.1b, 11.2a, and 11.2b.
TVP01 – Cond 12	MSS03 – Cond 5	Operational Hour Limits	Limit the operation of EU IDs 1 – 10 to no more than 1,680 hours per 12-month rolling period when firing ULSD exclusively. 12.1 Burn only natural gas and ULSD. 12.2 Install and maintain a non-resettable hour meters.	Yes	Monitor, record, and report in accordance with Conditions 12.3 through 12.6.
TVP01 – Cond 15	MSS03 – Cond 8	Control Equipment	Operate and maintain a combined selective catalytic reduction (SCR) and catalytic oxidation (CATOX) control equipment downstream of each of EU IDs 1 – 10 according to the manufacturer's instructions and as follows.	Yes	Monitor, record, and report in accordance with Conditions 15.1 through 15.5.
TVP01 – Cond 16	MSS03 – Cond 9	Formaldehyde (CH_2O) Emission Limit	Limit CH_2O emissions from EU IDs 1 – 10 while firing natural gas to no more than 9.6 tpy during any consecutive 12 months by operating and maintaining the control equipment as described in Condition 15.	Yes	Record review and reasonable inquiry. Certify compliance via the Annual Compliance certification of Condition 64.

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
TVP01 – Cond 17	MSS03 – Cond 13	Annual NO_2 Ambient Air Quality Protection	Maintain a release height for each stack that equals or exceeds 30.0 meters above grade.	Yes	Record review and reasonable inquiry. Certify compliance via the Annual Compliance certification of Condition 64.
TVP01 – Cond 20	40 CFR 60.7(a)	NSPS Subpart A General Provisions	For any affected facility or existing facility regulated under NSPS requirements in 40 CFR 60, the Permittee shall furnish the Department and EPA written notification or, if acceptable to both the EPA and the Permittee, electronic Notification.	Yes	Record review and reasonable inquiry. Certify compliance via the Annual Compliance certification of Condition 64.
TVP01 – Cond 21	40 CFR 60.7(b)	NSPS Subpart A Startup, Shutdown, & Malfunction Requirements	Maintain records of any start-up, shutdown, or malfunction of the unit, any malfunction of the air-pollution control equipment, or any periods during which a continuous monitoring system or device is inoperative.	Yes	Record review and reasonable inquiry. Certify compliance via the Annual Compliance certification of Condition 64.
TVP01 – Cond 22	40 CFR 60.8	NSPS Subpart A Performance (Source) Tests	Conduct source tests as required by Section 6 and as required in this condition.	Yes	Record review and reasonable inquiry. Certify compliance via the Annual Compliance certification of Condition 64.
TVP01 – Cond 24	40 CFR 60.11(g)	NSPS Subpart A Credible Evidence	For the purpose of submitting compliance certifications or establishing whether or not the Permittee has violated or is in violation of the standards set forth in Condition 26, 27, or 28 nothing in 40 CFR Part 60 shall preclude the use, including the exclusive use, of any credible evidence or information, relevant to whether EU IDs 1 – 14 and 18 would have been in compliance with applicable requirements of 40 CFR Part 60 if the appropriate performance or compliance test or procedure had been performed.	Yes	Record review and reasonable inquiry. Certify compliance via the Annual Compliance certification of Condition 64.

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
TVP01 – Cond 25	40 CFR 60.12	NSPS Subpart A Concealment of Emissions	Do not build, erect, install, or use any article, machine, equipment or process, the use of which conceals an emission which would otherwise constitute a violation of a standard set forth in Condition 26, 27, or 28. Such concealment includes, but is not limited to, the use of gaseous diluents to achieve compliance with an opacity standard or with a standard that is based on the concentration of a pollutant in the gases discharged to the atmosphere.	Yes	Record review and reasonable inquiry. Certify compliance via the Annual Compliance certification of Condition 64.
TVP01 – Cond 28	40 CFR 60.4230	NSPS Subpart JJJJ	Comply with all applicable requirements of Subpart JJJJ for stationary spark ignition (SI) internal combustion engine whose construction, modification, or reconstruction commences after June 12, 2006.	Yes	Monitor, record, and report in accordance with Conditions 28.1 through 28.7
TVP01 – Cond 29	40 CFR 63.6590(c)	NESHAP Subpart ZZZZ	Comply with all applicable requirements of NESHAP Subpart ZZZZ for stationary reciprocating internal combustion engines (RICE) located at an area source of hazardous air pollutant (HAP) emissions. 29.2 Meet the requirements of 40 CFR 63 by meeting the requirements of 40 CFR 60 Subpart JJJJ, for SI ICE, as set out in Conditions 28.1 through 28.6.	Yes	Record review and reasonable inquiry. Certify compliance via the Annual Compliance certification of Condition 64.

[1] Citations must be specific. Include sub-paragraph level detail [e.g. 18 AAC 50.055(a)(1), or 40 CFR 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 60 Subpart IIII – Standards of Performance for Stationary CI ICE	Unit is dual fuel, spark ignition engines, not compression ignition.

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

FORM B2

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

Permit Number: AQ1086TVP02A

1.	Emission Unit ID Number // Operating Scenario	11 // 1
2.	Date installation/construction commenced[1]	June 2012
3.	Date installed	October 2014
4.	Emission Unit serial number	PE6068L23649
5.	Special control requirements? [if yes, describe]	No
6.	Manufacturer and model number	John Deere JU6H-UFADN0
7.	Type of combustion device	Diesel engine
8.	Rated design capacity (horsepower rating for engines)	197 horsepower
9.	Rated design capacity (heat input, MMBtu/hr rating for turbines)	N/A
10.	If used for power generation, electrical output (kW)	N/A

1. See page 2 of the Form B instructions regarding installation/construction date and consult regulations under 40 CFR 60 (NSPS) and 40 CFR 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	Approximately 10.3 gallons per hour

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
TVP01 – Cond 1	18 AAC 50.055(a)(1)	Visible Emissions	Do not cause or allow visible emissions to reduce visibility by more than 20 percent averaged over any six consecutive minutes.	Yes	Monitor, record, and report in accordance with Condition 1.3.
TVP01 – Cond 5	18 AAC 50.055(b)(1)	Particulate Matter	Do not cause or allow particulate matter to exceed 0.05 grains per cubic foot of exhaust gas averaged over three hours.	Yes	Monitor, record, and report in accordance with Conditions 5.3 and 6-8.
TVP01 – Cond 10	18 AAC 50.055(c)	Sulfur Compound Emissions	Do not cause or allow sulfur compound emissions, expressed as SO_2, to exceed 500 ppm averaged over three hours.	Yes	Monitor, record, and report in accordance with Condition 10.1.
TVP01 – Cond 11.2	MSS03 – Cond 15	Fuel Sulfur Requirements	The sulfur content of diesel fuel burned in this unit shall not exceed 15 ppm by weight (ppmw) of sulfur.	Yes	Monitor, record, and report in accordance with Conditions 11.2a and 11.2b.
TVP01 – Cond 13	MSS03 – Cond 6	Operational Hour Limits	Limit the operation to no more than 500 hours per year.	Yes	Monitor, record, and report in accordance with Conditions 13.1 through 13.5.
TVP01 – Cond 20	40 CFR 60.7(a)	NSPS Subpart A General Provisions	For any affected facility or existing facility regulated under NSPS requirements in 40 CFR 60, the Permittee shall furnish the Department and EPA written notification or, if acceptable to both the EPA and the Permittee, electronic Notification.	Yes	Record review and reasonable inquiry. Certify compliance via the Annual Compliance certification of Condition 64.
TVP01 – Cond 21	40 CFR 60.7(b)	NSPS Subpart A Startup, Shutdown, & Malfunction Requirements	Maintain records of any start-up, shutdown, or malfunction of the unit, any malfunction of the air-pollution control equipment, or any periods during which a continuous monitoring system or device is inoperative.	Yes	Record review and reasonable inquiry. Certify compliance via the Annual Compliance certification of Condition 64.

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
TVP01 – Cond 22.5	40 CFR 60.8(e)	NSPS Subpart A Performance Source Tests	Sampling ports adequate for test methods applicable to EU IDs 1 – 14 and 18. This includes (i) constructing the air pollution control system such that volumetric flow rates and pollutant emission rates can be accurately determined by applicable test methods and procedures and (ii) providing a stack or duct free of cyclonic flow during performance tests, as demonstrated by applicable test methods and procedures.	Yes	Record review and reasonable inquiry. Certify compliance via the Annual Compliance certification of Condition 64.
TVP01 – Cond 24	40 CFR 60.11(g)	NSPS Subpart A Credible Evidence	For the purpose of submitting compliance certifications or establishing whether or not the Permittee has violated or is in violation of the standards set forth in Condition 26, 27, or 28 nothing in 40 CFR Part 60 shall preclude the use, including the exclusive use, of any credible evidence or information, relevant to whether EU IDs 1 through 14 and 18 would have been in compliance with applicable requirements of 40 CFR Part 60 if the appropriate performance or compliance test or procedure had been performed.	Yes	Record review and reasonable inquiry. Certify compliance via the Annual Compliance certification of Condition 64.
TVP01 – Cond 25	40 CFR 60.12	NSPS Subpart A Concealment of Emissions	Do not build, erect, install, or use any article, machine, equipment or process, the use of which conceals an emission which would otherwise constitute a violation of a standard set forth in Condition 26, 27, or 28. Such concealment includes, but is not limited to, the use of gaseous diluents to achieve compliance with an opacity standard or with a standard that is based on the concentration of a pollutant in the gases discharged to the atmosphere.	Yes	Record review and reasonable inquiry. Certify compliance via the Annual Compliance certification of Condition 64.
TVP01 – Cond 27	40 CFR 60.4200	NSPS Subpart IIII	Comply with all applicable requirements in 40 CFR 60 Subpart IIII.	Yes	Monitor, record, and report in accordance with Conditions 27.6, 27.7, and 27.9-27.12.

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
TVP01 – Cond 29	40 CFR 63.6590(c)	NESHAP Subpart ZZZZ	Comply with all applicable requirements of NESHAP Subpart ZZZZ for stationary reciprocating internal combustion engines (RICE) located at an area source of hazardous air pollutant (HAP) emissions. 29.1 Meet the requirements of 40 CFR 63 by meeting the requirements of 40 CFR 60 Subpart IIII, for CI ICE, as set out in Conditions 27.1 through 27.12. No further requirements apply.	Yes	Record review and reasonable inquiry. Certify compliance via the Annual Compliance certification of Condition 64.

[1] Citations must be specific. Include sub-paragraph level detail [e.g. 18 AAC 50.055(a)(1), or 40 CFR 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
N/A	

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

FORM B2

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

Permit Number: AQ1086TVP02A

1.	Emission Unit ID Number // Operating Scenario	12 // 1
2.	Date installation/construction commenced[1]	June 2013
3.	Date installed	April 2015
4.	Emission Unit serial number	37259966
5.	Special control requirements? [if yes, describe]	No
6.	Manufacturer and model number	Cummins 1000DQFAD
7.	Type of combustion device	Diesel engine
8.	Rated design capacity (horsepower rating for engines)	1,490 horsepower
9.	Rated design capacity (heat input, MMBtu/hr rating for turbines)	N/A
10.	If used for power generation, electrical output (kW)	N/A

1. See page 2 of the Form B instructions regarding installation/construction date and consult regulations under 40 CFR 60 (NSPS) and 40 CFR 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	Approximately 71.9 gallons per hour

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
TVP01 – Cond 1	18 AAC 50.055(a)(1)	Visible Emissions	Do not cause or allow visible emissions to reduce visibility by more than 20 percent averaged over any six consecutive minutes.	Yes	Monitor, record, and report in accordance with Conditions 2 through 4.
TVP01 – Cond 5	18 AAC 50.055(b)(1)	Particulate Matter	Do not cause or allow particulate matter to exceed 0.05 grains per cubic foot of exhaust gas averaged over three hours.	Yes	Monitor, record, and report in accordance with Conditions 6 through 8.
TVP01 – Cond 10	18 AAC 50.055(c)	Sulfur Compound Emissions	Do not cause or allow sulfur compound emissions, expressed as SO_2, to exceed 500 ppm averaged over three hours.	Yes	Monitor, record, and report in accordance with Condition 10.1.
TVP01 – Cond 11.2	MSS03 – Cond 15	Fuel Sulfur Requirements	The sulfur content of diesel fuel burned in this unit shall not exceed 15 ppm by weight (ppmw) of sulfur.	Yes	Monitor, record, and report in accordance with Conditions 11.2a and 11.2b.
TVP01 – Cond 18	MSS03 – Cond 14	Annual NO_2 Ambient Air Quality Protection	Protect the annual NO_2 and 24-hr PM-10, by limiting the combined operating hours for EU IDs 12 and 18 to no more than 1,000 hours per rolling 12-month period.	Yes	Monitor, record, and report in accordance with Conditions 18.1 through 18.5.
TVP01 – Cond 20	40 CFR 60.7(a)	NSPS Subpart A General Provisions	For any affected facility or existing facility regulated under NSPS requirements in 40 CFR 60, the Permittee shall furnish the Department and EPA written notification or, if acceptable to both the EPA and the Permittee, electronic Notification.	Yes	Record review and reasonable inquiry. Certify compliance via the Annual Compliance certification of Condition 64.
TVP01 – Cond 21	40 CFR 60.7(b)	NSPS Subpart A Startup, Shutdown, & Malfunction Requirements	Maintain records of any start-up, shutdown, or malfunction of the unit, any malfunction of the air-pollution control equipment, or any periods during which a continuous monitoring system or device is inoperative.	Yes	Record review and reasonable inquiry. Certify compliance via the Annual Compliance certification of Condition 64.

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
TVP01 – Cond 22.5	40 CFR 60.8(e)	NSPS Subpart A Performance Source Tests	Sampling ports adequate for test methods applicable to EU IDs 1 – 14 and 18. This includes (i) constructing the air pollution control system such that volumetric flow rates and pollutant emission rates can be accurately determined by applicable test methods and procedures and (ii) providing a stack or duct free of cyclonic flow during performance tests, as demonstrated by applicable test methods and procedures.	Yes	Record review and reasonable inquiry. Certify compliance via the Annual Compliance certification of Condition 64.
TVP01 – Cond 24	40 CFR 60.11(g)	NSPS Subpart A Credible Evidence	For the purpose of submitting compliance certifications or establishing whether or not the Permittee has violated or is in violation of the standards set forth in Condition 26, 27, or 28 nothing in 40 CFR Part 60 shall preclude the use, including the exclusive use, of any credible evidence or information, relevant to whether EU IDs 1 – 14 and 18 would have been in compliance with applicable requirements of 40 CFR Part 60 if the appropriate performance or compliance test or procedure had been performed.	Yes	Record review and reasonable inquiry. Certify compliance via the Annual Compliance certification of Condition 64.
TVP01 – Cond 25	40 CFR 60.12	NSPS Subpart A Concealment of Emissions	Do not build, erect, install, or use any article, machine, equipment or process, the use of which conceals an emission which would otherwise constitute a violation of a standard set forth in Condition 26, 27, or 28. Such concealment includes, but is not limited to, the use of gaseous diluents to achieve compliance with an opacity standard or with a standard that is based on the concentration of a pollutant in the gases discharged to the atmosphere.	Yes	Record review and reasonable inquiry. Certify compliance via the Annual Compliance certification of Condition 64.
TVP01 – Cond 27	40 CFR 60.4200	NSPS Subpart IIII	Comply with all applicable requirements in 40 CFR 60 Subpart IIII.	Yes	Monitor, record, and report in accordance with Conditions 27.6 through 27.8 and 27.10 through 27.12.

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
TVP01 – Cond 29	40 CFR 63.6590(c)	NESHAP Subpart ZZZZ	Comply with all applicable requirements of NESHAP Subpart ZZZZ for stationary reciprocating internal combustion engines (RICE) located at an area source of hazardous air pollutant (HAP) emissions. 29.1 Meet the requirements of 40 CFR 63 by meeting the requirements of 40 CFR 60 Subpart IIII, for CI ICE, as set out in Conditions 27.1 through 27.12. No further requirements apply.	Yes	Record review and reasonable inquiry. Certify compliance via the Annual Compliance certification of Condition 64.

[1] Citations must be specific. Include sub-paragraph level detail [e.g. 18 AAC 50.055(a)(1), or 40 CFR 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
N/A	

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

FORM B2

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

Permit Number: AQ1086TVP02A

1.	Emission Unit ID Number // Operating Scenario	18 // 1
2.	Date installation/construction commenced[1]	June 2013
3.	Date installed	April 2015
4.	Emission Unit serial number	37259833
5.	Special control requirements? [if yes, describe]	No
6.	Manufacturer and model number	Cummins 1000DQFAD
7.	Type of combustion device	Diesel engine
8.	Rated design capacity (horsepower rating for engines)	1,490 horsepower
9.	Rated design capacity (heat input, MMBtu/hr rating for turbines)	N/A
10.	If used for power generation, electrical output (kW)	N/A

1. See page 2 of the Form B instructions regarding installation/construction date and consult regulations under 40 CFR 60 (NSPS) and 40 CFR 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	Approximately 71.9 gallons per hour

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
TVP01 – Cond 1	18 AAC 50.055(a)(1)	Visible Emissions	Do not cause or allow visible emissions to reduce visibility by more than 20 percent averaged over any six consecutive minutes.	Yes	Monitor, record, and report in accordance with Conditions 2 through 4.
TVP01 – Cond 5	18 AAC 50.055(b)(1)	Particulate Matter	Do not cause or allow particulate matter to exceed 0.05 grains per cubic foot of exhaust gas averaged over three hours.	Yes	Monitor, record, and report in accordance with Conditions 6 through 8.
TVP01 – Cond 10	18 AAC 50.055(c)	Sulfur Compound Emissions	Do not cause or allow sulfur compound emissions, expressed as SO_2, to exceed 500 ppm averaged over three hours.	Yes	Monitor, record, and report in accordance with Condition 10.1.
TVP01 – Cond 11.2	MSS03 – Cond 15	Fuel Sulfur Requirements	The sulfur content of diesel fuel burned in this unit shall not exceed 15 ppm by weight (ppmw) of sulfur.	Yes	Monitor, record, and report in accordance with Conditions 11.2a and 11.2b.
TVP01 – Cond 18	MSS03 – Cond 14	Annual NO_2 Ambient Air Quality Protection	Protect the annual NO_2 and 24-hr PM-10, by limiting the combined operating hours for EU IDs 12 and 18 to no more than 1,000 hours per rolling 12-month period.	Yes	Monitor, record, and report in accordance with Conditions 18.1 through 18.5.
TVP01 – Cond 20	40 CFR 60.7(a)	NSPS Subpart A General Provisions	For any affected facility or existing facility regulated under NSPS requirements in 40 CFR 60, the Permittee shall furnish the Department and EPA written notification or, if acceptable to both the EPA and the Permittee, electronic Notification.	Yes	Record review and reasonable inquiry. Certify compliance via the Annual Compliance certification of Condition 64.
TVP01 – Cond 21	40 CFR 60.7(b)	NSPS Subpart A Startup, Shutdown, & Malfunction Requirements	Maintain records of any start-up, shutdown, or malfunction of the unit, any malfunction of the air-pollution control equipment, or any periods during which a continuous monitoring system or device is inoperative.	Yes	Record review and reasonable inquiry. Certify compliance via the Annual Compliance certification of Condition 64.

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
TVP01 – Cond 22.5	40 CFR 60.8(e)	NSPS Subpart A Performance Source Tests	Sampling ports adequate for test methods applicable to EU IDs 1 – 14 and 18. This includes (i) constructing the air pollution control system such that volumetric flow rates and pollutant emission rates can be accurately determined by applicable test methods and procedures and (ii) providing a stack or duct free of cyclonic flow during performance tests, as demonstrated by applicable test methods and procedures.	Yes	Record review and reasonable inquiry. Certify compliance via the Annual Compliance certification of Condition 64.
TVP01 – Cond 24	40 CFR 60.11(g)	NSPS Subpart A Credible Evidence	For the purpose of submitting compliance certifications or establishing whether or not the Permittee has violated or is in violation of the standards set forth in Condition 26, 27, or 28 nothing in 40 CFR Part 60 shall preclude the use, including the exclusive use, of any credible evidence or information, relevant to whether EU IDs 1 – 14 and 18 would have been in compliance with applicable requirements of 40 CFR Part 60 if the appropriate performance or compliance test or procedure had been performed.	Yes	Record review and reasonable inquiry. Certify compliance via the Annual Compliance certification of Condition 64.
TVP01 – Cond 25	40 CFR 60.12	NSPS Subpart A Concealment of Emissions	Do not build, erect, install, or use any article, machine, equipment or process, the use of which conceals an emission which would otherwise constitute a violation of a standard set forth in Condition 26, 27, or 28. Such concealment includes, but is not limited to, the use of gaseous diluents to achieve compliance with an opacity standard or with a standard that is based on the concentration of a pollutant in the gases discharged to the atmosphere.	Yes	Record review and reasonable inquiry. Certify compliance via the Annual Compliance certification of Condition 64.
TVP01 – Cond 27	40 CFR 60.4200	NSPS Subpart IIII	Comply with all applicable requirements in 40 CFR 60 Subpart IIII.	Yes	Monitor, record, and report in accordance with Conditions 27.6 through 27.8 and 27.10 through 27.12.

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
TVP01 – Cond 29	40 CFR 63.6590(c)	NESHAP Subpart ZZZZ	Comply with all applicable requirements of NESHAP Subpart ZZZZ for stationary reciprocating internal combustion engines (RICE) located at an area source of hazardous air pollutant (HAP) emissions. 29.1 Meet the requirements of 40 CFR 63 by meeting the requirements of 40 CFR 60 Subpart IIII, for CI ICE, as set out in Conditions 27.1 through 27.12. No further requirements apply.	Yes	Record review and reasonable inquiry. Certify compliance via the Annual Compliance certification of Condition 64.

[1] Citations must be specific. Include sub-paragraph level detail [e.g. 18 AAC 50.055(a)(1), or 40 CFR 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
N/A	

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

FORM B1

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

Permit Number: AQ1086TVP02A

1.	Emission Unit ID Number // Operating Scenario	13 // 1
2.	Date installation/construction commenced	June 2013
3.	Date installed	October 2014
4.	Emission Unit serial number	08688-1-2
5.	Special control requirements? [if yes, describe]	N/A
6.	Manufacturer	Cleaver-Brooks
7.	Description of emission unit, including type of boiler/heater and firing method: Dual fuel fired water boiler. Natural gas is fired at all times, except during testing or natural gas curtailment.	
8.	Rated design capacity (heat input, MMBtu/hr)	15.75 MMBtu/hr
9.	Maximum steam production rate (lbs/hr)	662,235 lb/hr
10.	Maximum steam pressure (psi)	30 psi
11.	Maximum steam temperature (°F)	180 □F

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

Fuel	Maximum hourly firing rate (specify units)
Natural Gas	Approximately 15,752 scf/hr
ULSD	Approximately 110.3 gal/hr

13.	Is waste heat utilized for any purpose? If yes, describe: No, waste heat is not utilized.

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
TVP01 – Cond 1	18 AAC 50.055(a)(1)	Visible Emissions	Do not cause or allow visible emissions to reduce visibility by more than 20 percent averaged over any six consecutive minutes.	Yes	Monitor, record, and report in accordance with Conditions 1.1 and 9.
TVP01 – Cond 5	18 AAC 50.055(b)(1)	Particulate Matter	Do not cause or allow particulate matter to exceed 0.05 grains per cubic foot of exhaust gas averaged over three hours.	Yes	Monitor, record, and report in accordance with Conditions 5.1 and 9.
TVP01 – Cond 10	18 AAC 50.055(c)	Sulfur Compound Emissions	Do not cause or allow sulfur compound emissions, expressed as SO_2, to exceed 500 ppm averaged over three hours.	Yes	Monitor, record, and report in accordance with Conditions 10.1 and 10.2.
TVP01 – Cond 11	MSS03 – Cond 15	Fuel Sulfur Requirements	11.1 The H_2S content of natural gas burned in this unit shall not exceed 20 ppm by volume. 11.2 The S content of diesel burned in this unit shall not exceed 15 ppm by weight.	Yes	Monitor, record, and report in accordance with Conditions 11.1a, 11.1b, 11.2a, and 11.2b.
TVP01 – Cond 14	MSS03 – Cond 7	Operational Hour Limits	Limit the combined hours of operation of EU IDs 13 and 14 to no more than 1,000 hours per rolling 12-month period when firing ULSD exclusively. 14.1 Fire only natural gas and ULSD.	Yes	Monitor, record, and report in accordance with Conditions 14.2 through 14.6.
TVP01 – Cond 20	40 CFR 60.7(a)	NSPS Subpart A General Provisions	For any affected facility or existing facility regulated under NSPS requirements in 40 CFR 60, the Permittee shall furnish the Department and EPA written notification or, if acceptable to both the EPA and the Permittee, electronic Notification.	Yes	Record review and reasonable inquiry. Certify compliance via the Annual Compliance certification of Condition 64.
TVP01 – Cond 21	40 CFR 60.7(b)	NSPS Subpart A Startup, Shutdown, & Malfunction Requirements	Maintain records of any start-up, shutdown, or malfunction of the unit, any malfunction of the air-pollution control equipment, or any periods during which a continuous monitoring system or device is inoperative.	Yes	Record review and reasonable inquiry. Certify compliance via the Annual Compliance certification of Condition 64.

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
TVP01 – Cond 22.5	40 CFR 60.8(e)	NSPS Subpart A Performance Source Tests	Sampling ports adequate for test methods applicable to EU IDs 1 – 14 and 18. This includes (i) constructing the air pollution control system such that volumetric flow rates and pollutant emission rates can be accurately determined by applicable test methods and procedures and (ii) providing a stack or duct free of cyclonic flow during performance tests, as demonstrated by applicable test methods and procedures.	Yes	Record review and reasonable inquiry. Certify compliance via the Annual Compliance certification of Condition 64.
TVP01 – Cond 23	40 CFR 60.11(d)	NSPS Subpart A Good Air Pollution Control Practice	At all times, including periods of startup, shutdown, and malfunction, the Permittee shall, to the extent practicable, maintain and operate EU IDs 13 and 14 including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions. The Administrator will determine whether acceptable operating and maintenance procedures are being used based on information available, which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance records, and inspections of EU IDs 13 and 14.	Yes	Record review and reasonable inquiry. Certify compliance via the Annual Compliance certification of Condition 64.
TVP01 – Cond 24	40 CFR 60.11(g)	NSPS Subpart A Credible Evidence	For the purpose of submitting compliance certifications or establishing whether or not the Permittee has violated or is in violation of the standards set forth in Condition 26, 27, or 28 nothing in 40 CFR Part 60 shall preclude the use, including the exclusive use, of any credible evidence or information, relevant to whether EU IDs 1 through 14 and 18 would have been in compliance with applicable requirements of 40 CFR Part 60 if the appropriate performance or compliance test or procedure had been performed.	Yes	Record review and reasonable inquiry. Certify compliance via the Annual Compliance certification of Condition 64.

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
TVP01 – Cond 25	40 CFR 60.12	NSPS Subpart A Concealment of Emissions	Do not build, erect, install, or use any article, machine, equipment or process, the use of which conceals an emission which would otherwise constitute a violation of a standard set forth in Condition 26, 27, or 28. Such concealment includes, but is not limited to, the use of gaseous diluents to achieve compliance with an opacity standard or with a standard that is based on the concentration of a pollutant in the gases discharged to the atmosphere.	Yes	Record review and reasonable inquiry. Certify compliance via the Annual Compliance certification of Condition 64.
TVP01 – Cond 26	40 CFR 60.40c(a)	NSPS Subpart Dc	Comply with any applicable requirement in 40 CFR 60 Subpart Dc for small steam generating units for which construction is commenced after June 9, 1989 and that has a maximum design capacity of 100 MMBtu/hr or less but greater than or equal to 10 MMBtu/hr. 26.1 At all times, including periods of startup, shutdown, and malfunction, when EU IDs 13 and 14 combust fuel oil, the Permittee shall either: a. emit no more than 0.5 lb SO2/MMBtu (215 ng/J) heat input from fuel oil combusted, or b. combust fuel oil that contains no more than 0.5 percent sulfur by weight	Yes	Monitor, record, and report in accordance with Conditions 26.2 through 26.5.
TVP01 – Cond 42	18 AAC 50.030	Good Air Pollution Control Practice	42.1 Perform regular maintenance considering the manufacturer's or the operator's maintenance procedures	Yes	Monitor, record, and report in accordance with Conditions 42.2 through 42.3.

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

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

Non-Applicable Requirements[1]	Reason for non-applicability and citation/basis
40 CFR 60 Subpart Da – Standards of Performance for Electric Utility Steam Generating Units	Unit has a heat input less than 250 MMBtu/hr and is therefore exempt per 40 CFR 60.40Da(e)(1).
40 CFR 60 Subpart Db – Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units	Unit has a heat input less than 100 MMBtu/hr and is therefore exempt per 40 CFR 60.40Db(a).
40 CFR. 63 Subpart DDDDD – NESHAP for major sources: industrial, commercial, and institutional boilers and process heaters	Unit is not located at a major source of HAP and is therefore exempt per 40 CFR 63.7485.
40 CFR 60 Subpart JJJJJJ – NESHAP for Industrial, Commercial, and Institutional Boilers Area Sources	Unit meets definition of gas fired boiler and is therefore exempt per 40 CFR 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: AQ1086TVP02A

1.	Emission Unit ID Number // Operating Scenario	14 // 1
2.	Date installation/construction commenced	June 2013
3.	Date installed	October 2014
4.	Emission Unit serial number	08688-1-1
5.	Special control requirements? [if yes, describe]	N/A
6.	Manufacturer	Cleaver-Brooks
7.	Description of emission unit, including type of boiler/heater and firing method: Dual fuel fired water boiler. Natural gas is fired at all times, except during testing or natural gas curtailment.	
8.	Rated design capacity (heat input, MMBtu/hr)	15.75 MMBtu/hr
9.	Maximum steam production rate (lbs/hr)	662,235 lb/hr
10.	Maximum steam pressure (psi)	30 psi
11.	Maximum steam temperature (°F)	180 °F

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

Fuel	Maximum hourly firing rate (specify units)
Natural Gas	Approximately 15,752 scf/hr
ULSD	Approximately 110.3 gal/hr

13.	Is waste heat utilized for any purpose? If yes, describe: No, waste heat is not utilized.

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
TVP01 – Cond 1	18 AAC 50.055(a)(1)	Visible Emissions	Do not cause or allow visible emissions to reduce visibility by more than 20 percent averaged over any six consecutive minutes.	Yes	Monitor, record, and report in accordance with Conditions 1.1 and 9.
TVP01 – Cond 5	18 AAC 50.055(b)(1)	Particulate Matter	Do not cause or allow particulate matter to exceed 0.05 grains per cubic foot of exhaust gas averaged over three hours.	Yes	Monitor, record, and report in accordance with Conditions 5.1 and 9.
TVP01 – Cond 10	18 AAC 50.055(c)	Sulfur Compound Emissions	Do not cause or allow sulfur compound emissions, expressed as SO_2, to exceed 500 ppm averaged over three hours.	Yes	Monitor, record, and report in accordance with Conditions 10.1 and 10.2.
TVP01 – Cond 11	MSS03 – Cond 15	Fuel Sulfur Requirements	11.1 The H_2S content of natural gas burned in this unit shall not exceed 20 ppm by volume. 11.2 The S content of diesel burned in this unit shall not exceed 15 ppm by weight.	Yes	Monitor, record, and report in accordance with Conditions 11.1a, 11.1b, 11.2a, and 11.2b.
TVP01 – Cond 14	MSS03 – Cond 7	Operational Hour Limits	Limit the combined hours of operation of EU IDs 13 and 14 to no more than 1,000 hours per rolling 12-month period when firing ULSD exclusively. 14.1 Fire only natural gas and ULSD.	Yes	Monitor, record, and report in accordance with Conditions 14.2 through 14.6.
TVP01 – Cond 20	40 CFR 60.7(a)	NSPS Subpart A General Provisions	For any affected facility or existing facility regulated under NSPS requirements in 40 CFR 60, the Permittee shall furnish the Department and EPA written notification or, if acceptable to both the EPA and the Permittee, electronic Notification.	Yes	Record review and reasonable inquiry. Certify compliance via the Annual Compliance certification of Condition 64.
TVP01 – Cond 21	40 CFR 60.7(b)	NSPS Subpart A Startup, Shutdown, & Malfunction Requirements	Maintain records of any start-up, shutdown, or malfunction of the unit, any malfunction of the air-pollution control equipment, or any periods during which a continuous monitoring system or device is inoperative.	Yes	Record review and reasonable inquiry. Certify compliance via the Annual Compliance certification of Condition 64.

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
TVP01 – Cond 22.5	40 CFR 60.8(e)	NSPS Subpart A Performance Source Tests	Sampling ports adequate for test methods applicable to EU IDs 1 – 14 and 18. This includes (i) constructing the air pollution control system such that volumetric flow rates and pollutant emission rates can be accurately determined by applicable test methods and procedures and (ii) providing a stack or duct free of cyclonic flow during performance tests, as demonstrated by applicable test methods and procedures.	Yes	Record review and reasonable inquiry. Certify compliance via the Annual Compliance certification of Condition 64.
TVP01 – Cond 23	40 CFR 60.11(d)	NSPS Subpart A Good Air Pollution Control Practice	At all times, including periods of startup, shutdown, and malfunction, the Permittee shall, to the extent practicable, maintain and operate EU IDs 13 and 14 including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions. The Administrator will determine whether acceptable operating and maintenance procedures are being used based on information available, which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance records, and inspections of EU IDs 13 and 14.	Yes	Record review and reasonable inquiry. Certify compliance via the Annual Compliance certification of Condition 64.
TVP01 – Cond 24	40 CFR 60.11(g)	NSPS Subpart A Credible Evidence	For the purpose of submitting compliance certifications or establishing whether or not the Permittee has violated or is in violation of the standards set forth in Condition 26, 27, or 28 nothing in 40 CFR Part 60 shall preclude the use, including the exclusive use, of any credible evidence or information, relevant to whether EU IDs 1 through 14 and 18 would have been in compliance with applicable requirements of 40 CFR Part 60 if the appropriate performance or compliance test or procedure had been performed.	Yes	Record review and reasonable inquiry. Certify compliance via the Annual Compliance certification of Condition 64.

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
TVP01 – Cond 25	40 CFR 60.12	NSPS Subpart A Concealment of Emissions	Do not build, erect, install, or use any article, machine, equipment or process, the use of which conceals an emission which would otherwise constitute a violation of a standard set forth in Condition 26, 27, or 28. Such concealment includes, but is not limited to, the use of gaseous diluents to achieve compliance with an opacity standard or with a standard that is based on the concentration of a pollutant in the gases discharged to the atmosphere.	Yes	Record review and reasonable inquiry. Certify compliance via the Annual Compliance certification of Condition 64.
TVP01 – Cond 26	40 CFR 60.40c(a)	NSPS Subpart Dc	Comply with any applicable requirement in 40 CFR 60 Subpart Dc for small steam generating units for which construction is commenced after June 9, 1989 and that has a maximum design capacity of 100 MMBtu/hr or less but greater than or equal to 10 MMBtu/hr. 26.1 At all times, including periods of startup, shutdown, and malfunction, when EU IDs 13 and 14 combust fuel oil, the Permittee shall either: a. emit no more than 0.5 lb SO2/MMBtu (215 ng/J) heat input from fuel oil combusted, or b. combust fuel oil that contains no more than 0.5 percent sulfur by weight	Yes	Monitor, record, and report in accordance with Conditions 26.2 through 26.5.
TVP01 – Cond 42	18 AAC 50.030	Good Air Pollution Control Practice	42.1 Perform regular maintenance considering the manufacturer's or the operator's maintenance procedures	Yes	Monitor, record, and report in accordance with Conditions 42.2 through 42.3.

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

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

Non-Applicable Requirements[1]	Reason for non-applicability and citation/basis
40 CFR 60 Subpart Da – Standards of Performance for Electric Utility Steam Generating Units	Unit has a heat input less than 250 MMBtu/hr and is therefore exempt per 40 CFR 60.40Da(e)(1).
40 CFR 60 Subpart Db – Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units	Unit has a heat input less than 100 MMBtu/hr and is therefore exempt per 40 CFR 60.40Db(a).
40 CFR 63 Subpart DDDDD – NESHAP for major sources: industrial, commercial, and institutional boilers and process heaters	Unit is not located at a major source of HAP and is therefore exempt per 40 CFR 63.7485.
40 CFR 60 Subpart JJJJJJ – NESHAP for Industrial, Commercial, and Institutional Boilers Area Sources	Unit meets definition of gas fired boiler and is therefore exempt per 40 CFR 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: AQ1086TVP02A

1.	Emission Unit ID Number // Operating Scenario	17 // 1
2.	Date installation/construction commenced	September 2016
3.	Date installed	August 2017
4.	Emission Unit serial number	011762349
5.	Special control requirements? [if yes, describe]	N/A
6.	Manufacturer	DBA Aether C5-G-30
7.	Description of emission unit, including type of boiler/heater and firing method: Natural gas fired heater.	
8.	Rated design capacity (heat input, MMBtu/hr)	8.3 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)
Natural Gas	Approximately 8,137 scf/hr

13.	Is waste heat utilized for any purpose? If yes, describe: No, waste heat is not utilized.

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
TVP01 – Cond 1	18 AAC 50.055(a)(1)	Visible Emissions	Do not cause or allow visible emissions to reduce visibility by more than 20 percent averaged over any six consecutive minutes.	Yes	Monitor, record, and report in accordance with Condition 1.2.
TVP01 – Cond 5	18 AAC 50.055(b)(1)	Particulate Matter	Do not cause or allow particulate matter to exceed 0.05 grains per cubic foot of exhaust gas averaged over three hours.	Yes	Monitor, record, and report in accordance with Condition 5.2.
TVP01 – Cond 10	18 AAC 50.055(c)	Sulfur Compound Emissions	Do not cause or allow sulfur compound emissions, expressed as SO_2, to exceed 500 ppm averaged over three hours.	Yes	Monitor, record, and report in accordance with Condition 10.2.
TVP01 – Cond 11.1	MSS03 – Cond 15	Fuel Sulfur Requirements	The H_2S content of natural gas burned in this unit shall not exceed 20 ppm by volume.	Yes	Monitor, record, and report in accordance with Conditions 11.1a and 11.1b.
TVP01 – Cond 42	18 AAC 50.030	Good Air Pollution Control Practice	42.1 Perform regular maintenance considering the manufacturer's or the operator's maintenance procedures	Yes	Monitor, record, and report in accordance with Conditions 42.2 through 42.3.

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

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 DDDDD – NESHAP for major sources: industrial, commercial, and institutional boilers and process heaters	Unit is not located at a major source of HAP and is therefore exempt per 40 CFR 63.7485.

[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).]

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SECTION C
POLLUTION CONTROL DEVICES

Form C5: Pollution Control Device Form - Other Pollution Control Devices

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FORM C5

Pollution Control Device Form - Other Pollution Control Devices

Permit Number: AQ1086TVP02A

1.	Name	Selective Catalytic Reduction (SCR) and Catalytic Oxidation (CATOX)
2.	Emission Unit ID Number	EU IDs 1 – 10
3.	Date installed	February 2015
4.	Manufacturer	Wartsila
5.	Model number	N/A
6.	Type of device (describe): The ten Wartsila generator engines, EU IDs 1 – 10, have had selective catalytic reduction (SCR) and catalytic oxidation (CATOX) emission control equipment installed. The engines and emission control equipment are maintained per manufacturer's instructions.	
7.	Rated efficiency (%)	SCR- 93% to 94% for NO_X (estimated) Catalytic oxidation - 93% to 94% for CO (estimated) Catalytic oxidation - 70% for VOC (estimated)
8	Date of most recent source test on control device	To ensure compliance with 40 CFR 60 Subpart JJJJ, MEA tests two of ten engines per year according to the EPA reduced testing waiver dated March 12, 2018. The most recent test was on May 22, 2020 for EU IDs 1 and 2.
9	Emission factor (result) of most recent source test	NO_X: 4.5 ppmvd; 2.4 ppmvd CO: 7.2 ppmvd; 6.9 ppmvd VOC: 1.8 ppmvd; 1.7 ppmvd
10.	Design inlet gas flow rate (acfm)	N/A
11.	Describe control device operating limits	1.0 gal/hr to 38.5 gal/hr for the ammonia injection rate 536°F to 997°F for the flue gas exit temperature 1.5 and 9.5 inches of water for the pressure drop
12.	Control device subject to Compliance Assurance Monitoring (CAM) under 40 C.F.R. Part 64?	No

Applicable Requirements Specific to Control Device (*attach additional sheets as needed. Form C Supplement – Control Device-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 Determine Compliance
TVP01 – Cond 15	MSS03 – Cond 8	Control Equipment	Operate and maintain selective catalytic reduction and catalytic oxidation emission control equipment per manufacturer's instructions.	Yes.	Monitor, record, and report in accordance with Conditions 15.1 through 15.5.

[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 Control Device (*attach additional sheets as needed. Form C Supplement – Control Device-Specific Permit Shield Request*):

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

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

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SECTION D
EMISSIONS SUMMARY

Forms D1: Emission Unit Summary of Emissions

Form D2: Stationary Source Emission Unit Summary

Attachment: Emissions Spreadsheet

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FORM D1
Emission Unit Summary of Emissions

Permit Number: AQ1086TVP02A

1.	Emission Unit ID Number	1
2.	Emissions Unit description	Generator Engine
3.	Operating Scenario ID number	1
4.	Is this a significant or insignificant unit? (If insignificant, provide basis for insignificance)	Significant

5. Emission control devices:

Control Device ID(s) from Form Series C
SCR and CATOX

6. Pollutants/Emissions:

Pollutant Name	Expected Actual Annual Emissions[1] (after controls/ limitations) (*tons/year*)	Potential Annual Emissions (before controls/limitations) (*tons/year*)	Potential Annual Emissions (after controls/limitations) (*tons/year*)
NO_X	8.3 (NG/ULSD & ULSD)	87.4 (ULSD)	16.4 (NG/ULSD & ULSD)
CO	10.8 (NG/ULSD & ULSD)	29.7 (ULSD)	20.0 (NG/ULSD & ULSD)
PM-10	11.7 (NG/ULSD & ULSD)	47.8 (ULSD)	21.9 (NG/ULSD & ULSD)
SO_2	1.1 (NG/ULSD & ULSD)	2.0 (NG/ULSD)	2.0 (NG/ULSD)
VOC	8.2 (NG/ULSD & ULSD)	34.6 (ULSD)	15.4 (NG/ULSD & ULSD)
CO_2e	37,537.0 (NG/ULSD & ULSD)	110,225.3 (ULSD)	69,858.0 (NG/ULSD & ULSD)
(List individual HAPs)	See spreadsheet	See spreadsheet	See spreadsheet
Note: Emissions are based on worst case scenario for dual fuel-fired units. See spreadsheet for details.			

[1] For significant emission units. For insignificant emission units, expected actual annual emissions are only required if the unit is an insignificant unit on an emission rate basis under 18 AAC 50.326(e) and potential annual emissions exceed 80% of the thresholds in 18 AAC 50.326(e)(1-15).

FORM D1
Emission Unit Summary of Emissions

Permit Number: AQ1086TVP02A

1.	Emission Unit ID Number	2
2.	Emissions Unit description	Generator Engine
3.	Operating Scenario ID number	1
4.	Is this a significant or insignificant unit? (If insignificant, provide basis for insignificance)	Significant

5. Emission control devices:

Control Device ID(s) from Form Series C
SCR and CATOX

6. Pollutants/Emissions:

Pollutant Name	Expected Actual Annual Emissions[1] (after controls/ limitations) (*tons/year*)	Potential Annual Emissions (before controls/limitations) (*tons/year*)	Potential Annual Emissions (after controls/limitations) (*tons/year*)
NO_X	9.3 (NG/ULSD & ULSD)	87.4 (ULSD)	16.4 (NG/ULSD & ULSD)
CO	12.1 (NG/ULSD & ULSD)	29.7 (ULSD)	20.0 (NG/ULSD & ULSD)
PM-10	13.1 (NG/ULSD & ULSD)	47.8 (ULSD)	21.9 (NG/ULSD & ULSD)
SO_2	1.2 (NG/ULSD & ULSD)	2.0 (NG/ULSD)	2.0 (NG/ULSD)
VOC	9.2 (NG/ULSD & ULSD)	34.6 (ULSD)	15.4 (NG/ULSD & ULSD)
CO_2e	42,236.2 (NG/ULSD & ULSD)	110,225.3 (ULSD)	69,858.0 (NG/ULSD & ULSD)
(List individual HAPs)	See spreadsheet	See spreadsheet	See spreadsheet
Note: Emissions are based on worst case scenario for dual fuel-fired units. See spreadsheet for details.			

[1] For significant emission units. For insignificant emission units, expected actual annual emissions are only required if the unit is an insignificant unit on an emission rate basis under 18 AAC 50.326(e) and potential annual emissions exceed 80% of the thresholds in 18 AAC 50.326(e)(1-15).

FORM D1
Emission Unit Summary of Emissions

Permit Number: AQ1086TVP02A

1.	Emission Unit ID Number	3
2.	Emissions Unit description	Generator Engine
3.	Operating Scenario ID number	1
4.	Is this a significant or insignificant unit? (If insignificant, provide basis for insignificance)	Significant

5. Emission control devices:

Control Device ID(s) from Form Series C
SCR and CATOX

6. Pollutants/Emissions:

Pollutant Name	Expected Actual Annual Emissions[1] (after controls/ limitations) (*tons/year*)	Potential Annual Emissions (before controls/limitations) (*tons/year*)	Potential Annual Emissions (after controls/limitations) (*tons/year*)
NO_X	9.1 (NG/ULSD & ULSD)	87.4 (ULSD)	16.4 (NG/ULSD & ULSD)
CO	11.8 (NG/ULSD & ULSD)	29.7 (ULSD)	20.0 (NG/ULSD & ULSD)
PM-10	12.8 (NG/ULSD & ULSD)	47.8 (ULSD)	21.9 (NG/ULSD & ULSD)
SO_2	1.2 (NG/ULSD & ULSD)	2.0 (NG/ULSD)	2.0 (NG/ULSD)
VOC	9.0 (NG/ULSD & ULSD)	34.6 (ULSD)	15.4 (NG/ULSD & ULSD)
CO_2e	41,195.5 (NG/ULSD & ULSD)	110,225.3 (ULSD)	69,858.0 (NG/ULSD & ULSD)
(List individual HAPs)	See spreadsheet	See spreadsheet	See spreadsheet
Note: Emissions are based on worst case scenario for dual fuel-fired units. See spreadsheet for details.			

[1] For significant emission units. For insignificant emission units, expected actual annual emissions are only required if the unit is an insignificant unit on an emission rate basis under 18 AAC 50.326(e) and potential annual emissions exceed 80% of the thresholds in 18 AAC 50.326(e)(1-15).

FORM D1
Emission Unit Summary of Emissions

Permit Number: AQ1086TVP02A

1.	Emission Unit ID Number	4
2.	Emissions Unit description	Generator Engine
3.	Operating Scenario ID number	1
4.	Is this a significant or insignificant unit? (If insignificant, provide basis for insignificance)	Significant

5. Emission control devices:

Control Device ID(s) from Form Series C
SCR and CATOX

6. Pollutants/Emissions:

Pollutant Name	Expected Actual Annual Emissions[1] (after controls/ limitations) (*tons/year*)	Potential Annual Emissions (before controls/limitations) (*tons/year*)	Potential Annual Emissions (after controls/limitations) (*tons/year*)
NO_X	8.7 (NG/ULSD & ULSD)	87.4 (ULSD)	16.4 (NG/ULSD & ULSD)
CO	11.2 (NG/ULSD & ULSD)	29.7 (ULSD)	20.0 (NG/ULSD & ULSD)
PM-10	12.8 (NG/ULSD & ULSD)	47.8 (ULSD)	21.9 (NG/ULSD & ULSD)
SO_2	1.2 (NG/ULSD & ULSD)	2.0 (NG/ULSD)	2.0 (NG/ULSD)
VOC	8.5 (NG/ULSD & ULSD)	34.6 (ULSD)	15.4 (NG/ULSD & ULSD)
CO_2e	39,106.1 (NG/ULSD & ULSD)	110,225.3 (ULSD)	69,858.0 (NG/ULSD & ULSD)
(List individual HAPs)	See spreadsheet	See spreadsheet	See spreadsheet
Note: Emissions are based on worst case scenario for dual fuel-fired units. See spreadsheet for details.			

[1] For significant emission units. For insignificant emission units, expected actual annual emissions are only required if the unit is an insignificant unit on an emission rate basis under 18 AAC 50.326(e) and potential annual emissions exceed 80% of the thresholds in 18 AAC 50.326(e)(1-15).

FORM D1
Emission Unit Summary of Emissions

Permit Number: AQ1086TVP02A

1.	Emission Unit ID Number	5
2.	Emissions Unit description	Generator Engine
3.	Operating Scenario ID number	1
4.	Is this a significant or insignificant unit? (If insignificant, provide basis for insignificance)	Significant

5. Emission control devices:

Control Device ID(s) from Form Series C
SCR and CATOX

6. Pollutants/Emissions:

Pollutant Name	Expected Actual Annual Emissions[1] (after controls/ limitations) (*tons/year*)	Potential Annual Emissions (before controls/limitations) (*tons/year*)	Potential Annual Emissions (after controls/limitations) (*tons/year*)
NO_X	8.9 (NG/ULSD & ULSD)	87.4 (ULSD)	16.4 (NG/ULSD & ULSD)
CO	11.5 (NG/ULSD & ULSD)	29.7 (ULSD)	20.0 (NG/ULSD & ULSD)
PM-10	12.5 (NG/ULSD & ULSD)	47.8 (ULSD)	21.9 (NG/ULSD & ULSD)
SO_2	1.2 (NG/ULSD & ULSD)	2.0 (NG/ULSD)	2.0 (NG/ULSD)
VOC	8.8 (NG/ULSD & ULSD)	34.6 (ULSD)	15.4 (NG/ULSD & ULSD)
CO_2e	40,115.3 (NG/ULSD & ULSD)	110,225.3 (ULSD)	69,858.0 (NG/ULSD & ULSD)
(List individual HAPs)	See spreadsheet	See spreadsheet	See spreadsheet
Note: Emissions are based on worst case scenario for dual fuel-fired units. See spreadsheet for details.			

[1] For significant emission units. For insignificant emission units, expected actual annual emissions are only required if the unit is an insignificant unit on an emission rate basis under 18 AAC 50.326(e) and potential annual emissions exceed 80% of the thresholds in 18 AAC 50.326(e)(1-15).

FORM D1
Emission Unit Summary of Emissions

Permit Number: AQ1086TVP02A

1.	Emission Unit ID Number	6
2.	Emissions Unit description	Generator Engine
3.	Operating Scenario ID number	1
4.	Is this a significant or insignificant unit? (If insignificant, provide basis for insignificance)	Significant

5. Emission control devices:

Control Device ID(s) from Form Series C
SCR and CATOX

6. Pollutants/Emissions:

Pollutant Name	Expected Actual Annual Emissions[1] (after controls/ limitations) (*tons/year*)	Potential Annual Emissions (before controls/limitations) (*tons/year*)	Potential Annual Emissions (after controls/limitations) (*tons/year*)
NO_X	10.8 (NG/ULSD & ULSD)	87.4 (ULSD)	16.4 (NG/ULSD & ULSD)
CO	14.0 (NG/ULSD & ULSD)	29.7 (ULSD)	20.0 (NG/ULSD & ULSD)
PM-10	15.1 (NG/ULSD & ULSD)	47.8 (ULSD)	21.9 (NG/ULSD & ULSD)
SO_2	1.4 (NG/ULSD & ULSD)	2.0 (NG/ULSD)	2.0 (NG/ULSD)
VOC	10.7 (NG/ULSD & ULSD)	34.6 (ULSD)	15.4 (NG/ULSD & ULSD)
CO_2e	48,796.2 (NG/ULSD & ULSD)	110,225.3 (ULSD)	69,858.0 (NG/ULSD & ULSD)
(List individual HAPs)	See spreadsheet	See spreadsheet	See spreadsheet
Note: Emissions are based on worst case scenario for dual fuel-fired units. See spreadsheet for details.			

[1] For significant emission units. For insignificant emission units, expected actual annual emissions are only required if the unit is an insignificant unit on an emission rate basis under 18 AAC 50.326(e) and potential annual emissions exceed 80% of the thresholds in 18 AAC 50.326(e)(1-15).

FORM D1
Emission Unit Summary of Emissions

Permit Number: AQ1086TVP02A

1.	Emission Unit ID Number	7
2.	Emissions Unit description	Generator Engine
3.	Operating Scenario ID number	1
4.	Is this a significant or insignificant unit? (If insignificant, provide basis for insignificance)	Significant

5. Emission control devices:

Control Device ID(s) from Form Series C
SCR and CATOX

6. Pollutants/Emissions:

Pollutant Name	Expected Actual Annual Emissions[1] (after controls/ limitations) (*tons/year*)	Potential Annual Emissions (before controls/limitations) (*tons/year*)	Potential Annual Emissions (after controls/limitations) (*tons/year*)
NO_X	9.3 (NG/ULSD & ULSD)	87.4 (ULSD)	16.4 (NG/ULSD & ULSD)
CO	12.0 (NG/ULSD & ULSD)	29.7 (ULSD)	20.0 (NG/ULSD & ULSD)
PM-10	13.0 (NG/ULSD & ULSD)	47.8 (ULSD)	21.9 (NG/ULSD & ULSD)
SO_2	1.2 (NG/ULSD & ULSD)	2.0 (NG/ULSD)	2.0 (NG/ULSD)
VOC	9.2 (NG/ULSD & ULSD)	34.6 (ULSD)	15.4 (NG/ULSD & ULSD)
CO_2e	42,023.3 (NG/ULSD & ULSD)	110,225.3 (ULSD)	69,858.0 (NG/ULSD & ULSD)
(List individual HAPs)	See spreadsheet	See spreadsheet	See spreadsheet
Note: Emissions are based on worst case scenario for dual fuel-fired units. See spreadsheet for details.			

[1] For significant emission units. For insignificant emission units, expected actual annual emissions are only required if the unit is an insignificant unit on an emission rate basis under 18 AAC 50.326(e) and potential annual emissions exceed 80% of the thresholds in 18 AAC 50.326(e)(1-15).

FORM D1
Emission Unit Summary of Emissions

Permit Number: AQ1086TVP02A

1.	Emission Unit ID Number	8
2.	Emissions Unit description	Generator Engine
3.	Operating Scenario ID number	1
4.	Is this a significant or insignificant unit? (If insignificant, provide basis for insignificance)	Significant

5. Emission control devices:

Control Device ID(s) from Form Series C
SCR and CATOX

6. Pollutants/Emissions:

Pollutant Name	Expected Actual Annual Emissions[1] (after controls/ limitations) (*tons/year*)	Potential Annual Emissions (before controls/limitations) (*tons/year*)	Potential Annual Emissions (after controls/limitations) (*tons/year*)
NO_X	9.2 (NG/ULSD & ULSD)	87.4 (ULSD)	16.4 (NG/ULSD & ULSD)
CO	11.9 (NG/ULSD & ULSD)	29.7 (ULSD)	20.0 (NG/ULSD & ULSD)
PM-10	13.0 (NG/ULSD & ULSD)	47.8 (ULSD)	21.9 (NG/ULSD & ULSD)
SO_2	1.2 (NG/ULSD & ULSD)	2.0 (NG/ULSD)	2.0 (NG/ULSD)
VOC	9.1 (NG/ULSD & ULSD)	34.6 (ULSD)	15.4 (NG/ULSD & ULSD)
CO_2e	41,668.5 (NG/ULSD & ULSD)	110,225.3 (ULSD)	69,858.0 (NG/ULSD & ULSD)
(List individual HAPs)	See spreadsheet	See spreadsheet	See spreadsheet
Note: Emissions are based on worst case scenario for dual fuel-fired units. See spreadsheet for details.			

[1] For significant emission units. For insignificant emission units, expected actual annual emissions are only required if the unit is an insignificant unit on an emission rate basis under 18 AAC 50.326(e) and potential annual emissions exceed 80% of the thresholds in 18 AAC 50.326(e)(1-15).

FORM D1
Emission Unit Summary of Emissions

Permit Number: AQ1086TVP02A

1.	Emission Unit ID Number	9
2.	Emissions Unit description	Generator Engine
3.	Operating Scenario ID number	1
4.	Is this a significant or insignificant unit? (If insignificant, provide basis for insignificance)	Significant

5. Emission control devices:

Control Device ID(s) from Form Series C
SCR and CATOX

6. Pollutants/Emissions:

Pollutant Name	Expected Actual Annual Emissions[1] (after controls/ limitations) (*tons/year*)	Potential Annual Emissions (before controls/limitations) (*tons/year*)	Potential Annual Emissions (after controls/limitations) (*tons/year*)
NO_X	9.1 (NG/ULSD & ULSD)	87.4 (ULSD)	16.4 (NG/ULSD & ULSD)
CO	11.7 (NG/ULSD & ULSD)	29.7 (ULSD)	20.0 (NG/ULSD & ULSD)
PM-10	12.6 (NG/ULSD & ULSD)	47.8 (ULSD)	21.9 (NG/ULSD & ULSD)
SO_2	1.2 (NG/ULSD & ULSD)	2.0 (NG/ULSD)	2.0 (NG/ULSD)
VOC	8.9 (NG/ULSD & ULSD)	34.6 (ULSD)	15.4 (NG/ULSD & ULSD)
CO_2e	40,104.9 (NG/ULSD & ULSD)	110,225.3 (ULSD)	69,858.0 (NG/ULSD & ULSD)
(List individual HAPs)	See spreadsheet	See spreadsheet	See spreadsheet
Note: Emissions are based on worst case scenario for dual fuel-fired units. See spreadsheet for details.			

[1] For significant emission units. For insignificant emission units, expected actual annual emissions are only required if the unit is an insignificant unit on an emission rate basis under 18 AAC 50.326(e) and potential annual emissions exceed 80% of the thresholds in 18 AAC 50.326(e)(1-15).

FORM D1
Emission Unit Summary of Emissions

Permit Number: AQ1086TVP02A

1.	Emission Unit ID Number	10
2.	Emissions Unit description	Generator Engine
3.	Operating Scenario ID number	1
4.	Is this a significant or insignificant unit? (If insignificant, provide basis for insignificance)	Significant

5. Emission control devices:

Control Device ID(s) from Form Series C
SCR and CATOX

6. Pollutants/Emissions:

Pollutant Name	Expected Actual Annual Emissions[1] (after controls/ limitations) (*tons/year*)	Potential Annual Emissions (before controls/limitations) (*tons/year*)	Potential Annual Emissions (after controls/limitations) (*tons/year*)
NO_X	9.8 (NG/ULSD & ULSD)	87.4 (ULSD)	16.4 (NG/ULSD & ULSD)
CO	12.3 (NG/ULSD & ULSD)	29.7 (ULSD)	20.0 (NG/ULSD & ULSD)
PM-10	13.7 (NG/ULSD & ULSD)	47.8 (ULSD)	21.9 (NG/ULSD & ULSD)
SO_2	1.3 (NG/ULSD & ULSD)	2.0 (NG/ULSD)	2.0 (NG/ULSD)
VOC	9.6 (NG/ULSD & ULSD)	34.6 (ULSD)	15.4 (NG/ULSD & ULSD)
CO_2e	44,104.9 (NG/ULSD & ULSD)	110,225.3 (ULSD)	69,858.0 (NG/ULSD & ULSD)
(List individual HAPs)	See spreadsheet	See spreadsheet	See spreadsheet
Note: Emissions are based on worst case scenario for dual fuel-fired units. See spreadsheet for details.			

[1] For significant emission units. For insignificant emission units, expected actual annual emissions are only required if the unit is an insignificant unit on an emission rate basis under 18 AAC 50.326(e) and potential annual emissions exceed 80% of the thresholds in 18 AAC 50.326(e)(1-15).

FORM D1
Emission Unit Summary of Emissions

Permit Number: AQ1086TVP02A

1.	Emission Unit ID Number	11
2.	Emissions Unit description	Firewater Pump Engine
3.	Operating Scenario ID number	1
4.	Is this a significant or insignificant unit? (If insignificant, provide basis for insignificance)	Significant – insignificant based on potential emissions per 18 AAC 50.326(e), however, unit is subject to Title I and federal requirements

5. Emission control devices:

Control Device ID(s) from Form Series C
N/A

6. Pollutants/Emissions:

Pollutant Name	Expected Actual Annual Emissions[1] (after controls/ limitations) (*tons/year*)	Potential Annual Emissions (before controls/limitations) (*tons/year*)	Potential Annual Emissions (after controls/limitations) (*tons/year*)
NO_X	0.02	5.14	0.29
CO	0.01	1.71	0.10
PM-10	0.00056	0.19	0.01
SO_2	0.000028	0.01	0.00053
VOC	0.00056	0.19	0.01
CO_2e	3.0	1,018.6	58.1
(List individual HAPs)	See spreadsheet	See spreadsheet	See spreadsheet

[1] For significant emission units. For insignificant emission units, expected actual annual emissions are only required if the unit is an insignificant unit on an emission rate basis under 18 AAC 50.326(e) and potential annual emissions exceed 80% of the thresholds in 18 AAC 50.326(e)(1-15).

FORM D1
Emission Unit Summary of Emissions

Permit Number: AQ1086TVP02A

1.	Emission Unit ID Number	12
2.	Emissions Unit description	Black Start Generator Engine
3.	Operating Scenario ID number	1
4.	Is this a significant or insignificant unit? (If insignificant, provide basis for insignificance)	Significant – insignificant based on actual emissions per 18 AAC 50.326(e), however, unit is subject to a Title I/federal requirements

5. Emission control devices:

Control Device ID(s) from Form Series C
N/A

6. Pollutants/Emissions:

Pollutant Name	Expected Actual Annual Emissions[1] (after controls/ limitations) (*tons/year*)	Potential Annual Emissions (before controls/limitations) (*tons/year*)	Potential Annual Emissions (after controls/limitations) (*tons/year*)
NO_X	0.05	74.82	8.54 (EU IDs 12 & 18)
CO	0.01	9.50	1.08 (EU IDs 12 & 18)
PM-10	0.002	2.73	0.31 (EU IDs 12 & 18)
SO_2	0.000047	0.07	0.01 (EU IDs 12 & 18)
VOC	0.0012	1.73	0.20 (EU IDs 12 & 18)
CO_2e	5.1	7,110.4	811.7 (EU IDs 12 & 18)
(List individual HAPs)	See spreadsheet	See spreadsheet	See spreadsheet

[1] For significant emission units. For insignificant emission units, expected actual annual emissions are only required if the unit is an insignificant unit on an emission rate basis under 18 AAC 50.326(e) and potential annual emissions exceed 80% of the thresholds in 18 AAC 50.326(e)(1-15).

FORM D1
Emission Unit Summary of Emissions

Permit Number: AQ1086TVP02A

1.	Emission Unit ID Number	18
2.	Emissions Unit description	Black Start Generator Engine
3.	Operating Scenario ID number	1
4.	Is this a significant or insignificant unit? (If insignificant, provide basis for insignificance)	Significant – insignificant based on actual emissions per 18 AAC 50.326(e), however, unit is subject to a Title I/federal requirements

5. Emission control devices:

Control Device ID(s) from Form Series C
N/A

6. Pollutants/Emissions:

Pollutant Name	Expected Actual Annual Emissions[1] (after controls/ limitations) (*tons/year*)	Potential Annual Emissions (before controls/limitations) (*tons/year*)	Potential Annual Emissions (after controls/limitations) (*tons/year*)
NO_X	0.05	74.82	8.54 (EU IDs 12 & 18)
CO	0.01	9.50	1.08 (EU IDs 12 & 18)
PM-10	0.0019	2.73	0.31 (EU IDs 12 & 18)
SO_2	0.000046	0.07	0.01 (EU IDs 12 & 18)
VOC	0.0012	1.73	0.20 (EU IDs 12 & 18)
CO_2e	5.0	7,110.4	811.7 (EU IDs 12 & 18)
(List individual HAPs)	See spreadsheet	See spreadsheet	See spreadsheet

[1] For significant emission units. For insignificant emission units, expected actual annual emissions are only required if the unit is an insignificant unit on an emission rate basis under 18 AAC 50.326(e) and potential annual emissions exceed 80% of the thresholds in 18 AAC 50.326(e)(1-15).

FORM D1
Emission Unit Summary of Emissions

Permit Number: AQ1086TVP02A

1.	Emission Unit ID Number	13
2.	Emissions Unit description	Auxiliary Boiler
3.	Operating Scenario ID number	1
4.	Is this a significant or insignificant unit? (If insignificant, provide basis for insignificance)	Significant – insignificant based on actual emissions per 18 AAC 50.326(e), however, unit is subject to a Title I/federal requirements

5. Emission control devices:

Control Device ID(s) from Form Series C
N/A

6. Pollutants/Emissions:

Pollutant Name	Expected Actual Annual Emissions[1] (after controls/ limitations) (*tons/year*)	Potential Annual Emissions (before controls/limitations) (*tons/year*)	Potential Annual Emissions (after controls/limitations) (*tons/year*)
NO_X	1.18 (NG)	9.55 (ULSD)	5.9 (NG & ULSD)
CO	0.53 (NG)	2.52 (NG)	2.52 (NG)
PM-10	0.09 (NG)	1.40 (ULSD)	0.47 (NG & ULSD)
SO_2	0.05 (NG)	0.25 (NG)	0.25 (NG)
VOC	0.06 (NG)	0.28 (NG)	0.28 (NG)
CO_2e	1,684.7 (NG)	11,286.76 (ULSD)	8,261.1 (NG & ULSD)
(List individual HAPs)	See spreadsheet	See spreadsheet	See spreadsheet
Note: Emissions are based on worst case scenario for dual fuel-fired units. See spreadsheet for details.			

[1] For significant emission units. For insignificant emission units, expected actual annual emissions are only required if the unit is an insignificant unit on an emission rate basis under 18 AAC 50.326(e) and potential annual emissions exceed 80% of the thresholds in 18 AAC 50.326(e)(1-15).

FORM D1
Emission Unit Summary of Emissions

Permit Number: AQ1086TVP02A

1.	Emission Unit ID Number	14
2.	Emissions Unit description	Auxiliary Boiler
3.	Operating Scenario ID number	1
4.	Is this a significant or insignificant unit? (If insignificant, provide basis for insignificance)	Significant – insignificant based on actual emissions per 18 AAC 50.326(e), however, unit is subject to a Title I/federal requirements

5. Emission control devices:

Control Device ID(s) from Form Series C
N/A

6. Pollutants/Emissions:

Pollutant Name	Expected Actual Annual Emissions[1] (after controls/ limitations) (*tons/year*)	Potential Annual Emissions (before controls/limitations) (*tons/year*)	Potential Annual Emissions (after controls/limitations) (*tons/year*)
NO_X	0.90 (NG)	9.55 (ULSD)	5.9 (NG & ULSD)
CO	0.40 (NG)	2.52 (NG)	2.52 (NG)
PM-10	0.07 (NG)	1.40 (ULSD)	0.47 (NG & ULSD)
SO_2	0.04 (NG)	0.25 (NG)	0.25 (NG)
VOC	0.04 (NG)	0.28 (NG)	0.28 (NG)
CO_2e	1,279.0 (NG)	11,286.76 (ULSD)	8,261.1 (NG & ULSD)
(List individual HAPs)	See spreadsheet	See spreadsheet	See spreadsheet
Note: Emissions are based on worst case scenario for dual fuel-fired units. See spreadsheet for details.			

[1] For significant emission units. For insignificant emission units, expected actual annual emissions are only required if the unit is an insignificant unit on an emission rate basis under 18 AAC 50.326(e) and potential annual emissions exceed 80% of the thresholds in 18 AAC 50.326(e)(1-15).

FORM D1
Emission Unit Summary of Emissions

Permit Number: AQ1086TVP02A

1.	Emission Unit ID Number	17
2.	Emissions Unit description	Natural Gas Fuel Heater
3.	Operating Scenario ID number	1
4.	Is this a significant or insignificant unit? (If insignificant, provide basis for insignificance)	Significant

5. Emission control devices:

Control Device ID(s) from Form Series C
N/A

6. Pollutants/Emissions:

Pollutant Name	Expected Actual Annual Emissions[1] (after controls/ limitations) (*tons/year*)	Potential Annual Emissions (before controls/limitations) (*tons/year*)	Potential Annual Emissions (after controls/limitations) (*tons/year*)
NO_X	3.31	3.31	3.31
CO	1.35	1.35	1.35
PM-10	0.17	0.17	0.17
SO_2	0.13	0.13	0.13
VOC	0.91	0.91	0.91
CO_2e	4,256.9	4,256.9	4,256.9
(List individual HAPs)	See spreadsheet	See spreadsheet	See spreadsheet

[1] For significant emission units. For insignificant emission units, expected actual annual emissions are only required if the unit is an insignificant unit on an emission rate basis under 18 AAC 50.326(e) and potential annual emissions exceed 80% of the thresholds in 18 AAC 50.326(e)(1-15).

FORM D2

Stationary Source Emission Summary – Significant Emission Units

Permit Number: AQ1086TVP02A

1.	Applicable Emission Unit IDs (list)	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 17, and 18
2.	Applicable Operating Scenario ID number	1

3. Pollutants/Emissions:

Pollutant Name	Pollutant Emission Status (Major / Minor)	Expected Actual Annual Emissions (after controls/ limitations) (*tons/year*)	Potential Annual Emissions (before controls/limitations) (*tons/year*)	Potential Annual Emissions (after controls/limitations) (*tons/year*)
NO_X	Major	97.9	1,051.0	188.1
CO	Major	121.9	323.9	207.3
PM-10	Major	130.3	486.8	220.9
SO_2	Minor	12.5	21.1	21.0
VOC	Major	92.2	351. 4	155.8
HAP Total	Minor	9.5	16.0	15.8
CO_2e	Minor	424,983.7	1,144,323.2	720,228.8
(List individual HAPs)		See spreadsheet	See spreadsheet	See spreadsheet

FORM D2

Stationary Source Emission Summary – Insignificant Emission Units

Permit Number: AQ1086TVP02A

Pollutants/Emissions:

Pollutant Name	Pollutant Emission Status (Major / Minor)	Expected Actual Annual Emissions[1] (after controls/ limitations) (*tons/year*)	Potential Annual Emissions (before controls/limitations) (*tons/year*)	Potential Annual Emissions (after controls/limitations) (*tons/year*)
NO_X	Major	0.0	0.0	0.0
CO	Major	0.0	0.0	0.0
PM-10	Major	0.0	0.0	0.0
SO_2	Minor	0.0	0.0	0.0
VOC	Major	0.1	0.1	0.1
HAP Total	Minor	0.0	0.0	0.0
CO_2e	Minor	0.0	0.0	0.0
(List individual HAPs)		See spreadsheet	See spreadsheet	See spreadsheet

[1] For insignificant emission units, expected actual annual emissions are only required if the unit is an insignificant unit on an emission rate basis under 18 AAC 50.326(e) and potential annual emissions exceed 80% of the thresholds in 18 AAC 50.326(e)(1-15)

Table 1. Emission Unit Inventory
Matanuska Electric Association - Eklutna Generation Station

ID	Emission Unit Name	Emission Unit Description	Size / Rating	Fuel Type	Maximum Rated Fuel Consumption	Maximum Allowable Operation	2019 Actual Operations
Significant Emission Units							
1	Generator Engine	Wartsila 18V50DF	17.1 MW	NG / ULSD	129,548 scf/hr	8,760 hr/yr	4,727 hr/yr
2	Generator Engine	Wartsila 18V50DF	17.1 MW	NG / ULSD	129,548 scf/hr	8,760 hr/yr	5,323 hr/yr
3	Generator Engine	Wartsila 18V50DF	17.1 MW	NG / ULSD	129,548 scf/hr	8,760 hr/yr	5,191 hr/yr
4	Generator Engine	Wartsila 18V50DF	17.1 MW	NG / ULSD	129,548 scf/hr	8,760 hr/yr	4,926 hr/yr
5	Generator Engine	Wartsila 18V50DF	17.1 MW	NG / ULSD	129,548 scf/hr	8,760 hr/yr	5,054 hr/yr
6	Generator Engine	Wartsila 18V50DF	17.1 MW	NG / ULSD	129,548 scf/hr	8,760 hr/yr	6,155 hr/yr
7	Generator Engine	Wartsila 18V50DF	17.1 MW	NG / ULSD	129,548 scf/hr	8,760 hr/yr	5,296 hr/yr
8	Generator Engine	Wartsila 18V50DF	17.1 MW	NG / ULSD	129,548 scf/hr	8,760 hr/yr	5,251 hr/yr
9	Generator Engine	Wartsila 18V50DF	17.1 MW	NG / ULSD	129,548 scf/hr	8,760 hr/yr	5,162 hr/yr
10	Generator Engine	Wartsila 18V50DF	17.1 MW	NG / ULSD	129,548 scf/hr	8,760 hr/yr	5,560 hr/yr
1-10 (combined)	Generator Engines	Wartsila 18V50DF	17.1 MW (each)	ULSD Exclusively	1,114.6 gal/hr (each)	1,680 hr/yr	212 hr/yr
11	Firewater Pump Engine	John Deere JU6H-UFADN0	197 hp	ULSD	10.3 gal/hr	500 hr/yr	26 hr/yr
12	Black Start Generator Engine	Cummins 1000DQFAD	1,490 hp	ULSD	71.9 gal/hr	1,000 hr/yr	6 hr/yr
18	Black Start Generator Engine	Cummins 1000DQFAD	1,490 hp	ULSD	71.9 gal/hr		6 hr/yr
13	Auxiliary Boiler	Cleaver-Brooks FLX200-1650	15.75 MMBtu/hr	NG	15,752 scf/hr	8,760 hr/yr	1,827 hr/yr
14	Auxiliary Boiler	Cleaver-Brooks FLX200-1650	15.75 MMBtu/hr	NG	15,752 scf/hr	8,760 hr/yr	1,387 hr/yr
13-14 (combined)	Auxiliary Boilers	Cleaver-Brooks FLX200-1650	15.75 MMBtu/hr (each)	ULSD	110.3 gal/hr (each)	1,000 hr/yr	0 hr/yr
17	Natural Gas Fuel Heater	Aether C5-G30	8.3 MMBtu/hr	NG	8,137 scf/hr	8,760 hr/yr	8,760 hr/yr
Insignificant Emission Units							
15	Diesel Storage Tank	Rockford 071301	509,000 gal	N/A	N/A	8,760 hr/yr	8,760 hr/yr
16	Diesel Storage Tank	Rockford 071301	509,000 gal	N/A	N/A	8,760 hr/yr	8,760 hr/yr
N/A	Lube Oil Storage Tank	Lube Oil Storage Tank	18,784 gal	N/A	N/A	8,760 hr/yr	8,760 hr/yr
N/A	Used Lube Oil Storage Tank	Used Lube Oil Storage Tank	14,898 gal	N/A	N/A	8,760 hr/yr	8,760 hr/yr
N/A	Service Lube Oil Storage Tank (2)	Service Lube Oil Storage Tank (2)	19,474 gal (each)	N/A	N/A	8,760 hr/yr	8,760 hr/yr
N/A	Wastewater/Lube Oil Storage Tank	Wastewater/Lube Oil Storage Tank	14,898 gal	N/A	N/A	8,760 hr/yr	8,760 hr/yr
N/A	Diesel Storage Tank (2)	Diesel Storage Tank (2)	1,000 gal (each)	N/A	N/A	8,760 hr/yr	8,760 hr/yr
N/A	Diesel Storage Tank	Diesel Storage Tank	300 gal	N/A	N/A	8,760 hr/yr	8,760 hr/yr
N/A	Diesel Storage Tank (2)	Diesel Storage Tank (2)	660 gal (each)	N/A	N/A	8,760 hr/yr	8,760 hr/yr
N/A	Diesel Engine Lube Oil Reservoirs (10)	Diesel Engine Lube Oil Reservoirs (10)	3,500 gal (each)	N/A	N/A	8,760 hr/yr	8,760 hr/yr

Notes:

1. NG is natural gas; ULSD is ultra low sulfur diesel.
2. When operating on natural gas, EU IDs 1 through 10 burn one percent diesel.
3. An off-permit change notification was submitted on August 30, 2017 to revise the rating of EU ID 17 from 7.0 MMBtu/hr to 8.3 MMBtu/hr.
4. Expected operation includes hours of operation for 2019. If information is not available, 8,760 hours per year is assumed.

Conversions:

453.59	g/lb
6.9	lb/gal diesel
0.9478	Btu/kJ
1020	Btu/scf natural gas

Table 2. Emissions Summary
Matanuska Electric Association - Eklutna Generation Station

	NO_X Emissions	CO Emissions	PM Emissions	SO_2 Emissions	VOC Emissions	HAP Emissions	CO_2e Emissions
Unlimited Annual Emissions							
Significant Emission Units	1051.0 tpy	323.9 tpy	486.8 tpy	21.1 tpy	351.4 tpy	16.0 tpy	1,144,323.2 tpy
Insignificant Emission Units	0.0 tpy	0.0 tpy	0.0 tpy	0.0 tpy	0.1 tpy	0.0 tpy	0.0 tpy
Total	**1,051.0 tpy**	**323.9 tpy**	**486.8 tpy**	**21.1 tpy**	**351.4 tpy**	**16.0 tpy**	**1,144,323.2 tpy**
Permitted Annual Emissions							
Significant Emission Units	188.1 tpy	207.3 tpy	220.9 tpy	21.0 tpy	155.8 tpy	15.8 tpy	720,228.8 tpy
Insignificant Emission Units	0.0 tpy	0.0 tpy	0.0 tpy	0.0 tpy	0.1 tpy	0.0 tpy	0.0 tpy
Total	**188.1 tpy**	**207.3 tpy**	**220.9 tpy**	**21.0 tpy**	**155.8 tpy**	**15.8 tpy**	**720,228.8 tpy**
Expected Actual Annual Emissions							
Significant Emission Units	97.9 tpy	121.9 tpy	130.3 tpy	12.5 tpy	92.2 tpy	9.5 tpy	424,983.7 tpy
Insignificant Emission Units	0.0 tpy	0.0 tpy	0.0 tpy	0.0 tpy	0.1 tpy	0.0 tpy	0.0 tpy
Total	**97.9 tpy**	**121.9 tpy**	**130.3 tpy**	**12.5 tpy**	**92.3 tpy**	**9.5 tpy**	**424,983.7 tpy**

Table 3. Oxides of Nitrogen (NO_X) Emissions

Matanuska Electric Association - Eklutna Generation Station

ID	Emission Unit Name	Rating / Capacity	Fuel Type	Reference	NO_X Emission Factor	Unlimited NO_X Emissions	Permitted NO_X Emissions	Expected NO_X Emissions
Significant Emission Units								
1	Generator Engine	17.1 MW	NG / ULSD	Manufacturer Data	3.43 lb/hr	0 tpy	14.74 tpy	8.11 tpy
2	Generator Engine	17.1 MW	NG / ULSD	Manufacturer Data	3.43 lb/hr	0 tpy	14.74 tpy	9.13 tpy
3	Generator Engine	17.1 MW	NG / ULSD	Manufacturer Data	3.43 lb/hr	0 tpy	14.74 tpy	8.90 tpy
4	Generator Engine	17.1 MW	NG / ULSD	Manufacturer Data	3.43 lb/hr	0 tpy	14.74 tpy	8.45 tpy
5	Generator Engine	17.1 MW	NG / ULSD	Manufacturer Data	3.43 lb/hr	0 tpy	14.74 tpy	8.67 tpy
6	Generator Engine	17.1 MW	NG / ULSD	Manufacturer Data	3.43 lb/hr	0 tpy	14.74 tpy	10.56 tpy
7	Generator Engine	17.1 MW	NG / ULSD	Manufacturer Data	3.43 lb/hr	0 tpy	14.74 tpy	9.08 tpy
8	Generator Engine	17.1 MW	NG / ULSD	Manufacturer Data	3.43 lb/hr	0 tpy	14.74 tpy	9.01 tpy
9	Generator Engine	17.1 MW	NG / ULSD	Manufacturer Data	3.43 lb/hr	0 tpy	14.74 tpy	8.85 tpy
10	Generator Engine	17.1 MW	NG / ULSD	Manufacturer Data	3.43 lb/hr	0 tpy	14.74 tpy	9.54 tpy
1-10 (combined)	Generator Engines	17.1 MW (each)	ULSD Exclusively	Manufacturer Data	19.95 lb/hr	873.81 tpy	16.76 tpy	2.11 tpy
11	Firewater Pump Engine	197 hp	ULSD	Manufacturer Data	2.7 g/hp-hr	5.14 tpy	0.29 tpy	0.02 tpy
12	Black Start Generator Engine	1,490 hp	ULSD	Manufacturer Data	5.20 g/hp-hr	74.82 tpy	8.54 tpy	0.05 tpy
18	Black Start Generator Engine	1,490 hp	ULSD	Manufacturer Data	5.20 g/hp-hr	74.82 tpy		0.05 tpy
13	Auxiliary Boiler	15.75 MMBtu/hr	NG	Manufacturer Data	1.30 lb/hr	0 tpy	5.36 tpy	1.18 tpy
14	Auxiliary Boiler	15.75 MMBtu/hr	NG	Manufacturer Data	1.30 lb/hr	0 tpy	5.36 tpy	0.90 tpy
13-14 (combined)	Auxiliary Boilers	15.75 MMBtu/hr (each)	ULSD	Manufacturer Data	2.18 lb/hr	19.10 tpy	1.09 tpy	0 tpy
17	Natural Gas Fuel Heater	8.3 MMBtu/hr	NG	Manufacturer Data	0.09 lb/MMBtu	3.31 tpy	3.31 tpy	3.31 tpy
					Subtotal:	**1,051.0 tpy**	**188.1 tpy**	**97.9 tpy**
Insignificant Emission Units								
15	Diesel Storage Tank	509,000 gal	N/A	N/A	N/A	0 tpy	0 tpy	0 tpy
16	Diesel Storage Tank	509,000 gal	N/A	N/A	N/A	0 tpy	0 tpy	0 tpy
N/A	Lube Oil Storage Tank	18,784 gal	N/A	N/A	N/A	0 tpy	0 tpy	0 tpy
N/A	Used Lube Oil Storage Tank	14,898 gal	N/A	N/A	N/A	0 tpy	0 tpy	0 tpy
N/A	Service Lube Oil Storage Tank (2)	19,474 gal (each)	N/A	N/A	N/A	0 tpy	0 tpy	0 tpy
N/A	Wastewater/Lube Oil Storage Tank	14,898 gal	N/A	N/A	N/A	0 tpy	0 tpy	0 tpy
N/A	Diesel Storage Tank (2)	1,000 gal (each)	N/A	N/A	N/A	0 tpy	0 tpy	0 tpy
N/A	Diesel Storage Tank	300 gal	N/A	N/A	N/A	0 tpy	0 tpy	0 tpy
N/A	Diesel Storage Tank (2)	660 gal (each)	N/A	N/A	N/A	0 tpy	0 tpy	0 tpy
N/A	Diesel Engine Lube Oil Reservoirs (10)	3,500 gal (each)	N/A	N/A	N/A	0 tpy	0 tpy	0 tpy
					Subtotal:	**0.0 tpy**	**0.0 tpy**	**0.0 tpy**
					Total NO_X Emissions:	**1,051.0 tpy**	**188.1 tpy**	**97.9 tpy**

Notes:

1. NG is natural gas; ULSD is ultra low sulfur diesel.
2. Emissions calculations are based on worst case scenario for dual fuel-fired units (EU IDs 1-10, 13, and 14) when operating on natural gas and/or diesel.
3. When operating on natural gas, EU IDs 1 through 10 burn one percent diesel; emission factor accounts for this mix.

Conversions:

453.59 g/lb

Table 4. Carbon Monoxide (CO) Emissions
Matanuska Electric Association - Eklutna Generation Station

ID	Emission Unit Name	Rating / Capacity	Fuel Type	Reference	CO Emission Factor	Unlimited CO Emissions	Permitted CO Emissions	Expected CO Emissions
Significant Emission Units								
1	Generator Engine	17.1 MW	NG / ULSD	Manufacturer Data	4.52 lb/hr	0 tpy	19.41 tpy	10.68 tpy
2	Generator Engine	17.1 MW	NG / ULSD	Manufacturer Data	4.52 lb/hr	0 tpy	19.41 tpy	12.02 tpy
3	Generator Engine	17.1 MW	NG / ULSD	Manufacturer Data	4.52 lb/hr	0 tpy	19.41 tpy	11.73 tpy
4	Generator Engine	17.1 MW	NG / ULSD	Manufacturer Data	4.52 lb/hr	0 tpy	19.41 tpy	11.13 tpy
5	Generator Engine	17.1 MW	NG / ULSD	Manufacturer Data	4.52 lb/hr	0 tpy	19.41 tpy	11.42 tpy
6	Generator Engine	17.1 MW	NG / ULSD	Manufacturer Data	4.52 lb/hr	0 tpy	19.41 tpy	13.90 tpy
7	Generator Engine	17.1 MW	NG / ULSD	Manufacturer Data	4.52 lb/hr	0 tpy	19.41 tpy	11.96 tpy
8	Generator Engine	17.1 MW	NG / ULSD	Manufacturer Data	4.52 lb/hr	0 tpy	19.41 tpy	11.86 tpy
9	Generator Engine	17.1 MW	NG / ULSD	Manufacturer Data	4.52 lb/hr	0 tpy	19.41 tpy	11.66 tpy
10	Generator Engine	17.1 MW	NG / ULSD	Manufacturer Data	4.52 lb/hr	0 tpy	19.41 tpy	12.56 tpy
1-10 (combined)	Generator Engines	17.1 MW (each)	ULSD Exclusively	Manufacturer Data	6.78 lb/hr	296.80 tpy	5.69 tpy	0.72 tpy
11	Firewater Pump Engine	197 hp	ULSD	Manufacturer Data	0.9 g/hp-hr	1.71 tpy	0.10 tpy	0.01 tpy
12	Black Start Generator Engine	1,490 hp	ULSD	Manufacturer Data	0.66 g/hp-hr	9.50 tpy	1.08 tpy	0.01 tpy
18	Black Start Generator Engine	1,490 hp	ULSD	Manufacturer Data	0.66 g/hp-hr	9.50 tpy		0.01 tpy
13	Auxiliary Boiler	15.75 MMBtu/hr	NG	Manufacturer Data	0.58 lb/hr	2.52 tpy	2.52 tpy	0.53 tpy
14	Auxiliary Boiler	15.75 MMBtu/hr	NG	Manufacturer Data	0.58 lb/hr	2.52 tpy	2.52 tpy	0.40 tpy
13-14 (combined)	Auxiliary Boilers	15.75 MMBtu/hr (each)	ULSD	Manufacturer Data	0.56 lb/hr	0 tpy	0 tpy	0 tpy
17	Natural Gas Fuel Heater	8.3 MMBtu/hr	NG	Manufacturer Data	0.037 lb/MMBtu	1.35 tpy	1.35 tpy	1.35 tpy
					Subtotal:	**323.9 tpy**	**207.3 tpy**	**121.9 tpy**
Insignificant Emission Units								
15	Diesel Storage Tank	509,000 gal	N/A	N/A	N/A	0 tpy	0 tpy	0 tpy
16	Diesel Storage Tank	509,000 gal	N/A	N/A	N/A	0 tpy	0 tpy	0 tpy
N/A	Lube Oil Storage Tank	18,784 gal	N/A	N/A	N/A	0 tpy	0 tpy	0 tpy
N/A	Used Lube Oil Storage Tank	14,898 gal	N/A	N/A	N/A	0 tpy	0 tpy	0 tpy
N/A	Service Lube Oil Storage Tank (2)	19,474 gal (each)	N/A	N/A	N/A	0 tpy	0 tpy	0 tpy
N/A	Wastewater/Lube Oil Storage Tank	14,898 gal	N/A	N/A	N/A	0 tpy	0 tpy	0 tpy
N/A	Diesel Storage Tank (2)	1,000 gal (each)	N/A	N/A	N/A	0 tpy	0 tpy	0 tpy
N/A	Diesel Storage Tank	300 gal	N/A	N/A	N/A	0 tpy	0 tpy	0 tpy
N/A	Diesel Storage Tank (2)	660 gal (each)	N/A	N/A	N/A	0 tpy	0 tpy	0 tpy
N/A	Diesel Engine Lube Oil Reservoirs (10)	3,500 gal (each)	N/A	N/A	N/A	0 tpy	0 tpy	0 tpy
					Subtotal:	**0.0 tpy**	**0.0 tpy**	**0.0 tpy**
					Total CO Emissions:	**323.9 tpy**	**207.3 tpy**	**121.9 tpy**

Notes:

1. NG is natural gas; ULSD is ultra low sulfur diesel.
2. Emissions calculations are based on worst case scenario for dual fuel-fired units (EU IDs 1-10, 13, and 14) when operating on natural gas and/or diesel.
3. When operating on natural gas, EU IDs 1 through 10 burn one percent diesel; emission factor accounts for this mix.

Conversions:

453.59 g/lb

Table 5. Particulate Matter (PM-10, PM-2.5) Emissions
Matanuska Electric Association - Eklutna Generation Station

ID	Emission Unit Name	Rating / Capacity	Fuel Type	Reference	PM Emission Factor	Unlimited PM Emissions	Permitted PM Emissions	Expected PM Emissions
Significant Emission Units								
1	Generator Engine	17.1 MW	NG / ULSD	Manufacturer Data	4.89 lb/hr	0 tpy	21.02 tpy	11.57 tpy
2	Generator Engine	17.1 MW	NG / ULSD	Manufacturer Data	4.89 lb/hr	0 tpy	21.02 tpy	13.03 tpy
3	Generator Engine	17.1 MW	NG / ULSD	Manufacturer Data	4.89 lb/hr	0 tpy	21.02 tpy	12.70 tpy
4	Generator Engine	17.1 MW	NG / ULSD	Manufacturer Data	4.89 lb/hr	0 tpy	21.02 tpy	12.05 tpy
5	Generator Engine	17.1 MW	NG / ULSD	Manufacturer Data	4.89 lb/hr	0 tpy	21.02 tpy	12.37 tpy
6	Generator Engine	17.1 MW	NG / ULSD	Manufacturer Data	4.89 lb/hr	0 tpy	21.02 tpy	15.06 tpy
7	Generator Engine	17.1 MW	NG / ULSD	Manufacturer Data	4.89 lb/hr	0 tpy	21.02 tpy	12.96 tpy
8	Generator Engine	17.1 MW	NG / ULSD	Manufacturer Data	4.89 lb/hr	0 tpy	21.02 tpy	12.85 tpy
9	Generator Engine	17.1 MW	NG / ULSD	Manufacturer Data	4.89 lb/hr	0 tpy	21.02 tpy	12.63 tpy
10	Generator Engine	17.1 MW	NG / ULSD	Manufacturer Data	4.89 lb/hr	0 tpy	21.02 tpy	13.61 tpy
1-10 (combined)	Generator Engines	17.1 MW (each)	ULSD Exclusively	Manufacturer Data	10.92 lb/hr	478.18 tpy	9.17 tpy	1.16 tpy
11	Firewater Pump Engine	197 hp	ULSD	Manufacturer Data	0.1 g/hp-hr	0.19 tpy	0.01 tpy	5.6E-04 tpy
12	Black Start Generator Engine	1,490 hp	ULSD	Manufacturer Data	0.19 g/hp-hr	2.73 tpy	0.31 tpy	2.0E-03 tpy
18	Black Start Generator Engine	1,490 hp	ULSD	Manufacturer Data	0.19 g/hp-hr	2.73 tpy		1.9E-03 tpy
13	Auxiliary Boiler	15.75 MMBtu/hr	NG	Manufacturer Data	0.10 lb/hr	0 tpy	0.39 tpy	0.09 tpy
14	Auxiliary Boiler	15.75 MMBtu/hr	NG	Manufacturer Data	0.10 lb/hr	0 tpy	0.39 tpy	0.07 tpy
13-14 (combined)	Auxiliary Boilers	15.75 MMBtu/hr (each)	ULSD	Manufacturer Data	0.32 lb/hr	2.80 tpy	0.16 tpy	0 tpy
17	Natural Gas Fuel Heater	8.3 MMBtu/hr	NG	Manufacturer Data	0.0048 lb/MMBtu	0.17 tpy	0.17 tpy	0.17 tpy
					Subtotal:	**486.8 tpy**	**220.9 tpy**	**130.3 tpy**
Insignificant Emission Units								
15	Diesel Storage Tank	509,000 gal	N/A	N/A	N/A	0 tpy	0 tpy	0 tpy
16	Diesel Storage Tank	509,000 gal	N/A	N/A	N/A	0 tpy	0 tpy	0 tpy
N/A	Lube Oil Storage Tank	18,784 gal	N/A	N/A	N/A	0 tpy	0 tpy	0 tpy
N/A	Used Lube Oil Storage Tank	14,898 gal	N/A	N/A	N/A	0 tpy	0 tpy	0 tpy
N/A	Service Lube Oil Storage Tank (2)	19,474 gal (each)	N/A	N/A	N/A	0 tpy	0 tpy	0 tpy
N/A	Wastewater/Lube Oil Storage Tank	14,898 gal	N/A	N/A	N/A	0 tpy	0 tpy	0 tpy
N/A	Diesel Storage Tank (2)	1,000 gal (each)	N/A	N/A	N/A	0 tpy	0 tpy	0 tpy
N/A	Diesel Storage Tank	300 gal	N/A	N/A	N/A	0 tpy	0 tpy	0 tpy
N/A	Diesel Storage Tank (2)	660 gal (each)	N/A	N/A	N/A	0 tpy	0 tpy	0 tpy
N/A	Diesel Engine Lube Oil Reservoirs (10)	3,500 gal (each)	N/A	N/A	N/A	0 tpy	0 tpy	0 tpy
					Subtotal:	**0.0 tpy**	**0.0 tpy**	**0.0 tpy**
					Total PM Emissions:	**486.8 tpy**	**220.9 tpy**	**130.3 tpy**

Notes:

1. NG is natural gas; ULSD is ultra low sulfur diesel.
2. Emissions calculations are based on worst case scenario for dual fuel-fired units (EU IDs 1-10, 13, and 14) when operating on natural gas and/or diesel.
3. When operating on natural gas, EU IDs 1 through 10 burn one percent diesel; emission factor accounts for this mix.

Conversions:

453.59 g/lb

Table 6. Sulfur Dioxide (SO_2) Emissions

Matanuska Electric Association - Eklutna Generation Station

ID	Emission Unit Name	Rating / Capacity	Fuel Type	Max Rated Fuel Consumption	Reference	SO_2 Emission Factor	Unlimited SO_2 Emissions	Permitted SO_2 Emissions	Expected SO_2 Emissions
Significant Emission Units									
1	Generator Engine	17.1 MW	NG	129,548 scf/hr	Mass Balance	20 ppmv H_2S	2.02 tpy	2.02 tpy	1.09 tpy
			Diesel	13.1 gal/hr	Mass Balance	15 ppmw S	0.01 tpy	0.01 tpy	0.01 tpy
2	Generator Engine	17.1 MW	NG	129,548 scf/hr	Mass Balance	20 ppmv H_2S	2.02 tpy	2.02 tpy	1.23 tpy
			Diesel	13.1 gal/hr	Mass Balance	15 ppmw S	0.01 tpy	0.01 tpy	0.01 tpy
3	Generator Engine	17.1 MW	NG	129,548 scf/hr	Mass Balance	20 ppmv H_2S	2.02 tpy	2.02 tpy	1.20 tpy
			Diesel	13.1 gal/hr	Mass Balance	15 ppmw S	0.01 tpy	0.01 tpy	0.01 tpy
4	Generator Engine	17.1 MW	NG	129,548 scf/hr	Mass Balance	20 ppmv H_2S	2.02 tpy	2.02 tpy	1.14 tpy
			Diesel	13.1 gal/hr	Mass Balance	15 ppmw S	0.01 tpy	0.01 tpy	0.01 tpy
5	Generator Engine	17.1 MW	NG	129,548 scf/hr	Mass Balance	20 ppmv H_2S	2.02 tpy	2.02 tpy	1.17 tpy
			Diesel	13.1 gal/hr	Mass Balance	15 ppmw S	0.01 tpy	0.01 tpy	0.01 tpy
6	Generator Engine	17.1 MW	NG	129,548 scf/hr	Mass Balance	20 ppmv H_2S	2.02 tpy	2.02 tpy	1.42 tpy
			Diesel	13.1 gal/hr	Mass Balance	15 ppmw S	0.01 tpy	0.01 tpy	0.01 tpy
7	Generator Engine	17.1 MW	NG	129,548 scf/hr	Mass Balance	20 ppmv H_2S	2.02 tpy	2.02 tpy	1.22 tpy
			Diesel	13.1 gal/hr	Mass Balance	15 ppmw S	0.01 tpy	0.01 tpy	0.01 tpy
8	Generator Engine	17.1 MW	NG	129,548 scf/hr	Mass Balance	20 ppmv H_2S	2.02 tpy	2.02 tpy	1.21 tpy
			Diesel	13.1 gal/hr	Mass Balance	15 ppmw S	0.01 tpy	0.01 tpy	0.01 tpy
9	Generator Engine	17.1 MW	NG	129,548 scf/hr	Mass Balance	20 ppmv H_2S	2.02 tpy	2.02 tpy	1.19 tpy
			Diesel	13.1 gal/hr	Mass Balance	15 ppmw S	0.01 tpy	0.01 tpy	0.01 tpy
10	Generator Engine	17.1 MW	NG	129,548 scf/hr	Mass Balance	20 ppmv H_2S	2.02 tpy	2.02 tpy	1.28 tpy
			Diesel	13.1 gal/hr	Mass Balance	15 ppmw S	0.01 tpy	0.01 tpy	0.01 tpy
1-10 (combined)	Generator Engines	17.1 MW (each)	ULSD Exclusively	1,114.6 gal/hr (each)	Mass Balance	15 ppmw S	0 tpy	0 tpy	0.02 tpy
11	Firewater Pump Engine	197 hp	ULSD	10.3 gal/hr	Mass Balance	15 ppmw S	0.01 tpy	5.3E-04 tpy	2.8E-05 tpy
12	Black Start Generator Engine	1,490 hp	ULSD	71.9 gal/hr	Mass Balance	15 ppmw S	0.07 tpy	0.01 tpy	4.7E-05 tpy
18	Black Start Generator Engine	1,490 hp	ULSD	71.9 gal/hr	Mass Balance	15 ppmw S	0.07 tpy		4.6E-05 tpy
13	Auxiliary Boiler	15.75 MMBtu/hr	NG	15,752 scf/hr	Mass Balance	20 ppmv H_2S	0.25 tpy	0.25 tpy	0.05 tpy
14	Auxiliary Boiler	15.75 MMBtu/hr	NG	15,752 scf/hr	Mass Balance	20 ppmv H_2S	0.25 tpy	0.25 tpy	0.04 tpy
13-14 (combined)	Auxiliary Boilers	15.75 MMBtu/hr (each)	ULSD	110.3 gal/hr (each)	Mass Balance	15 ppmw S	0 tpy	0 tpy	0 tpy
17	Natural Gas Fuel Heater	8.3 MMBtu/hr	NG	8,137 scf/hr	Mass Balance	20 ppmv H_2S	0.13 tpy	0.13 tpy	0.13 tpy
						Subtotal:	**21.1 tpy**	**21.0 tpy**	**12.5 tpy**
Insignificant Emission Units									
15	Diesel Storage Tank	509,000 gal	N/A	N/A	N/A	N/A	0 tpy	0 tpy	0 tpy
16	Diesel Storage Tank	509,000 gal	N/A	N/A	N/A	N/A	0 tpy	0 tpy	0 tpy
N/A	Lube Oil Storage Tank	18,784 gal	N/A	N/A	N/A	N/A	0 tpy	0 tpy	0 tpy
N/A	Used Lube Oil Storage Tank	14,898 gal	N/A	N/A	N/A	N/A	0 tpy	0 tpy	0 tpy
N/A	Service Lube Oil Storage Tank (2)	19,474 gal (each)	N/A	N/A	N/A	N/A	0 tpy	0 tpy	0 tpy
N/A	Wastewater/Lube Oil Storage Tank	14,898 gal	N/A	N/A	N/A	N/A	0 tpy	0 tpy	0 tpy
N/A	Diesel Storage Tank (2)	1,000 gal (each)	N/A	N/A	N/A	N/A	0 tpy	0 tpy	0 tpy
N/A	Diesel Storage Tank	300 gal	N/A	N/A	N/A	N/A	0 tpy	0 tpy	0 tpy

Table 6. Sulfur Dioxide (SO_2) Emissions

Matanuska Electric Association - Eklutna Generation Station

ID	Emission Unit Name	Rating / Capacity	Fuel Type	Max Rated Fuel Consumption	Reference	SO_2 Emission Factor	Unlimited SO_2 Emissions	Permitted SO_2 Emissions	Expected SO_2 Emissions
N/A	Diesel Storage Tank (2)	660 gal (each)	N/A	N/A	N/A	N/A	0 tpy	0 tpy	0 tpy
N/A	Diesel Engine Lube Oil Reservoirs (10)	3,500 gal (each)	N/A	N/A	N/A	N/A	0 tpy	0 tpy	0 tpy
						Subtotal:	**0.0 tpy**	**0.0 tpy**	**0.0 tpy**
						Total SO_2 Emissions:	**21.1 tpy**	**21.0 tpy**	**12.5 tpy**

Notes:

1. NG is natural gas; ULSD is ultra low sulfur diesel. H_2S and S content limited per Condition 11.
2. Emissions calculations are based on worst case scenario for dual fuel-fired units (EU IDs 1-10, 13, and 14) when operating on natural gas and/or diesel.
3. When operating on natural gas, EU IDs 1 through 10 burn one percent diesel.

Conversions:

453.59 g/lb

6.9 lb/gal diesel

Table 7. Volatile Organic Compound (VOC) Emissions
Matanuska Electric Association - Eklutna Generation Station

ID	Emission Unit Name	Rating / Capacity	Fuel Type	Reference	VOC Emission Factor	Unlimited VOC Emissions	Permitted VOC Emissions	Expected VOC Emissions
Significant Emission Units								
1	Generator Engine	17.1 MW	NG / ULSD	Manufacturer Data	3.43 lb/hr	0 tpy	14.75 tpy	8.11 tpy
2	Generator Engine	17.1 MW	NG / ULSD	Manufacturer Data	3.43 lb/hr	0 tpy	14.75 tpy	9.14 tpy
3	Generator Engine	17.1 MW	NG / ULSD	Manufacturer Data	3.43 lb/hr	0 tpy	14.75 tpy	8.91 tpy
4	Generator Engine	17.1 MW	NG / ULSD	Manufacturer Data	3.43 lb/hr	0 tpy	14.75 tpy	8.45 tpy
5	Generator Engine	17.1 MW	NG / ULSD	Manufacturer Data	3.43 lb/hr	0 tpy	14.75 tpy	8.67 tpy
6	Generator Engine	17.1 MW	NG / ULSD	Manufacturer Data	3.43 lb/hr	0 tpy	14.75 tpy	10.56 tpy
7	Generator Engine	17.1 MW	NG / ULSD	Manufacturer Data	3.43 lb/hr	0 tpy	14.75 tpy	9.09 tpy
8	Generator Engine	17.1 MW	NG / ULSD	Manufacturer Data	3.43 lb/hr	0 tpy	14.75 tpy	9.01 tpy
9	Generator Engine	17.1 MW	NG / ULSD	Manufacturer Data	3.43 lb/hr	0 tpy	14.75 tpy	8.86 tpy
10	Generator Engine	17.1 MW	NG / ULSD	Manufacturer Data	3.43 lb/hr	0 tpy	14.75 tpy	9.54 tpy
1-10 (combined)	Generator Engines	17.1 MW (each)	ULSD Exclusively	Manufacturer Data	7.91 lb/hr	346.27 tpy	6.64 tpy	0.84 tpy
11	Firewater Pump Engine	197 hp	ULSD	Manufacturer Data	0.1 g/hp-hr	0.19 tpy	0.01 tpy	5.6E-04 tpy
12	Black Start Generator Engine	1,490 hp	ULSD	Manufacturer Data	0.12 g/hp-hr	1.73 tpy	0.20 tpy	1.2E-03 tpy
18	Black Start Generator Engine	1,490 hp	ULSD	Manufacturer Data	0.12 g/hp-hr	1.73 tpy		1.2E-03 tpy
13	Auxiliary Boiler	15.75 MMBtu/hr	NG	Manufacturer Data	0.063 lb/hr	0.28 tpy	0.28 tpy	0.06 tpy
14	Auxiliary Boiler	15.75 MMBtu/hr	NG	Manufacturer Data	0.063 lb/hr	0.28 tpy	0.28 tpy	0.04 tpy
13-14 (combined)	Auxiliary Boilers	15.75 MMBtu/hr (each)	ULSD	Manufacturer Data	0.062 lb/hr	0 tpy	0 tpy	0 tpy
17	Natural Gas Fuel Heater	8.3 MMBtu/hr	NG	Manufacturer Data	0.025 lb/MMBtu	0.91 tpy	0.91 tpy	0.91 tpy
					Subtotal:	**351.4 tpy**	**155.8 tpy**	**92.2 tpy**
Insignificant Emission Units								
15	Diesel Storage Tank	509,000 gal	N/A	See Table 10	61.06 lb/yr	0.03 tpy	0.03 tpy	0.03 tpy
16	Diesel Storage Tank	509,000 gal	N/A	See Table 10	61.06 lb/yr	0.03 tpy	0.03 tpy	0.03 tpy
N/A	Lube Oil Storage Tank	18,784 gal	N/A	N/A	N/A	0 tpy	0 tpy	0 tpy
N/A	Used Lube Oil Storage Tank	14,898 gal	N/A	N/A	N/A	0 tpy	0 tpy	0 tpy
N/A	Service Lube Oil Storage Tank (2)	19,474 gal (each)	N/A	N/A	N/A	0 tpy	0 tpy	0 tpy
N/A	Wastewater/Lube Oil Storage Tank	14,898 gal	N/A	N/A	N/A	0 tpy	0 tpy	0 tpy
N/A	Diesel Storage Tank (2)	1,000 gal (each)	N/A	N/A	N/A	0 tpy	0 tpy	0 tpy
N/A	Diesel Storage Tank	300 gal	N/A	N/A	N/A	0 tpy	0 tpy	0 tpy
N/A	Diesel Storage Tank (2)	660 gal (each)	N/A	N/A	N/A	0 tpy	0 tpy	0 tpy
N/A	Diesel Engine Lube Oil Reservoirs (10)	3,500 gal (each)	N/A	N/A	N/A	0 tpy	0 tpy	0 tpy
					Subtotal:	**0.1 tpy**	**0.1 tpy**	**0.1 tpy**
					Total VOC Emissions:	**351.4 tpy**	**155.8 tpy**	**92.3 tpy**

Notes:

1. NG is natural gas; ULSD is ultra low sulfur diesel.
2. Emissions calculations are based on worst case scenario for dual fuel-fired units (EU IDs 1-10, 13, and 14) when operating on natural gas and/or diesel.
3. When operating on natural gas, EU IDs 1 through 10 burn one percent diesel; emission factor accounts for this mix.

Conversions:

453.59 g/lb

Table 8. Hazardous Air Pollutant (HAP) Emissions
Matanuska Electric Association - Eklutna Generation Station

ID	Emission Unit Name	Rating / Capacity	Fuel Type	Maximum Heat Rate	Reference	HAP Emission Factor	Unlimited HAP Emissions	Permitted HAP Emissions	Expected HAP Emissions
Significant Emission Units									
1	Generator Engine	17.1 MW	NG	132.14 MMBtu/hr	See Table 11	0.0026 lb/MMBtu	1.53 tpy	1.53 tpy	0.83 tpy
			Diesel	1.54 MMBtu/hr	See Table 11	0.0033 lb/MMBtu	0.02 tpy	0.02 tpy	0.01 tpy
2	Generator Engine	17.1 MW	NG	132.14 MMBtu/hr	See Table 11	0.0026 lb/MMBtu	1.53 tpy	1.53 tpy	0.93 tpy
			Diesel	1.49 MMBtu/hr	See Table 11	0.0033 lb/MMBtu	0.02 tpy	0.02 tpy	0.01 tpy
3	Generator Engine	17.1 MW	NG	132.14 MMBtu/hr	See Table 11	0.0026 lb/MMBtu	1.53 tpy	1.53 tpy	0.91 tpy
			Diesel	1.49 MMBtu/hr	See Table 11	0.0033 lb/MMBtu	0.02 tpy	0.02 tpy	0.01 tpy
4	Generator Engine	17.1 MW	NG	132.14 MMBtu/hr	See Table 11	0.0026 lb/MMBtu	1.53 tpy	1.53 tpy	0.86 tpy
			Diesel	1.49 MMBtu/hr	See Table 11	0.0033 lb/MMBtu	0.02 tpy	0.02 tpy	0.01 tpy
5	Generator Engine	17.1 MW	NG	132.14 MMBtu/hr	See Table 11	0.0026 lb/MMBtu	1.53 tpy	1.53 tpy	0.88 tpy
			Diesel	1.49 MMBtu/hr	See Table 11	0.0033 lb/MMBtu	0.02 tpy	0.02 tpy	0.01 tpy
6	Generator Engine	17.1 MW	NG	132.14 MMBtu/hr	See Table 11	0.0026 lb/MMBtu	1.53 tpy	1.53 tpy	1.08 tpy
			Diesel	1.49 MMBtu/hr	See Table 11	0.0033 lb/MMBtu	0.02 tpy	0.02 tpy	0.02 tpy
7	Generator Engine	17.1 MW	NG	132.14 MMBtu/hr	See Table 11	0.0026 lb/MMBtu	1.53 tpy	1.53 tpy	0.93 tpy
			Diesel	1.49 MMBtu/hr	See Table 11	0.0033 lb/MMBtu	0.02 tpy	0.02 tpy	0.01 tpy
8	Generator Engine	17.1 MW	NG	132.14 MMBtu/hr	See Table 11	0.0026 lb/MMBtu	1.53 tpy	1.53 tpy	0.92 tpy
			Diesel	1.49 MMBtu/hr	See Table 11	0.0033 lb/MMBtu	0.02 tpy	0.02 tpy	0.01 tpy
9	Generator Engine	17.1 MW	NG	132.14 MMBtu/hr	See Table 11	0.0026 lb/MMBtu	1.53 tpy	1.53 tpy	0.90 tpy
			Diesel	1.49 MMBtu/hr	See Table 11	0.0033 lb/MMBtu	0.02 tpy	0.02 tpy	0.01 tpy
10	Generator Engine	17.1 MW	NG	132.14 MMBtu/hr	See Table 11	0.0026 lb/MMBtu	1.53 tpy	1.53 tpy	0.97 tpy
			Diesel	1.49 MMBtu/hr	See Table 11	0.0033 lb/MMBtu	0.02 tpy	0.02 tpy	0.01 tpy
1-10 (combined)	Generator Engines	17.1 MW (each)	ULSD Exclusively	153.93 MMBtu/hr (each)	See Table 11	0.0033 lb/MMBtu	0 tpy	0 tpy	0.05 tpy
11	Firewater Pump Engine	197 hp	ULSD	1.42 MMBtu/hr	See Table 11	0.0039 lb/MMBtu	0.02 tpy	1.4E-03 tpy	7.2E-05 tpy
12	Black Start Generator Engine	1,490 hp	ULSD	9.92 MMBtu/hr	See Table 11	0.0016 lb/MMBtu	0.07 tpy	0.01 tpy	4.9E-05 tpy
18	Black Start Generator Engine	1,490 hp	ULSD	9.92 MMBtu/hr	See Table 11	0.0016 lb/MMBtu	0.07 tpy		4.8E-05 tpy
13	Auxiliary Boiler	15.75 MMBtu/hr	NG	15,752 scf/hr	See Table 11	1.8882 lb/MMscf	0.13 tpy	0.13 tpy	0.03 tpy
14	Auxiliary Boiler	15.75 MMBtu/hr	NG	15,752 scf/hr	See Table 11	1.8882 lb/MMscf	0.13 tpy	0.13 tpy	0.05 tpy
13-14 (combined)	Auxiliary Boilers	15.75 MMBtu/hr (each)	ULSD	110.31 gal/hr (each)	See Table 11	0.1577 $lb/10^3$ gal	0 tpy	0 tpy	0 tpy
17	Natural Gas Fuel Heater	8.3 MMBtu/hr	NG	8.3 MMBtu/hr	See Table 11	1.8882 lb/MMscf	6.9E-05 tpy	6.9E-05 tpy	6.9E-05 tpy
						Subtotal:	**16.0 tpy**	**15.8 tpy**	**9.5 tpy**
Insignificant Emission Units									
15	Diesel Storage Tank	509,000 gal	N/A	N/A	N/A	N/A	0 tpy	0 tpy	0 tpy
16	Diesel Storage Tank	509,000 gal	N/A	N/A	N/A	N/A	0 tpy	0 tpy	0 tpy
N/A	Lube Oil Storage Tank	18,784 gal	N/A	N/A	N/A	N/A	0 tpy	0 tpy	0 tpy
N/A	Used Lube Oil Storage Tank	14,898 gal	N/A	N/A	N/A	N/A	0 tpy	0 tpy	0 tpy
N/A	Service Lube Oil Storage Tank (2)	19,474 gal (each)	N/A	N/A	N/A	N/A	0 tpy	0 tpy	0 tpy
N/A	Wastewater/Lube Oil Storage Tank	14,898 gal	N/A	N/A	N/A	N/A	0 tpy	0 tpy	0 tpy
N/A	Diesel Storage Tank (2)	1,000 gal (each)	N/A	N/A	N/A	N/A	0 tpy	0 tpy	0 tpy
N/A	Diesel Storage Tank	300 gal	N/A	N/A	N/A	N/A	0 tpy	0 tpy	0 tpy

Table 8. Hazardous Air Pollutant (HAP) Emissions
Matanuska Electric Association - Eklutna Generation Station

ID	Emission Unit Name	Rating / Capacity	Fuel Type	Maximum Heat Rate	Reference	HAP Emission Factor	Unlimited HAP Emissions	Permitted HAP Emissions	Expected HAP Emissions
N/A	Diesel Storage Tank (2)	660 gal (each)	N/A	N/A	N/A	N/A	0 tpy	0 tpy	0 tpy
N/A	Diesel Engine Lube Oil Reservoirs (10)	3,500 gal (each)	N/A	N/A	N/A	N/A	0 tpy	0 tpy	0 tpy
						Subtotal:	**0.0 tpy**	**0.0 tpy**	**0.0 tpy**
						Total HAP Emissions:	**16.0 tpy**	**15.8 tpy**	**9.5 tpy**
						Highest Individual HAP (Formaldehyde):	**4.4 tpy**	**4.4 tpy**	**2.7 tpy**

Notes:

1. NG is natural gas. ULSD is ultra low sulfur diesel.
2. Calculation is based on worst case scenario for dual fuel-fired units (EU IDs 1-10, 13, and 14) when operating on natural gas and/or diesel.
3. When operating on natural gas, EU IDs 1 through 10 burn one percent diesel.

Conversions:

6.9 lb/gal diesel
1020 Btu/scf natural gas

Table 9. Carbon Dioxide Equivalent (CO_2e) Emissions
Matanuska Electric Association - Eklutna Generation Station

ID	Emission Unit Name	Rating / Capacity	Fuel Type	Maximum Heat Rate	Reference	CO_2e Emission Factor	Unlimited CO_2e Emissions	Permitted CO_2e Emissions	Expected CO_2e Emissions
Significant Emission Units									
1	Generator Engine	17.1 MW	NG	132.14 MMBtu/hr	See Table 12	53.11 kg/MMBtu	0 tpy	66,472.2 tpy	36,570.5 tpy
			Diesel	1.81 MMBtu/hr	See Table 12	74.21 kg/MMBtu	0 tpy	1,271.9 tpy	699.8 tpy
2	Generator Engine	17.1 MW	NG	132.14 MMBtu/hr	See Table 12	53.11 kg/MMBtu	0 tpy	66,472.2 tpy	41,181.5 tpy
			Diesel	1.81 MMBtu/hr	See Table 12	74.21 kg/MMBtu	0 tpy	1,271.9 tpy	788.0 tpy
3	Generator Engine	17.1 MW	NG	132.14 MMBtu/hr	See Table 12	53.11 kg/MMBtu	0 tpy	66,472.2 tpy	40,160.3 tpy
			Diesel	1.81 MMBtu/hr	See Table 12	74.21 kg/MMBtu	0 tpy	1,271.9 tpy	768.4 tpy
4	Generator Engine	17.1 MW	NG	132.14 MMBtu/hr	See Table 12	53.11 kg/MMBtu	0 tpy	66,472.2 tpy	38,110.1 tpy
			Diesel	1.81 MMBtu/hr	See Table 12	74.21 kg/MMBtu	0 tpy	1,271.9 tpy	729.2 tpy
5	Generator Engine	17.1 MW	NG	132.14 MMBtu/hr	See Table 12	53.11 kg/MMBtu	0 tpy	66,472.2 tpy	39,100.4 tpy
			Diesel	1.81 MMBtu/hr	See Table 12	74.21 kg/MMBtu	0 tpy	1,271.9 tpy	748.2 tpy
6	Generator Engine	17.1 MW	NG	132.14 MMBtu/hr	See Table 12	53.11 kg/MMBtu	0 tpy	66,472.2 tpy	47,618.3 tpy
			Diesel	1.81 MMBtu/hr	See Table 12	74.21 kg/MMBtu	0 tpy	1,271.9 tpy	911.1 tpy
7	Generator Engine	17.1 MW	NG	132.14 MMBtu/hr	See Table 12	53.11 kg/MMBtu	0 tpy	66,472.2 tpy	40,972.6 tpy
			Diesel	1.81 MMBtu/hr	See Table 12	74.21 kg/MMBtu	0 tpy	1,271.9 tpy	784.0 tpy
8	Generator Engine	17.1 MW	NG	132.14 MMBtu/hr	See Table 12	53.11 kg/MMBtu	0 tpy	66,472.2 tpy	40,624.5 tpy
			Diesel	1.81 MMBtu/hr	See Table 12	74.21 kg/MMBtu	0 tpy	1,271.9 tpy	777.3 tpy
9	Generator Engine	17.1 MW	NG	132.14 MMBtu/hr	See Table 12	53.11 kg/MMBtu	0 tpy	66,472.2 tpy	39,935.9 tpy
			Diesel	1.81 MMBtu/hr	See Table 12	74.21 kg/MMBtu	0 tpy	1,271.9 tpy	764.1 tpy
10	Generator Engine	17.1 MW	NG	132.14 MMBtu/hr	See Table 12	53.11 kg/MMBtu	0 tpy	66,472.2 tpy	43,015.0 tpy
			Diesel	1.81 MMBtu/hr	See Table 12	74.21 kg/MMBtu	0 tpy	1,271.9 tpy	823.1 tpy
1-10 (combined)	Generator Engines	17.1 MW (each)	ULSD Exclusively	153.81 MMBtu/hr (each)	See Table 12	74.21 kg/MMBtu	1,102,253.2 tpy	21,139.1 tpy	2,667.6 tpy
11	Firewater Pump Engine	197 hp	ULSD	1.42 MMBtu/hr	See Table 12	74.21 kg/MMBtu	1,018.6 tpy	58.1 tpy	3.0 tpy
12	Black Start Generator Engine	1,490 hp	ULSD	9.92 MMBtu/hr	See Table 12	74.21 kg/MMBtu	7,110.4 tpy	811.7 tpy	5.1 tpy
18	Black Start Generator Engine	1,490 hp	ULSD	9.92 MMBtu/hr	See Table 12	74.21 kg/MMBtu	7,110.4 tpy		5.0 tpy
13	Auxiliary Boiler	15.75 MMBtu/hr	NG	15.75 MMBtu/hr	See Table 12	53.11 kg/MMBtu	0 tpy	7,616.9 tpy	1,684.7 tpy
14	Auxiliary Boiler	15.75 MMBtu/hr	NG	15.75 MMBtu/hr	See Table 12	53.11 kg/MMBtu	0 tpy	7,616.9 tpy	1,279.0 tpy
13-14 (combined)	Auxiliary Boilers	15.75 MMBtu/hr (each)	ULSD	15.75 MMBtu/hr	See Table 12	74.21 kg/MMBtu	22,573.5 tpy	1,288.4 tpy	0 tpy
17	Natural Gas Fuel Heater	8.3 MMBtu/hr	NG	8.3 MMBtu/hr	See Table 12	53.11 kg/MMBtu	4,256.9 tpy	4,256.9 tpy	4,256.9 tpy
						Subtotal:	**1,144,323.2 tpy**	**720,228.8 tpy**	**424,983.7 tpy**
Insignificant Emission Units									
15	Diesel Storage Tank	509,000 gal	N/A	N/A	N/A	N/A	0 tpy	0 tpy	0 tpy
16	Diesel Storage Tank	509,000 gal	N/A	N/A	N/A	N/A	0 tpy	0 tpy	0 tpy
N/A	Lube Oil Storage Tank	18,784 gal	N/A	N/A	N/A	N/A	0 tpy	0 tpy	0 tpy
N/A	Used Lube Oil Storage Tank	14,898 gal	N/A	N/A	N/A	N/A	0 tpy	0 tpy	0 tpy
N/A	Service Lube Oil Storage Tank (2)	19,474 gal (each)	N/A	N/A	N/A	N/A	0 tpy	0 tpy	0 tpy
N/A	Wastewater/Lube Oil Storage Tank	14,898 gal	N/A	N/A	N/A	N/A	0 tpy	0 tpy	0 tpy
N/A	Diesel Storage Tank (2)	1,000 gal (each)	N/A	N/A	N/A	N/A	0 tpy	0 tpy	0 tpy
N/A	Diesel Storage Tank	300 gal	N/A	N/A	N/A	N/A	0 tpy	0 tpy	0 tpy

Table 9. Carbon Dioxide Equivalent (CO_2e) Emissions

Matanuska Electric Association - Eklutna Generation Station

ID	Emission Unit Name	Rating / Capacity	Fuel Type	Maximum Heat Rate	Reference	CO_2e Emission Factor	Unlimited CO_2e Emissions	Permitted CO_2e Emissions	Expected CO_2e Emissions
N/A	Diesel Storage Tank (2)	660 gal (each)	N/A	N/A	N/A	N/A	0 tpy	0 tpy	0 tpy
N/A	Diesel Engine Lube Oil Reservoirs (10)	3,500 gal (each)	N/A	N/A	N/A	N/A	0 tpy	0 tpy	0 tpy
						Subtotal:	**0.0 tpy**	**0.0 tpy**	**0.0 tpy**
						Total CO_2e Emissions:	**1,144,323.2 tpy**	**720,228.8 tpy**	**424,983.7 tpy**

Notes:

1. NG is natural gas. ULSD is ultra low sulfur diesel.
2. Calculation is based on worst case scenario for dual fuel-fired units (EU IDs 1-10, 13, and 14) when operating on natural gas and/or diesel.
3. When operating on natural gas, EU IDs 1 through 10 burn one percent diesel.

Conversions:

0.138	MMBtu/gal diesel
6.9	lb/gal diesel
0.9478	Btu/kJ
1020	Btu/scf natural gas

Table 10. Diesel Tank Emission Factors from AP-42, Section 7.1
Matanuska Electric Association - Eklutna Generation Station

Tank Name	EU ID 15	EU ID 16
Orientation	Vertical Fixed Roof	Vertical Fixed Roof
Contents	Diesel	Diesel
Capacity (gallons)	509,000	509,000
Diameter, D (ft)	52.0	52.0
Radium, R_S (ft)	26.0	26.0
Shell Height, H_S (ft)	32.0	32.0
Average Liquid Height (H_L)	16.0	16.0
Maximum Liquid Height (H_{LX})	31.0	31.0
Diesel Throughput (gal/yr)	1,018,000	1,018,000
Color	White	White
Paint Condition	Good	Good
Roof Type	Cone	Cone
Slope, S_R (ft/ft)	0.0625	0.0625
Standing Loss (L_S) Calculations		
Vapor Space Expansion Factor, K_E	0.022	0.022
Vapor Space Outage, H_{VO} (ft)	16.54	16.54
Average Daily Ambient Temperature, T_{AA} (^oR)	495.90	495.90
Liquid Bulk Temperature, T_B (^oR)	496.33	496.33
Average Daily Liquid Surface Temperature, T_{LA} (^oR)	496.87	496.87
Vened Vapor Density, K_S	0.9948	0.9948
Stock Vapor Denisty, W_V (lb/ft^3)	1.46E-04	1.46E-04
Standing Loss, L_S (lb/yr)	41.54	41.54
Working Loss (L_W) Calculations		
Tank Maximum Liquid Volume, V_{LX} (ft^3)	65,835	65,835
Number of Turnovers per Year, N	2.07	2.07
Turnover Factor, K_N	1.0	1.0
Working Loss, L_W (lb/yr)	19.52	19.52
Total VOCs (lb/yr)	**61.0604120**	**61.0604120**

Inputs (Anchorage, AK):

T_{AX} =	42.7	^oF	502.7	^oR
T_{AN} =	29.1	^oF	489.1	^oR
a =	0.17	New, White		
I =	838	Btu/ft^2-d		

Constants:

M_V (diesel)=	130	lb/lb-mol
P_{VA} (diesel)=	0.006	psi
K_P =	1	

Table 11. Section 112 Hazardous Air Pollutant (HAP) Emission Factors
Matanuska Electric Association - Eklutna Generation Station

Pollutant	NG Engines AP-42 Table 3.2-2 (EU IDs 1-10 NG)	Large Diesel Engines AP-42 Tables 3.4-3, 4 (EU IDs 1-10 ULSD)	Other Large Diesel Engines AP-42 Tables 3.4-3, 4 (EU IDs 12 & 18)	Small Diesel Engines AP-42 Table 3.3-2 (EU ID 11)	Diesel Boilers/Heaters AP-42 Tables 1.3-9, 11 (EU ID 13 & 14 ULSD)	NG Boilers/Heaters AP-42 Tables 1.4-2, 3 (EU IDs 13, 14, 17 NG)
1,1,1-Trichloroethane					2.36E-04 lb/10^3 gal	
1,1,2-Trichloroethane	3.18E-05 lb/MMBtu					
1,1,2,2-Tetrachloroethane	4.00E-05 lb/MMBtu					
1,3-Butadiene	3.71E-04 lb/MMBtu[3]			3.91E-05 lb/MMBtu		
1,3-Dicholorbenzene						1.20E-03 lb/MMscf
1,3-Dichloropropene	2.64E-05 lb/MMBtu					
2-Methylnaphthalene	3.32E-05 lb/MMBtu					2.40E-05 lb/MMscf
3-Methylcholanthrene						1.80E-06 lb/MMscf
7,12-Dimethylbenz(a)anthracene						1.60E-05 lb/MMscf
Acenaphthene	1.53E-07 lb/MMBtu[3]	4.68E-06 lb/MMBtu	4.68E-06 lb/MMBtu	5.06E-06 lb/MMBtu	2.11E-05 lb/10^3 gal	1.80E-06 lb/MMscf
Acenaphthylene	5.06E-07 lb/MMBtu[3]	9.23E-06 lb/MMBtu	9.23E-06 lb/MMBtu	1.42E-06 lb/MMBtu	2.53E-07 lb/10^3 gal	1.80E-06 lb/MMscf
Acetaldehyde	5.19E-04 lb/MMBtu[3]	2.52E-05 lb/MMBtu	2.52E-05 lb/MMBtu	7.67E-04 lb/MMBtu		
Acrolein	3.84E-05 lb/MMBtu[3]	7.88E-06 lb/MMBtu	7.88E-06 lb/MMBtu	9.25E-05 lb/MMBtu		
Anthracene		1.23E-06 lb/MMBtu	1.23E-06 lb/MMBtu	1.87E-06 lb/MMBtu	1.22E-06 lb/10^3 gal	2.40E-06 lb/MMscf
Antimony					5.25E-03 lb/10^3 gal	
Arsenic					1.32E-03 lb/10^3 gal	2.00E-04 lb/MMscf
Benz(a)anthracene		6.22E-07 lb/MMBtu	6.22E-07 lb/MMBtu	1.68E-06 lb/MMBtu	4.01E-06 lb/10^3 gal	1.80E-06 lb/MMscf
Benzene	2.08E-04 lb/MMBtu[3]	7.76E-04 lb/MMBtu	7.76E-04 lb/MMBtu	9.33E-04 lb/MMBtu	2.14E-04 lb/10^3 gal	2.10E-03 lb/MMscf
Benzo(a)pyrene	4.15E-07 lb/MMBtu	2.57E-07 lb/MMBtu	2.57E-07 lb/MMBtu	1.88E-07 lb/MMBtu		1.20E-06 lb/MMscf
Benzo(b)fluoranthene	1.66E-07 lb/MMBtu	1.11E-06 lb/MMBtu	1.11E-06 lb/MMBtu	9.91E-08 lb/MMBtu	1.48E-06 lb/10^3 gal	1.80E-06 lb/MMscf
Benzo(g,h,I)perylene	4.14E-07 lb/MMBtu	5.56E-07 lb/MMBtu	5.56E-07 lb/MMBtu	4.89E-07 lb/MMBtu	2.26E-06 lb/10^3 gal	1.20E-06 lb/MMscf
Benzo(k)fluoranthene	8.37E-09 lb/MMBtu[3]	2.18E-07 lb/MMBtu	2.18E-07 lb/MMBtu	1.55E-07 lb/MMBtu		1.80E-06 lb/MMscf
Beryllium					2.78E-05 lb/10^3 gal	1.20E-05 lb/MMscf
Biphenyl	2.12E-04 lb/MMBtu					
Cadmium					3.98E-04 lb/10^3 gal	1.10E-03 lb/MMscf
Carbon Tetrachloride	3.67E-05 lb/MMBtu					
Chlorobenzene	3.04E-05 lb/MMBtu					
Chloroform	2.85E-05 lb/MMBtu					
Chromium					8.45E-04 lb/10^3 gal	1.40E-03 lb/MMscf
Chromium VI					2.48E-04 lb/10^3 gal	
Chrysene	1.55E-08 lb/MMBtu[3]	1.53E-06 lb/MMBtu	1.53E-06 lb/MMBtu	3.53E-07 lb/MMBtu	2.38E-06 lb/10^3 gal	1.80E-06 lb/MMscf
Cobalt					6.02E-03 lb/10^3 gal	8.40E-05 lb/MMscf
Dibenzo(a,h)anthracene	2.47E-09 lb/MMBtu[3]	3.46E-07 lb/MMBtu	3.46E-07 lb/MMBtu	5.83E-07 lb/MMBtu	1.67E-06 lb/10^3 gal	1.20E-06 lb/MMscf
Ethylbenzene	3.97E-05 lb/MMBtu				6.36E-05 lb/10^3 gal	
Ethylene Dibromide	4.43E-05 lb/MMBtu					
Fluoranthene	2.93E-07 lb/MMBtu[3]	4.03E-06 lb/MMBtu	4.03E-06 lb/MMBtu	7.61E-06 lb/MMBtu	4.48E-06 lb/10^3 gal	3.00E-06 lb/MMscf
Fluorene	3.42E-07 lb/MMBtu[3]	1.28E-06 lb/MMBtu	1.28E-06 lb/MMBtu	2.92E-05 lb/MMBtu	4.47E-06 lb/10^3 gal	2.80E-06 lb/MMscf
Formaldehyde	7.57E-04 lb/MMBtu[4]	1.82E-03 lb/MMBtu[5]	7.89E-05 lb/MMBtu	1.18E-03 lb/MMBtu	3.30E-02 lb/10^3 gal	7.50E-02 lb/MMscf
Hexane						1.80E+00 lb/MMscf
Indeno(1,2,3-cd)pyrene	7.90E-09 lb/MMBtu[3]	4.14E-07 lb/MMBtu	4.14E-07 lb/MMBtu	3.75E-07 lb/MMBtu	2.14E-06 lb/10^3 gal	1.80E-06 lb/MMscf
Lead					1.51E-03 lb/10^3 gal	5.00E-04 lb/MMscf

Table 11. Section 112 Hazardous Air Pollutant (HAP) Emission Factors
Matanuska Electric Association - Eklutna Generation Station

Pollutant	NG Engines AP-42 Table 3.2-2 (EU IDs 1-10 NG)	Large Diesel Engines AP-42 Tables 3.4-3, 4 (EU IDs 1-10 ULSD)	Other Large Diesel Engines AP-42 Tables 3.4-3, 4 (EU IDs 12 & 18)	Small Diesel Engines AP-42 Table 3.3-2 (EU ID 11)	Diesel Boilers/Heaters AP-42 Tables 1.3-9, 11 (EU ID 13 & 14 ULSD)	NG Boilers/Heaters AP-42 Tables 1.4-2, 3 (EU IDs 13, 14, 17 NG)
Manganese					3.00E-03 lb/10^3 gal	3.80E-04 lb/MMscf
Mercury					1.13E-04 lb/10^3 gal	
Methanol	2.50E-03 lb/MMBtu					
Methylene Chloride	2.00E-05 lb/MMBtu					
Naphthalene	2.29E-05 lb/MMBtu[3]	1.30E-04 lb/MMBtu	1.30E-04 lb/MMBtu	8.48E-05 lb/MMBtu	1.13E-03 lb/10^3 gal	6.10E-04 lb/MMscf
n-Hexane	1.11E-03 lb/MMBtu					
Nickel					8.45E-02 lb/10^3 gal	2.10E-03 lb/MMscf
o-Xylene					1.09E-04 lb/10^3 gal	
Phenanathrene	1.76E-06 lb/MMBtu[3]	4.08E-05 lb/MMBtu	4.08E-05 lb/MMBtu	2.94E-05 lb/MMBtu	1.05E-05 lb/10^3 gal	1.70E-05 lb/MMscf
Phenol	2.40E-05 lb/MMBtu					
Phosphorus					9.46E-03 lb/10^3 gal	
Polycyclic Aromatic Hydrocarbons	2.69E-05 lb/MMBtu					
Polycylic Organic Matter					3.30E-03 lb/10^3 gal	
Pyrene	1.87E-07 lb/MMBtu[3]	3.71E-06 lb/MMBtu	3.71E-06 lb/MMBtu	4.78E-06 lb/MMBtu	4.25E-06 lb/10^3 gal	5.00E-06 lb/MMscf
Selenium					6.83E-04 lb/10^3 gal	2.40E-05 lb/MMscf
Tetrachloroethane	2.48E-06 lb/MMBtu					
Toluene	2.54E-04 lb/MMBtu[3]	2.81E-04 lb/MMBtu	2.81E-04 lb/MMBtu	4.09E-04 lb/MMBtu	6.20E-03 lb/10^3 gal	3.40E-03 lb/MMscf
Vinyl Chloride	1.49E-05 lb/MMBtu					
Xylenes	6.72E-04 lb/MMBtu[3]	1.93E-04 lb/MMBtu	1.93E-04 lb/MMBtu	2.85E-04 lb/MMBtu		
Total HAPs	**7.07E-03 lb/MMBtu**	**3.30E-03 lb/MMBtu**	**1.56E-03 lb/MMBtu**	**3.87E-03 lb/MMBtu**	**1.58E-01 lb/10^3 gal**	**1.89E+00 lb/MMscf**
Total HAPs (Controlled[6])	**2.65E-03 lb/MMBtu**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**

Notes:

1. NG is natural gas. ULSD is ultra low sulfur diesel.
2. Emission factors are from AP-42 unless otherwise noted.
3. Emisson factors are from median values from the California Air Toxics Emission Factors (CATEF) database (4S/Lean/>650Hp).
4. Emission factor based on source test results for formaldehyde for EU ID 1-10 (natural gas). The source test report was submitted to ADEC on April 2, 2015 (0.1 lb/hr).
5. Emission factor for formaldehyde for EU IDs 1-10 (diesel) based on vendor data.
6. HAP emission control efficiency estimated at 70 percent for catalytic oxidation on EU IDs 1-10 (all pollutants except formaldehyde which was source tested).

Table 12. Carbon Dioxide Equivalent (CO_2e) Emissions Factors
Matanuska Electric Association - Eklutna Generation Station

	Distillate Fuel Oil No. 2 40 CFR 98 Tables C-1 & 2	Natural Gas 40 CFR 98 Tables C-1 & 2
CO_2 Emission Factor	73.96 kg/MMBtu	53.06 kg/MMBtu
CH_4 Emission Factor	0.003 kg/MMBtu	0.001 kg/MMBtu
N_2O Emission Factor	0.0006 kg/MMBtu	0.0001 kg/MMBtu
CO_2e Emission Factor	**74.2138 kg/MMBtu**	**53.1148 kg/MMBtu**

Notes:
CO_2e EF = CO_2 + 25(CH_4) + 298(N_2O)

SECTION E
REGULATORY REQUIREMENTS

Form E1: Stationary Source-Wide Applicable Requirements

Form E2: Permit to Operate and Minor Permit Condition Change Request

Form E3: Title V Condition Change Request

Form E4: Permit Shield Request

Form E5: Alternative Monitoring Procedures (AMR) Form

Attachment: EPA Waiver

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FORM E1

Stationary Source-Wide Applicable Requirements

Permit Number: AQ1086TVP02A

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
TVP01 – Cond 19.1	18 AAC 50.055(a) & 50.055(a)(1)	Insignificant Emissions Units - VE Standard	For insignificant sources, do not cause or allow visible emissions to reduce visibility by more than 20 percent averaged over any six consecutive minutes.	Yes	Monitor, record, and report in accordance with Condition 19.4.
TVP01 – Cond 19.2	18 AAC 50.055(b)(1)	Insignificant Emissions Units - PM Standard	For insignificant sources, do not cause or allow particulate matter to exceed 0.05 grains per cubic foot of exhaust gas averaged over three hours.	Yes	Monitor, record, and report in accordance with Condition 19.4.
TVP01 – Cond 19.3	18 AAC 50.055(c)	Insignificant Emissions Units - Sulfur Standard	For insignificant sources, do not cause or allow sulfur compound emissions to exceed 500 ppm averaged over three hours.	Yes	Monitor, record, and report in accordance with Condition 19.4.
TVP01 – Cond 30	40 CFR 61, Subparts A & M	Asbestos NESHAP	Comply with the requirements set forth in 40 CFR 61.145, 61.150, and 61.152 of Subpart M, and the applicable sections set forth in 40 CFR 61, Subpart A and Appendix A.	Yes	Certify compliance annually via the Annual Compliance Audit of Condition 64.
TVP01 – Cond 31	40 CFR 82, Subpart F	Refrigerant Recycling and Disposal	Comply with the standards for recycling and emission reduction of refrigerants set forth in 40 CFR 82, Subpart F.	Yes	Certify compliance annually via the Annual Compliance Audit of Condition 64.
TVP01 – Cond 32	40 CFR 82.174(b) through (d), Subpart G	Subpart G – Significant New Alternatives Policy	Comply with the applicable prohibitions set out in 40 CFR 82.174 (Protection of Stratospheric Ozone Subpart G – Significant New Alternatives Policy Program).	Yes	Certify compliance annually via the Annual Compliance Audit of Condition 64.
TVP01 – Cond 33	40 CFR 82.270(b) through (f), Subpart H	Subpart H – Halon Emissions Reduction	Comply with the applicable prohibitions set out in 40 CFR 82.270 (Protection of Stratospheric Ozone Subpart H – Halon Emission Reduction).	Yes	Certify compliance annually via the Annual Compliance Audit of Condition 64.

Permit and Condition Number	Applicable Requirement Citation[1]	Parameter/ Pollutant	Limit/Standard/ Requirement	Currently in Compliance?	Monitoring, Recordkeeping and Reporting Used to Determine Compliance
TVP01 – Cond 34	40 CFR 63.1(b), 63.5(b)(4), 63.6(c)(1) & 63.10(b)(3)	General NSPS and NESHAP Requirements	Determine rule applicability and designation of affected sources under NESHAPs 40 CFR 63 in accordance with the procedures described in 40 CFR 63.1(b) and 63.10(b)(3). If a source becomes affected by an applicable subpart of 40 CFR 63, comply with such standard by the compliance date established by the Administrator in the applicable subpart, in accordance with 40 CFR 63.6(c).	Yes	Certify compliance annually via the Annual Compliance Audit of Condition 64.
TVP01 – Cond 35	40 CFR 60.13, 63.10(d) & (f) & 71.6(c)(6)	NSPS and NESHAPs Reports	35.1 Reports: Attach to the operating report for the period covered by the ereport, a copy of any NSPS and NESHAPs reports submitted to the US EPA Region 10, unless previously submitted to the Department, and 35.2 Waivers: Upon request by the Department, provide a written copy of any EPA-granted alternative monitoring requirement, custom monitoring schedule or waiver of the federal emission standards, recordkeeping, monitoring, performance testing, or reporting requirements. Keep a copy of each EPA issued monitoring waiver or custom monitoring schedule with the permit.	Yes	Certify compliance annually via the Annual Compliance Audit of Condition 64.
TVP01 – Cond 36	18 AAC 50.345(a) & (e)	Standard Terms and Conditions	Each permit term and condition is independent and remains valid regardless of a challenge to any other part of the permit.	Yes	Certify compliance annually via the Annual Compliance Audit of Condition 64.
TVP01 – Cond 37	18 AAC 50.345 (a) & (f)	Standard Terms and Conditions	The permit may be modified, reopened, revoked and reissued, or terminated for cause. A request by the Permittee for modification, revocation and re-issuance, or termination or a notification of planned changes or anticipated noncompliance does not stay any permit condition.	Yes	Certify compliance annually via the Annual Compliance Audit of Condition 64.
TVP01 – Cond 38	18 AAC 50.345 (a) & (g)	Standard Terms and Conditions	The permit does not convey any property rights of any sort, nor any exclusive privilege.	Yes	Certify compliance annually via the Annual Compliance Audit of Condition 64.

Permit and Condition Number	Applicable Requirement Citation[1]	Parameter/ Pollutant	Limit/Standard/ Requirement	Currently in Compliance?	Monitoring, Recordkeeping and Reporting Used to Determine Compliance
TVP01 – Cond 39	18 AAC 50.400 - 405	Administration Fees	The Permittee shall pay all assessed permit administration fees.	Yes	Certify compliance annually via the Annual Compliance Audit of Condition 64.
TVP01 – Cond 40	18 AAC 50.410	Assessable Emissions	The Permittee shall pay the Department an annual emission fee based on the assessable emissions of the source.	Yes	Certify compliance annually via the Annual Compliance Audit of Condition 64.
TVP01 – Cond 41	18 AAC 50.410	Assessable Emissions Estimates	Emission fees will be assessed as follows: 41.4 No later than March 31 of each year, the Permittee may submit an estimate of the stationary source's assessable emissions to ADEC, Air Permits Program, ATTN: Assessable Emissions Estimate, 410 Willoughby Ave., Juneau, AK 99801-1795; the submittal must include all of the assumptions and calculations used to estimate the assessable emissions in sufficient detail so the Department can verify the estimates; or 41.2 If no estimate is submitted on or before March 31 of each year, emission fees for the next fiscal year will be based on the potential to emit set forth in Condition 35.1.	Yes	Certify compliance annually via the Annual Compliance Audit of Condition 64.
TVP01 – Cond 43	18 AAC 50.045(a)	Dilution	The Permittee shall not dilute emissions with air to comply with this permit.	Yes	Certify compliance annually via the Annual Compliance Audit of Condition 64.
TVP01 – Cond 44	18 AAC 50.055(g)	Stack Injection	The Permittee shall not release materials other than process emissions, products of combustion or materials introduced to control pollutant emissions from a stack at a source constructed or modified after November 1, 1982, except as authorized by a construction permit, a Title V permit, or air quality control permit issued before October 1, 2004.	Yes	Certify compliance annually via the Annual Compliance Audit of Condition 64.
TVP01 – Cond 45	18 AAC 50.110	Air Pollution Prohibited	No person may permit any emission which is injurious to human health or welfare, animal or plant life, or property, or which interferes with the enjoyment of life or property.	Yes	Monitor, record, and report in accordance with Conditions 45.1 through 45.5.

Permit and Condition Number	Applicable Requirement Citation[1]	Parameter/ Pollutant	Limit/Standard/ Requirement	Currently in Compliance?	Monitoring, Recordkeeping and Reporting Used to Determine Compliance
TVP01 – Cond 46	18 AAC 50.235(a), 50.326(j)(4), & 50.040(j)(4)	Technology-Based Emission Standard	If an unavoidable emergency, malfunction, or non-routine repair, as defined in 18 AAC 50.235(d), causes emissions in excess of a technology-based emission standard12 listed in Condition 26, 27, 28, or 31 (refrigerants), the Permittee shall take all reasonable steps to minimize levels of emissions that exceed the standard. Excess emissions reporting under Condition 62 requires information on the steps taken to minimize emissions. Monitoring of compliance for this condition consists of the report required under Condition 62.	Yes	Certify compliance annually via the Annual Compliance Audit of Condition 64.
TVP01 – Cond 47	18 AAC 50.065	Open Burning	If the Permittee conducts open burning at this stationary source, the Permittee shall comply with the requirements of 18 AAC 50.065.	Yes	Monitor, record, and report in accordance with Conditions 47.1 and 47.2.
TVP01 – Cond 48	18 AAC 50.220(a) & 50.345(a) & (k)	Requested Source Tests	In addition to any source testing explicitly required by the permit, the Permittee shall conduct source testing as requested by the Department to determine compliance with applicable permit requirements.	Yes	Certify compliance annually via the Annual Compliance Audit of Condition 64.
TVP01 – Cond 49	18 AAC 50.220(b)	Operating Conditions	Unless otherwise specified by an applicable requirement or test method, the Permittee shall conduct source testing at a point or points that characterize the actual discharge into the ambient air; and at the maximum rated burning or operating capacity of the emission unit or another rate determined by the Department to characterize the actual discharge into the ambient air.	Yes	Certify compliance annually via the Annual Compliance Audit of Condition 64.
TVP01 – Cond 50	18 AAC 50.220(c)(1)(A) – (F) & (c)(2)	Reference Test Methods	The Permittee shall use the following as reference test methods when conducting source testing for compliance with this permit.	Yes	Comply with the test methods listed in Conditions 50.1 through 50.5.

Permit and Condition Number	Applicable Requirement Citation[1]	Parameter/ Pollutant	Limit/Standard/ Requirement	Currently in Compliance?	Monitoring, Recordkeeping and Reporting Used to Determine Compliance
TVP01 – Cond 51	18 AAC 50.220(c)(3)	Excess Air Requirements	To determine compliance with this permit, standard exhaust gas volumes must include only the volume of gases formed from the theoretical combustion of the fuel, plus the excess air volume normal for the specific emission unit type, corrected to standard conditions (dry gas at 68° F and an absolute pressure of 760 millimeters of mercury).	Yes	Certify compliance annually via the Annual Compliance Audit of Condition 64.
TVP01 – Cond 52	18 AAC 50.345(a)	Test Exemption	The Permittee is not required to comply with Conditions 54, 55, and 56 when the exhaust is observed for visible emissions by Method 9 Plan (Condition 2.1) or Smoke/No Smoke Plan (Condition 2.2).	Yes	Certify compliance annually via the Annual Compliance Audit of Condition 64.
TVP01 – Cond 53	18 AAC 50.345(a) & (1)	Test Deadline Extension	The Permittee may request an extension to a source test deadline established by the Department. The Permittee may delay a source test beyond the original deadline only if the extension is approved in writing by the Department's appropriate division director or designee.	Yes	Certify compliance annually via the Annual Compliance Audit of Condition 64.
TVP01 – Cond 54	18 AAC 50.345(a) & (m)	Test Plans	Except as provided in Condition 52, before conducting any source tests, the Permittee shall submit a plan to the Department. The plan must include the methods and procedures to be used for sampling, testing, and quality assurance and must specify how the emission unit will operate during the test and how the Permittee will document that operation. The Permittee shall submit a complete plan within 60 days after receiving a request under Condition 48 and at least 30 days before the scheduled date of any test unless the Department agrees in writing to some other time period. Retesting may be performed without resubmitting the plan.	Yes	Certify compliance annually via the Annual Compliance Audit of Condition 64.

Permit and Condition Number	Applicable Requirement Citation[1]	Parameter/ Pollutant	Limit/Standard/ Requirement	Currently in Compliance?	Monitoring, Recordkeeping and Reporting Used to Determine Compliance
TVP01 – Cond 55	18 AAC 50.345(a) & (n)	Test Notification	Except as provided in Condition 52, at least 10 days before conducting a source test, the Permittee shall give the Department written notice of the date and the time the source test will begin.	Yes	Certify compliance annually via the Annual Compliance Audit of Condition 64.
TVP01 – Cond 56	18 AAC 50.345(a) & (o)	Test Reports	Except as provided in Condition 52, within 60 days after completing a source test, the Permittee shall submit two copies of the results in the format set out in the Source Test Report Outline, adopted by reference in 18 AAC 50.030. The Permittee shall additionally certify the results in the manner set out in Condition 59. If requested in writing by the Department, the Permittee must provide preliminary results in a shorter period of time specified by the Department.	Yes	Certify compliance annually via the Annual Compliance Audit of Condition 64.
TVP01 – Cond 57	18 AAC 50.220(f)	Particulate Matter Calculations	In source testing for compliance with the particulate matter standards in Conditions 5 and 19.2, the three-hour average is determined using the average of three one-hour test runs.	Yes	Certify compliance annually via the Annual Compliance Audit of Condition 64.
TVP01 – Cond 58	40 CFR 60.7(f), Subpart A	Recordkeeping	The Permittee shall keep all records for at least five years.	Yes	Maintain records in accordance with Conditions 58.1 and 58.2.

Permit and Condition Number	Applicable Requirement Citation[1]	Parameter/ Pollutant	Limit/Standard/ Requirement	Currently in Compliance?	Monitoring, Recordkeeping and Reporting Used to Determine Compliance
TVP01 – Cond 59	18 AAC 50.345(a) & (j), 50.205, 50.326(j), 40 CFR 71.6(a)(3)(iii)(A)	Certification	The Permittee shall certify any permit application, report, affirmation, or compliance certification submitted to the Department and required under the permit by including the signature of a responsible official for the permitted stationary source following the statement: "*Based on information and belief formed after reasonable inquiry, I certify that the statements and information in and attached to this document are true, accurate, and complete*." Excess emission reports must be certified either upon submittal or with an operating report required for the same reporting period. All other reports and other documents must be certified upon submittal.	Yes	Certify compliance annually via the Annual Compliance Audit of Condition 64.
TVP01 – Cond 60	40 CFR 71.6(a)(3)(iii)(A)	Submittals	Unless otherwise directed by the Department or this permit, the Permittee shall send an original and one copy of reports, compliance certifications, and other submittals required by this permit to ADEC, Air Permits Program, 610 University Ave., Fairbanks, AK 99709-3643, ATTN: Compliance Technician. The Permittee may, upon consultation with the Compliance Technician regarding software compatibility, provide electronic copies of data reports, source test reports, or other records under a cover letter certified in accordance with Condition 55.	Yes	Certify compliance annually via the Annual Compliance Audit of Condition 64.

Permit and Condition Number	Applicable Requirement Citation[1]	Parameter/ Pollutant	Limit/Standard/ Requirement	Currently in Compliance?	Monitoring, Recordkeeping and Reporting Used to Determine Compliance
TVP01 – Cond 61	18 AAC 50.345(a) and (j), 50.200, 50.326(a) & (j), 40 CFR 71.5(a)(2) & 71.6(a)(3)	Information Requests	The Permittee shall furnish to the Department, within a reasonable time, any information the Department requests in writing to determine whether cause exists to modify, revoke and reissue, or terminate the permit or to determine compliance with the permit. Upon request, the Permittee shall furnish to the Department copies of records required to be kept by the permit. The Department may require the Permittee to furnish copies of those records directly to the Federal Administrator.	Yes	Certify compliance annually via the Annual Compliance Audit of Condition 64.
TVP01 – Cond 62	18 AAC 50.235(a)(2), 50.240(c), 50.326(j), & 50.346(b)(2) & (3)	Excess Emissions and Permit Deviation Reports	Except as provided in Condition 45, the Permittee shall report all emissions or operations that exceed or deviate from the requirements of this permit	Yes	Report in accordance with Conditions 62.1(a) through (c), 62.2, and 62.3.
TVP01 – Cond 63	18 AAC 50.346(a) & 50.326(j), 40 CFR 71.6(a)(3)(iii)(A)	Operating Reports	During the life of this permit, the Permittee shall submit to the Department an original and one copy of an operating report by August 1 for the period January 1 to June 30 of the current year, and by February 1 for the period July 1 to December 31 of the previous year.	Yes	Report in accordance with Conditions 63.1 through 63.4
TVP01 – Cond 64	18 AAC 50.205, 50.345(a) & (j), 50.326(j), 40 CFR 71.6(c)(5)	Annual Compliance Certification	Each year by March 31, the Permittee shall compile and submit to the Department an annual compliance certification report	Yes	Report in accordance with Conditions 64.1 and 64.2.
TVP01 – Cond 65	18 AAC 50.346(b)(8), 18 AAC 50.200, 40 CFR 51.15, 51.30(a)(1), (b)(1), 40 CFR 51, Appendix A to Subpart A	Emission Inventory Reporting	The Permittee shall submit to the Department reports of actual emissions, by emission unit, of CO, NH_3, NO_X, PM_{10}, $PM_{2.5}$, SO_2, VOCs, and Lead (Pb) (and lead compounds) for the previous calendar year using the form in Section 14 of this permit, as follows:	Yes	Report in accordance with Conditions 65.1 through 65.4.

Permit and Condition Number	Applicable Requirement Citation[1]	Parameter/ Pollutant	Limit/Standard/ Requirement	Currently in Compliance?	Monitoring, Recordkeeping and Reporting Used to Determine Compliance
TVP01 – Cond 66	18 AAC 50.040(j)(7), 50.326(b), & 40 CFR 71.10(d)(1)	Permit Applications and Submittals	The Permittee shall comply with the following requirements for submitting application information to the EPA Region 10	Yes	Monitor, record, and report in accordance with Conditions 66.1 through 66.4.
TVP01 – Cond 67	18 AAC 50.040(j)(4), 50.326(j), & 40 CFR 71.6(a)(8)	Emissions Trading	No permit revision shall be required under any approved economic incentives, marketable permits, emissions trading and other similar programs or processes for changes that are provided for in the permit.	Yes	Certify compliance annually via the Annual Compliance Audit of Condition 64.
TVP01 – Cond 68	18 AAC 50.040(j)(4), 50.326(j), & 40 CFR 71.6(a)(12)	Off Permit Changes	The Permittee may make changes that are not addressed or prohibited by this permit other than those subject to the requirements of 40 CFR Part 72 through 78 or those that are modifications under any provision of Title I of the Act to be made without a permit revision, provided that the following requirements are met:	Yes	Monitor, record, and report in accordance with Conditions 68.1 through 68.4.
TVP01 – Cond 69	18 AAC 50.040(j)(4), 50.326(j), & 40 CFR 71.6(a)(13)	Operational Flexibility	The Permittee may make changes within the permitted stationary source without requiring a permit revision if the changes are not modifications under any provision of Title I of the Act and the changes do not exceed the emissions allowable under this permit (whether expressed therein as a rate of emissions or in terms of total emissions).	Yes	Monitor, record, and report in accordance with Conditions 69.1 through 69.3.
TVP01 – Cond 70	18 AAC 50.040(j)(3), 50.326(c)(2), (j)(2), & 40 CFR 71.5(a)(1)(iii), 71.7(b), (c)(1)(ii)	Permit Renewal	To renew this permit, the Permittee shall submit an application under 18 AAC 50.326. The renewal application shall be complete before the permit expiration date listed on the cover page of this permit. Permit expiration terminates the stationary source's right to operate unless a timely and complete renewal application has been submitted consistent with 40 CFR 71.7(b) and 71.5(a)(1)(iii).	Yes	Certify compliance annually via the Annual Compliance Audit of Condition 64.
TVP01 – Conditions 71 – 75	18 AAC 50.326(j)(3)	General Compliance Requirements	The Permittee shall comply with each permit term and condition and allow the Department access to the facility.	Yes	Certify compliance annually via the Annual Compliance Audit of Condition 64.

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

FORM E2

Permit-to-Operate and Minor Permit Condition Change Request

Permit Number: AQ1086TVP02A

Permit-to-Operate and Minor Permit Information (*attach additional sheets as needed*):

Permit-to-Operate or Minor Permit Number	Condition Number	Type of change (revise or remove)	Reason for change	Requested Alaska Title V Operating Permit Condition
N/A				

FORM E3
Title V Condition Change Request

Permit Number: AQ1086TVP02A

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

Current Title V Operating Permit Condition Number	Type of change (revise or remove)	Reason for Change	Requested Alaska Title V Operating Permit Condition
TVP01 – Section 1	Revise	Update the permittee's responsible official per Form A1.	Revise the Stationary Source Information.
TVP01 – Section 2	Revise	Revise the rating/size for EU ID 17 from 7.0 MMBtu/hr to 8.3 MMBtu/hr. The off-permit change for this EU ID was submitted August 30, 2017.	Revise Table A.
TVP01 – Section 2	Revise	Remove EU IDs 15 and 16 from Table A; these units are insignificant.	Revise Table A.
TVP01 – Cond 1.4	Revise	For the duration of the permit term, EU IDs 12 and 18 have had actual emissions less than the significance thresholds in 18 AAC 50.326(e). Each unit operated less than 10 hours per year and the significance threshold is approximately 230 hours per year. Revise Condition 1.4 to only trigger monitoring in Conditions 2 through 4 if operation exceeds 230 hours per year per unit.	Revise as suggested: "For EU IDs 12 and 18, as long as each emission unit does not exceed a significance threshold of 230 hour per year, monitoring shall consist of an annual compliance certification under Condition 64 with the visible emission standard. Otherwise, monitor, record and report visible emissions in accordance with Conditions 2 through 4 for the remainder of the permit term."
TVP01 – Cond 5.4	Revise	For the duration of the permit term, EU IDs 12 and 18 have had actual emissions less than the significance thresholds in 18 AAC 50.326(e). Each unit operated less than 10 hours per year and the significance threshold is approximately 230 hours per year. Revise Condition 5.4 to only trigger monitoring in Conditions 6 through 8 if operation exceeds 230 hours per year per unit.	Revise as suggested: "For EU IDs 12 and 18, as long as each emission unit does not exceed a significance threshold of 230 hour per year, monitoring shall consist of an annual compliance certification under Condition 64 with the particular matter emission standard. Otherwise, monitor, record and report particular matter emissions in accordance with Conditions 6 through 8 for the remainder of the permit term."
TVP01 – Cond 7	Delete	Initial reporting requirement has been completed.	Delete Condition 7.
TVP01 – Cond 28	Revise	EPA waiver dated March 12, 2018 authorizes testing of only two of ten of the Warsila engines (EU IDs 1-10) per test. After 5 tests, all ten engines under the waiver shall have been tested. Testing shall occur within 3 years of 8760 hours of operation, whichever comes first. See attached copy.	Revise Condition 28 to account for the EPA waiver.

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FORM E4
Permit Shield Request

Permit Number: AQ1086TVP02A

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

Non-Applicable Requirements[1]	Reason for non-applicability and citation/basis
40 CFR 60 Subpart K – Standards of Performance for Storage Vessels for Petroleum Liquids	Tanks, EU IDs 15 and 16, were constructed after the 1978 applicability date.
40 CFR 60 Subpart Ka – Standards of Performance for Storage Vessels for Petroleum Liquids	Tanks, EU IDs 15 and 16, were constructed after the 1984 applicability date.
40 CFR 60 Subpart Kb – Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage	Tanks, EU IDs 15 and 16, are exempt per 40 CFR 60.110b(b).
40 CFR 60 Subparts C, Cb, Cc, Cd, Ce, D, Da, Db, E, Ea, Eb, Ec, F, G, Ga, H, I, J, Ja, K, Ka, Kb, L, M, N, Na, O, P, Q, R, S, T, U, V, W, X, Y, Z, AA, AAa, BB, CC, DD, EE, HH, KK, LL, MM, NN, PP, QQ, RR, SS, TT, UU, VV, VVa, WW, XX, AAA, BBB, DDD, FFF, GGG, GGGa, HHH, III, JJJ, KKK, LLL, NNN, OOO, PPP, QQQ, RRR, SSS, TTT, UUU, VVV, WWW, AAAA, BBB, CCCC, DDD, EEEE, FFFF, KKKK, LLLL, MMMM, OOOO, QQQQ, TTTT, UUUU	Not an affected stationary source, operation, or industry.
40 CFR 61 Subpart A, B, C, D, E, F, H, I, J, K, L, M, N, O, P, Q, R, T, V, W, Y, BB, and FF	No affected emission units within the stationary source.
40 CFR 63 Subpart B, F, G, H, I, J, L, M, N, O, Q, R, S, T, U, W, X, Y, AA, BB, CC, DD, EE, GG, HH, II, JJ, KK, LL, MM, OO, PP, QQ, RR, SS, TT, UU, VV, WW, XX, YY, CCC, DDD, EEE, GGG, HHH, III, JJJ, LLL, MMM, NNN, OOO, PPP, QQQ, RRR, TTT, UUU, VVV, XXX, AAAA, CCCC, DDDD, EEEE, FFFF, GGGG, HHHH, IIII, JJJJ, KKKK, MMMM, NNNN, OOOO, PPPP, QQQQ, RRRR, SSSS, TTTT, UUUU, VVVV, WWWW, XXXX, YYYY, AAAAA, BBBBB, CCCCC, DDDDD, EEEEE, FFFFF, GGGGG, HHHHH, IIIII, JJJJJ, KKKKK, LLLLL, MMMMM, NNNNN, PPPPP, QQQQQ, RRRRR, SSSSS, TTTTT, UUUUU, WWWWW, YYYYY, ZZZZZ, BBBBBB, CCCCCC, DDDDDD, EEEEEE, FFFFFF, GGGGGG, HHHHHH, JJJJJ, LLLLLL, MMMMMM, NNNNNN, OOOOOO, PPPPPP, QQQQQQ, RRRRRR, SSSSSS, TTTTTT, VVVVVV, WWWWWW, XXXXXX, YYYYYY, ZZZZZZ, AAAAAAA, BBBBBBB, CCCCCCC, DDDDDDD, EEEEEEE, HHHHHHH	Not an affected stationary source, operation, or industry.
40 CFR 68 Subpart C	Stationary source does not use aqueous ammonia with a concentration of 20% or greater.
40 CFR 51.308(e) and 40 CFR 51 Appendix Y Guidelines for BART Determinations under the Regional Haze Rule	Stationary source is not an “existing stationary facility” as defined in 40 CFR 51.301.
40 CFR 82 Subpart B	Stationary source and its employees do not perform service on motor vehicle air conditioners, for consideration or otherwise.

Non-Applicable Requirements[1]	Reason for non-applicability and citation/basis
18 AAC 50.055(a)(2)-(a)(9)	The stationary source does not contain any emission units subject to these opacity standards.
18 AAC 50.055(b)(2)-(b)(6)	The stationary source does not contain any emission units subject to these particulate matter standards.
18 AAC 50.055(d)-(f)	The stationary source does not contain any emission units subject to these sulfur standards.
18 AAC 50.060, 50.070, 50.075, 50.076, 50.077, 50.085, 50.090	The stationary source is not an affected source regulated by these standards.

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

FORM E5

Alternative Monitoring Procedures (AMP) Form

Permit Number: AQ1086TVP02A

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

Condition for which AMP or EPA waiver is applicable	Parameter/ Pollutant	Limit/Standard/ Requirement	Currently in Compliance?	Monitoring, Recordkeeping and Reporting Used to Determine Compliance
TVP01 - Cond 28	NOx, CO, VOC	NSPS Subpart JJJJ	Yes	EPA waiver dated March 12, 2018, authorizes testing of only two of ten of the Warsila engines (EU IDs 1-10) per test. After 5 tests, all ten engines under the waiver shall have been tested. Testing shall occur within 3 years or 8,760 hours of operation, whichever comes first. See attached copy.

[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).]

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10
1200 Sixth Avenue, Suite 900
Seattle, WA 98101-3140

MAR 12 2018

OFFICE OF
AIR AND WASTE

Mr. Gary W. Peers
Eklutna Station Plant Manager
Matanuska Electric Association, Inc.
163 East Industrial Way
P.O. Box 2929
Palmer, Alaska 99645

Re: NSPS Subpart JJJJ Testing Waiver Request for Matanuska Electric Association, Inc. Eklutna Generation Station

Dear Mr. Peers:

This is a response to your letter on behalf of Matanuska Electric Association, Inc. (MEA) submitted to the U.S. Environmental Protection Agency (EPA) on May 12, 2015, for its Eklutna Generation Station (EGS) located near Palmer, Alaska. Your letter requested a waiver from ongoing performance test requirements in 40 CFR 63.8 and the *Standards of Performance for Stationary Spark Ignition Internal Combustion Engines* at 40 CFR part 60, subpart JJJJ (NSPS JJJJ). You have requested a waiver such that MEA would be allowed to test one dual-fuel, spark ignition engine at the EGS to assure continuing compliance with NSPS JJJJ for 10 similar units. Based on the information provided by MEA and the terms of the applicable EGS Clean Air Act permits, EPA is granting your waiver request with modifications and subject to conditions, as described below.

Background

According to the information MEA provided in its May 2015 submittal and subsequent data requests, as well as information in the EGS part 70 permit and associated statement of basis document prepared by the State of Alaska, MEA installed ten 17.1 MW Wartsila 18V50DF engines at the EGS in February of 2015.[1] These 2012 model year engines may be fired on natural gas or ultra-low sulfur diesel (ULSD).[2] This type of unit operates without a sparkplug. Injection of a small amount of distillate fuel (diesel) just before maximum compression initiates combustion. MEA operates and maintains these engines as baseload units for the purpose of generating electricity for the surrounding community.

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[1] The engines identified in the EGS part 70 permit have the following emission unit IDs and serial numbers: Emission Unit (EU) 1, Serial Number: PAAE201768; EU 2, Serial Number: PAAE201767; EU 3, Serial Number: PAAE201770; EU 4, Serial Number: PAAE201774; EU 5, Serial Number: PAAE233705; EU 6, Serial Number: PAAE201773; EU 7, Serial Number: PAA201771; EU 8, Serial Number: PAAE201769; EU 9, Serial Number: PAAE233706; EU 10, Serial Number: PAAE201772.

[2] There is no limit on natural gas. The State of Alaska limits ULSD combustion to 1,680 hours in EU 1-10 under its federally-enforceable new source review program. According to records provided by MEA, the units are fired on ULSD only a few hundred hours per year (averaged over all ten engines).

Each engine is equipped with a selective catalytic reduction (SCR) system for control of oxides of nitrogen (NO_x) and catalytic oxidation (CatOx) equipment for control of carbon monoxide (CO) and volatile organic compounds (VOC). Condition 15 in the EGS part 70 permit requires continuous operation of the SCR and CatOx systems, provides for continuous monitoring of SCR and CatOx operating parameters, and specifies records that must be maintained and reported.[3]

NSPS JJJJ establishes emission limits for NOx, CO, and VOC for stationary spark ignition internal combustion engines and requires an initial performance test within one year of engine startup and subsequent performance testing every 8,760 hours or three years, whichever comes first, to demonstrate continuing compliance thereafter. *See* 40 CFR 60.4243(a)(2)(iii).

MEA performed an initial compliance test on all ten engines at the EGS in February and March of 2015. Subsequent tests were performed on all ten engines in January of 2016[4] and March of 2017. The results of these performance tests are summarized in the following table.

	NO_x	CO	VOC
NSPS JJJJ Limit	82	270	60
2015 Test results	Range: 1.3-5.2 Mean: 2.5	Range: 0.8-2.4 Mean: 1.7	Range: 0.4-3.5 Mean: 2.2
2016 Test results	Range: 1.8-5.5 Mean: 3.7	Range: 0.5-1.9 Mean: 1.1	Range: 0.3-2.2 Mean: 1.4
2017 Test results	Range: 2.1-3.7 Mean: 2.8	Range: 1.8-3.0 Mean: 2.4	Range: 1.9-7.5 Mean: 3.2

All measurements are parts per million, dry volume (ppm_{vd}) corrected to 15 percent oxygen

MEA also provided information regarding annual hours of operation for the 10 engines, summarized in the following table.

	EU1	EU2	EU3	EU4	EU5	EU6	EU7	EU8	EU9	EU10
2015	3,026	5,553	2,368	4,114	3,477	5,067	4,154	4,818	5,787	3,172
2016	4,789	7,139	5,857	6,519	6,339	6,765	7,217	4,309	4,383	4,924
2017	5,229	6,208	3,961	6,206	3,920	6,429	6,439	4,068	5,337	4,958
Total	13,044	18,900	12,186	16,839	13,736	18,261	17,810	13,195	15,507	13,054
Minimum = 12,186 (20 percent below the mean) Mean = 15,253 Maximum = 18,900 (24 percent above the mean)										

Regulatory Background

EPA has authority to waive a performance test requirement pursuant to the provisions at 40 CFR 60.8(b)(4) if the owner or operator of the source has demonstrated by other means to the Administrator's satisfaction that the affected facility is in compliance with the applicable standards. As provided in EPA's Clean Air Act National Stack Testing Guidance issued on April 27, 2009, a waiver for one or more similar units "may be appropriate on a case-by-case basis when criteria similar to the following are met":

[3] Condition 15 in the facility's title V operating permits has its origin in minor new source review permit issued by the State of Alaska on November 6, 2016 (Permit 1086MSS03, Condition 8).

[4] EU 9 was tested in June of 2016 because it had not been operating in January.

1. the units are located at the same facility;
2. the units are produced by the same manufacturer, have the same model number or other manufacturer's designation in common, and have the same rated capacity and operating specifications;
3. the units are operated and maintained in a similar manner; and
4. the delegated agency, based on documentation submitted by the facility:
   a. determines that the margin of compliance for the identical units tested is significant and can be maintained on an ongoing basis; or
   b. determines based on a review of sufficient emissions data that, though the margin of compliance is not substantial, other factors allow for the determination that the variability of emissions for identical tested units is low enough for confidence that the untested unit will be in compliance. These factors may include, but are not limited to, the following:
      (1) historical records at the tested unit showing consistent/invariant load;
      (2) fuel characteristics yielding low variability, e.g., oil and, therefore, assurance that emissions will be constant and below allowable levels;
      (3) statistical analysis of a robust emissions data set demonstrate sufficiently low variability to convey assurance that the margin of compliance, though small, is reliable.

Determination

EPA is approving a waiver for MEA from ongoing performance testing required under NSPS JJJJ at 40 CFR 60.4243(a)(2)(iii) for NO_x, CO, and VOC emission standards for its Wartsila 18V50DF engines (identified as EU 1 through EU 10) subject to the conditions specified below. The information provided demonstrates that EU 1 through EU 10 are located at the same facility; produced by the same manufacturer; have the same model number or other manufacturer's designation in common; have the same rated capacity and operating specifications; and are operated and maintained in a similar manner. The margin of compliance as shown by the testing of all emission units is significant, which is due in large part to the requirement that the units be operated with SCR and CatOx control equipment. To ensure this margin of compliance is maintained on an ongoing basis, this waiver is subject to the following conditions and automatically terminates if these conditions are not met:

1. During each scheduled performance test, at least two of the Wartsila 18V50DF engines covered by the waiver shall be tested. After any five consecutive performance tests (or one half the sum of the remaining engines, rounding up to a whole number if necessary, if any engines have been retired from service or have become ineligible for the waiver), all of the Wartsila 18V50DF engines covered by the waiver shall have been tested.

2. MEA shall perform each subsequent test of its Wartsila 18V50DF engines within three years from the date of the previous test, or before such a time that any Wartsila 18V50DF engine covered by the waiver has operated 8,760 hours from the date of the previous test, whichever comes first.

3. The units must remain subject to federally-enforceable permit requirements that provide for continuous operation of the SCR and CatOx systems, continuous monitoring of SCR and CatOx operating parameters, and recordkeeping and reporting requirements that are consistent with the EGS ADEC operating permit AQ1086TVP01, issued, January 27, 2017.

4. Emissions of any pollutant regulated by NSPS JJJJ from any tested engine must remain at or below 50 percent of the level of the standard.

5. The units must remain at the MEA EGS located southwest of Palmer, Alaska.

This waiver applies only to performance testing requirements of the Wartsilla 18V50DF engines for NO_x, CO, and VOC emission standards under NSPS JJJJ, applicable to EU 1 through EU 10. Any compliance obligation not specifically waived in this letter continues to apply. This waiver is effective from the date of this letter.

If you have any questions regarding this determination, please contact Geoffrey Glass at (206) 553-1847 or at glass.geoffrey@epa.gov.

Sincerely,

Kelly McFadden, Manager
Stationary Source Unit

cc: Mr. James Plosay, Alaska Department of Environmental Conservation
Ms. Kathie Mulkey, Alaska Department of Environmental Conservation (email)
Ms. Jamie Brewer, SLR Consulting (email)
Ms. Traci Bradford (email)

ATTACHMENT
PERMITS

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DEPARTMENT OF ENVIRONMENTAL CONSERVATION
AIR QUALITY OPERATING PERMIT

Permit No. AQ1086TVP01

Issue Date: January 27, 2017
Expiration Date: January 27, 2022

The Alaska Department of Environmental Conservation, under the authority of AS 46.14 and 18 AAC 50, issues an operating permit to the Permittee, **Matanuska Electric Association, Inc.**, for the operation of the **Eklutna Generation Station**.

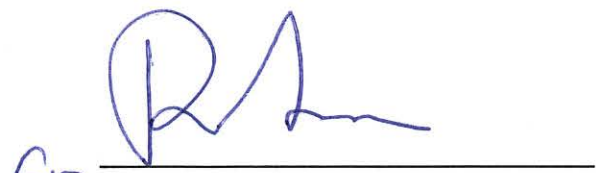
This permit satisfies the obligation of the owner and operator to obtain an operating permit as set out in AS 46.14.130(b).

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

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

This permit incorporates all applicable terms and conditions of Air Quality Minor Permit No. AQ1086MSS03 issued November 6, 2015.

This Operating Permit becomes effective February 26, 2017.



for John F. Kuterbach, Manager
Air Permits Program

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Abbreviations and Acronyms

AAC.....Alaska Administrative Code
ADEC .....Alaska Department of Environmental Conservation
AS .....Alaska Statutes
ASTM.....American Society for Testing and Materials
BACT .....Best Available Control Technology
Bhp .....brake horsepower
CATOX .....catalytic oxidation
CAA.....Clean Air Act
The Act .....Clean Air Act
C.F.R. .....Code of Federal Regulations
CH_2O .....formaldehyde
CO .....carbon monoxide
Department .....Alaska Department of Environmental Conservation
dscf .....dry standard cubic foot
EPA .....US Environmental Protection Agency
EU.....emission unit
gr./dscf .....grain per dry standard cubic foot (1 pound = 7000 grains)
GPH .....gallons per hour
HAP .....hazardous air pollutants [HAP as defined in AS 46.14.990]
hp .....horsepower
H_2S.....hydrogen sulfide
ID.....emission unit identification number
kPa .....kilopascals
kW .....kilowatt
LAER.....Lowest Achievable Emission Rate
MACT .....Maximum Achievable Control Technology [MACT as defined in 40 C.F.R. 63]
MMBtu/hr.....Million British thermal units per hour
MMscf .....Million standard cubic feet
MR&R .....monitoring, recordkeeping, and reporting
MW .....Megawatt
NESHAP .....Federal National Emission Standards for Hazardous Air Pollutants [NESHAP as contained in 40 C.F.R. 61 and 63]
NFPA .....National Fire Protection Association
NG.....natural gas
NO_X.....nitrogen oxides
NO_2.....nitrogen dioxide
NSPS .....Federal New Source Performance Standards [NSPS as contained in 40 C.F.R. 60]
O & M .....operation and maintenance
O_2 .....Oxygen
ORL.....owner requested limit
PAL .....Plant wide Applicability Limitation
PM-10 .....particulate matter less than or equal to a nominal ten microns in diameter
PM-2.5.....particulate matter less than or equal to a nominal 2.5 microns in diameter
ppm .....parts per million
ppmv, ppmvd .....parts per million by volume on a dry basis
psia .....pounds per square inch (absolute)
PSD .....Prevention of Significant Deterioration
PTE .....potential to emit
SCR .....selective catalytic reduction
SIC. .....Standard Industrial Classification
SO_2 .....sulfur dioxide
tpy .....tons per year
ULSD .....Ultra Low Sulfur Diesel
VOC .....volatile organic compound [VOC as defined in 40 C.F.R. 51.100(s)]
VOL .....volatile organic liquid [VOL as defined in 40 C.F.R. 60.111b, Subpart Kb]
vol% .....volume percent
wt% .....weight percent

Section 1. Stationary Source Information

Identification

Permittee:		**Matanuska Electric Association, Inc.** P.O. Box 2929 Palmer, AK 99645
Stationary Source Name:		**Eklutna Generation Station**
Location:		61º 27´ 34.5" North; 149º 20´ 33.9" West
Physical Address:		28705 Dena'ina Elders Road Chugiak, AK 99567
Owner/Operator:		**Matanuska Electric Association, Inc.** P.O. Box 2929 Palmer, AK 99645
Permittee's Responsible Official and Designated Agent:		Michael Mann, Eklutna Generation Station Plant Manager P.O. Box 2929 Palmer, AK 99645
Stationary Source and Building Contact:		Traci Bradford, Environmental Engineer P.O. Box 2929 Palmer, AK 99645 907-761-9374 traci.bradford@mea.coop
Fee Contact:		Traci Bradford, Environmental Engineer P.O. Box 2929 Palmer, AK 99645 907-761-9374
Permit Contact:		Traci Bradford, Environmental Engineer P.O. Box 2929 Palmer, AK 99645 907-761-9374 traci.bradford@mea.coop
Process Description	SIC Code:	4911 – Electric services
	NAICS Code:	221112 – Fossil fuel electric power generation

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

Section 2. Emission Unit Inventory and Description

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

Table A - Emission Unit Inventory

EU ID	Emission Unit Name	Emission Unit Description	Rating/Size	Fuel	Construction Date
1	Generator Engine	Wärtsilä 18V50DF	17.1 MW	Natural Gas /ULSD	March 2012
2	Generator Engine	Wärtsilä 18V50DF	17.1 MW	Natural Gas /ULSD	March 2012
3	Generator Engine	Wärtsilä 18V50DF	17.1 MW	Natural Gas /ULSD	March 2012
4	Generator Engine	Wärtsilä 18V50DF	17.1 MW	Natural Gas /ULSD	March 2012
5	Generator Engine	Wärtsilä 18V50DF	17.1 MW	Natural Gas /ULSD	March 2012
6	Generator Engine	Wärtsilä 18V50DF	17.1 MW	Natural Gas /ULSD	March 2012
7	Generator Engine	Wärtsilä 18V50DF	17.1 MW	Natural Gas /ULSD	March 2012
8	Generator Engine	Wärtsilä 18V50DF	17.1 MW	Natural Gas /ULSD	March 2012
9	Generator Engine	Wärtsilä 18V50DF	17.1 MW	Natural Gas /ULSD	March 2012
10	Generator Engine	Wärtsilä 18V50DF	17.1 MW	Natural Gas /ULSD	March 2012
11	Fire Pump Engine	John Deere JU6H-UFADN0	197 hp	ULSD	June 2012
12	Black Start Generator Engine	Cummins 1000DQFAD	1,490 hp	ULSD	June 2013
13	Auxiliary Boiler	Cleaver-Brooks FLX200-1650	15.75 MMBtu/hr	Natural Gas /ULSD	June 2013
14	Auxiliary Boiler	Cleaver-Brooks FLX200-1650	15.75 MMBtu/hr	Natural Gas /ULSD	June 2013
15	Diesel Storage Tank	Rockford 071301	436,842 gal	ULSD	March 2013
16	Diesel Storage Tank	Rockford 071301	436,842 gal	ULSD	March 2013
17	NG Fuel Heater	ETI	7.0 MMBtu/hr	Natural Gas	To be determined
18	Black Start Generator Engine	Cummins 1000DQFAD	1,490 hp	ULSD	June 2013

Note:

EU ID 11 has actual emissions below the significant emissions thresholds in 18 AAC 50.326(e). However, it is included in this permit because it is subject to the requirements of Minor Permit No. AQ1086MSS03 and 40 C.F.R. 60 Subpart IIII and therefore cannot be classified as insignificant per 18 AAC 50.326(d)(1)(A) and (C).

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

Section 3. State Requirements

Visible Emissions Standard

1. **Industrial Process and Fuel-Burning Equipment Visible Emissions.** The Permittee shall not cause or allow visible emissions, excluding condensed water vapor, emitted from EU IDs 1 through 14, 17, and 18 listed in Table A to reduce visibility through the exhaust effluent by more than 20 percent averaged over any six consecutive minutes.

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

1.1. For EU IDs 1 through 10, 13, and 14, use natural gas as primary fuel. Monitoring for these emission units shall consist of a statement in each operating report under Condition 63 indicating whether each of these EUs fired natural gas as the primary fuel during the period covered by the report. If exclusive operation on ULSD occurred during the period covered by the report, the Permittee shall monitor, record, and report according to Condition 9.

1.2. For EU ID 17, burn only natural gas as fuel. Monitoring for this emission unit shall consist of a statement in each operating report under Condition 63 indicating whether the emission unit fired only natural gas during the period covered by the report. Report under Condition 62 if any fuel other than natural gas is burned.

1.3. For EU ID 11, as long as the emission unit does not exceed the operational hour limit in Condition 13, monitoring shall consist of an annual compliance certification under Condition 64 with the visible emission standard. Otherwise, monitor, record and report visible emissions in accordance with Conditions 2 through 4 for the remainder of the permit term.

1.4. For EU IDs 12 and 18, monitor, record, and report in accordance with Conditions 2 through 4.

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

Visible Emissions Monitoring, Recordkeeping and Reporting

Liquid Fuel-Fired Emission Units

2. **Visible Emissions Monitoring.** When required by any of Condition 1.3 or 1.4, or in the event of replacement during the permit term, the Permittee shall observe the exhaust of EU IDs 11, 12, and 18 for visible emissions using either the Method 9 Plan under Condition 2.1 or the Smoke/No-Smoke Plan under Condition 2.2. The Permittee may change visible-emissions plans for an emission unit at any time unless prohibited from doing so by Condition 2.3. The Permittee may, for each unit, elect to continue the visible emissions monitoring schedule in effect from a previous permit, if applicable.

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

2.1. **Method 9 Plan.** For all 18-minute observations in this plan, observe exhaust, following 40 C.F.R. 60, Appendix A-4, Method 9, adopted by reference in 18 AAC 50.040(a), for 18 minutes to obtain 72 consecutive 15-second opacity observations.

a. First Method 9 Observation. Except as provided in Condition 2.3.c(ii), for EU IDs 11, 12 and 18, observe exhaust for 18 minutes within six months after the issue date of this permit or during the next scheduled operation following issuance of this permit, whichever is later. For any unit, observe exhaust for 18 minutes within 14 calendar days after changing from the Smoke/No-Smoke Plan of Condition 2.2.

(i) For any unit replaced during the term of this permit, observe exhaust for 18 minutes within 30 days of startup.

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

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

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

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

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

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

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

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

2.2. **Smoke/No Smoke Plan.** Observe the exhaust for the presence or absence of visible emissions, excluding condensed water vapor.

a. Initial Monitoring Frequency. Observe the exhaust during each calendar day that an emission unit operates.

b. Reduced Monitoring Frequency. After the emission unit has been observed on 30 consecutive operating days, if the emission unit operated without visible smoke in the exhaust for those 30 days, then observe emissions at least once in every calendar month that an emission unit operates.

c. Smoke Observed. If smoke is observed, either begin the Method 9 Plan of Condition 2.1 or perform the corrective action required under Condition 2.3

2.3. **Corrective Actions Based on Smoke/No Smoke Observations**. If visible emissions are present in the exhaust during an observation performed under the Smoke/No Smoke Plan of Condition 2.2, then the Permittee shall either follow the Method 9 plan of Condition 2.1 or

a. initiate actions to eliminate smoke from the emission unit within 24 hours of the observation;

b. keep a written record of the starting date, the completion date, and a description of the actions taken to reduce smoke; and

c. after completing the actions required under Condition 2.3.a,

(i) take smoke/no smoke observations in accordance with Condition 2.2.

(A) at least once per day for the next seven operating days and until the initial 30 day observation period is completed; and

(B) continue as described in Condition 2.2.b; or

(ii) if the actions taken under Condition 2.3.a do not eliminate the smoke, or if subsequent smoke is observed under the schedule of Condition 2.3.c(i)(A), then observe the exhaust using the Method 9 Plan unless the Department gives written approval to resume observations under the Smoke/No Smoke Plan; after observing smoke and making observations under the Method 9 Plan, the Permittee may at any time take corrective action that eliminates smoke and restart the Smoke/No Smoke Plan under Condition 2.2.a.

3. Visible Emissions Recordkeeping. When required by any of Condition 1.3 or 1.4, or in the event of replacement of any of EU IDs 11, 12, and 18 during the permit term, the Permittee shall keep records as follows:

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

3.1. If using the Method 9 Plan of Condition 2.1,

a. the observer shall record

(i) the name of the stationary source, emission unit and location, emission unit type, observer's name and affiliation, and the date on the Visible Emission Observation Form in Section 11;

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

(iii) the presence or absence of an attached or detached plume and the approximate distance from the emissions outlet to the point in the plume at which the observations are made;

(iv) opacity observations to the nearest five percent at 15-second intervals on the Visible Emission Observation Form in Section 11, and

(v) the minimum number of observations required by the permit; each momentary observation recorded shall be deemed to represent the average opacity of emissions for a 15-second period.

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

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

3.2. If using the Smoke/No Smoke Plan of Condition 2.2, record the following information in a written log for each observation and submit copies of the recorded information upon request of the Department:

a. the date and time of the observation;

b. from Table A, the ID of the emission unit observed;

c. whether visible emissions are present or absent in the exhaust;

d. a description of the background to the exhaust during the observation;

e. if the emission unit starts operation on the day of the observation, the startup time of the emission unit;

f. name and title of the person making the observation; and

g. operating rate (load or fuel consumption rate).

4. Visible Emissions Reporting. When required by any of Condition 1.3 or 1.4, or in the event of replacement of any of EU IDs 11, 12, and 18 during the permit term, the Permittee shall report visible emissions as follows:

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

4.1. Include in each operating report required under Condition 63:

a. which visible-emissions plan of Condition 2 was used for each emission unit; if more than one plan was used, give the time periods covered by each plan;

b. for each emission unit under the Method 9 Plan,

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

(ii) a summary to include:

(A) number of days observations were made;

(B) highest six-minute average observed; and

(C) dates when one or more observed six-minute averages were greater than 20 percent;

c. for each emission unit under the Smoke/No Smoke Plan, the number of days that smoke/no smoke observations were made and which days, if any, that smoke was observed; and

d. a summary of any monitoring or recordkeeping required under Conditions 2 and 3 that was not done;

4.2. Report under Condition 62:

a. the results of Method 9 observations that exceed an average of 20 percent opacity for any six-minute period; and

b. if any monitoring under Condition 2 was not performed when required, report within three days of the date the monitoring was required.

Particulate Matter Emissions Standard

5. Industrial Process and Fuel-Burning Equipment Particulate Matter. The Permittee shall not cause or allow particulate matter (PM) emitted from EU IDs 1 through 14, 17, and 18 listed in Table A to exceed 0.05 grains per cubic foot of exhaust gas corrected to standard conditions and averaged over three hours.

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

5.1. For EU IDs 1 through 10, 13, and 14, use natural gas as primary fuel. Monitoring for these emission units shall consist of a statement in each operating report under Condition 63 indicating whether each of these EUs fired natural gas as the primary fuel during the period covered by the report. If exclusive operation on ULSD occurred during the period covered by the report, the Permittee shall monitor, record, and report according to Condition 9.

5.2. For EU ID 17, burn only natural gas as fuel. Monitoring for this emission unit shall consist of a statement in each operating report under Condition 63 indication whether this emission unit fired only natural gas during the period covered by the report. Report under Condition 62 if any fuel other than natural gas is burned.

5.3. For EU ID 11, as long as the emission unit does not exceed the operational hour limit in Condition 13, monitoring shall consist of an annual compliance certification under Condition 64 with the particulate matter standard. Otherwise, monitor, record and report particulate matter emissions in accordance with Conditions 6 through 8 for the remainder of the permit term.

5.4. For EU IDs 12 and 18, monitor, record, and report in accordance with Conditions 6 through 8.

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

Particulate Matter Monitoring, Recordkeeping and Reporting

Liquid Fuel-Fired Engines

6. Particulate Matter Monitoring for Diesel Engines. When required by any of Condition 5.3 or 5.4, the Permittee shall conduct source tests on diesel engines, EU IDs 11, 12 and 18 to determine the concentration of particulate matter (PM) in the exhaust of an emission unit as follows:

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

6.1. Except as allowed under Condition 6.4, within six months of exceeding the criteria of Condition 6.2.a or 6.2.b, either

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

b. make repairs so that emissions no longer exceed the criteria of Condition 6.2; to show that emissions are below those criteria, observe emissions as described in Condition 2.1 under load conditions comparable to those when the criteria were exceeded.

6.2. Conduct the PM source test or make repairs according to Condition 6.1 if

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

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

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

6.4. The automatic PM source test requirement in Conditions 6.1 and 6.2 is waived for an emissions unit if a PM source test on that unit has shown compliance with the PM standard during this permit term.

7. Particulate Matter Recordkeeping for Diesel Engines. Within 180 calendar days after the effective date of this permit, the Permittee shall record the exhaust stack diameter of EU IDs 11, 12 and 18. Report the stack diameter(s) in the next operating report under Condition 63.

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

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

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

8.1. Report under Condition 62

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

b. if one of the criteria of Condition 6.2 was exceeded and the Permittee did not comply with either Condition 6.1.a or 6.1.b, this must be reported by the day following the day compliance with Condition 6.1 was required;

8.2. Report observations in excess of the threshold of Condition 6.2.b within 30 days of the end of the month in which the observations occur.

8.3. In each operating report under Condition 63, include:

a. the dates, EU ID(s), and results when an observed 18-minute average was greater than an applicable threshold in Condition 6.2;

b. a summary of the results of any PM testing under Condition 6; and

c. copies of any visible emissions observation results (opacity observations) greater than the thresholds of Condition 6.2, if they were not already submitted.

Visible Emissions & Particulate Matter MR&R for Dual Fuel Emission Units

9. The Permittee shall monitor, record, and report the monthly hours of operation when operating exclusively on ULSD.

9.1. For any of EU IDs 1 through 10, 13, and 14 that does not exceed 400 hours of operation per calendar year on ULSD, monitoring of compliance for visible and particulate matter emissions is not required for that EU and monitoring shall consist of an annual certification under Condition 64.

9.2. For any of EU IDs 1 through 10, 13, and 14, notify the Department and begin monitoring the affected emission unit(s) according to Condition 9.3 no later than 15 days after the end of a calendar month in which the cumulative hours of operation for the calendar year exceed any multiple of 400 hours on ULSD exclusively. If the observation exceeds the limit in Condition 1, monitor as described in Condition 6. If the observation does not exceed the limit in Condition 1, no additional monitoring is required until the cumulative hours of operation exceed each subsequent multiple of 400 hours on ULSD during a calendar year.[1]

9.3. When required to do so by Condition 9.2, observe the exhaust, following 40 C.F.R. 60, Appendix A-4 Method 9, adopted by reference in 18 AAC 50.040(a), for 18-minutes to obtain 72 consecutive 15-second opacity observations.

9.4. Keep records and report in accordance with Conditions 3, 4, 7, and/or 8, as applicable.

9.5. Report under Condition 62 if the Permittee fails to comply with Condition 9.2, 9.3 or 9.4.

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

Sulfur Compound Emissions Standard

10. Sulfur Compound Emissions. In accordance with 18 AAC 50.055(c), the Permittee shall not cause or allow sulfur compound emissions, expressed as SO_2, from EU IDs 1 through 14, 17, and 18 to exceed 500 ppm averaged over three hours.

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

For Fuel Oil[2] (EU IDs 1 through 14 and 18)

10.1. **Sulfur Compound MR&R for Oil-Fired Emission Units**. For EU IDs 1 through 10, 13, and 14 (when operating exclusively on ULSD) and EU IDs 11, 12, and 18, to ensure compliance with Condition 10, the Permittee shall comply with the fuel sulfur content limit and associated monitoring, recordkeeping, and reporting (MR&R) requirements in Condition 11.2.

[Condition 15.2, Minor Permit AQ1086MSS03, 11/6/2015]
[18 AAC 50.040(j), & 50.326(j)]
[40 C.F.R. 71.6(a)(3) & (c)(6)]

[1] If the requirement to monitor is triggered more than once in a calendar month, only one Method 9 observation is required to be conducted by the stated deadline for that month.

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

For Fuel Gas (EU IDs 1 through 10, 13, 14, and 17)

10.2. **Sulfur Compound MR&R for Gas-Fired Emission Units**. For EU IDs 1 through 10, 13, and 14 (when operating on natural gas) and EU ID 17, to ensure compliance with Condition 10, the Permittee shall comply with the fuel sulfur content limit and associated MR&R requirements in Condition 11.1.

[Condition 15.1, Minor Permit AQ1086MSS03, 11/6/2015]
[18 AAC 50.040(j), & 50.326(j)]
[40 C.F.R. 71.6(a)(3) & (c)(6)]

Preconstruction Permit[3] Requirements

Limits to Avoid Minor Permitting under 18 AAC 50.502(c)(1)(C)

11. Fuel Sulfur Requirements. The Permittee shall monitor the sulfur content of the ULSD and hydrogen sulfide (H_2S) content of the natural gas burned as follows.

11.1. The H_2S content of the natural gas burned in EU IDs 1 through 10, 13, 14, and 17 shall not exceed 20 parts per million by volume (ppmv).

a. Monitor and record the H_2S content of the natural gas monthly by obtaining and keeping a current certified letter, valid purchase contract, tariff sheet, or transportation contract from the supplier stipulating that the natural gas supplied during the month does not contain more than 20 ppmv H_2S.

b. Report in the operating report under Condition 63 the monthly H_2S content of the natural gas. Report under Condition 62 if the H_2S content of the natural gas exceeds 20 ppmv.

11.2. The sulfur content of the diesel fuel burned in EU IDs 1 through 10, 13, and 14 (when burning diesel) and in EU IDs 11, 12, and 18 shall not exceed 15 parts per million by weight (ppmw) of sulfur.

a. Monitor and record monthly the sulfur content of the diesel fuel burned by obtaining and keeping a current certified letter or fuel receipts from the diesel fuel supplier that the diesel fuel supplied during the month was ULSD.

b. Report in the operating report under Condition 63 the type of diesel fuel received for each shipment. Report under Condition 62 if the fuel received was not ULSD.

[Condition 15, Minor Permit AQ1086MSS03, 11/6/2015]
[18 AAC 50.040(j) & 50.326(j)]
[40 C.F.R. 71.6(a)(1) & (a)(3)]

[3] *Preconstruction Permit* refers to Federal PSD Permits, State-issued Permits-to-Operate issued before January 18, 1997 (these permits cover both construction and operations), Construction Permits issued after January 17, 1997, and Minor Permits issued after October 1, 2004.

Owner Requested Limits to Avoid Classification as PSD Major Source

12. Operational Hour Limits for EU IDs 1 through 10. The Permittee shall limit the combined hours of operation of EU IDs 1 through 10 to no more than 1,680 hours per 12-month rolling period when firing ultra-low sulfur diesel (ULSD) exclusively.

12.1. The Permittee shall burn only natural gas and ULSD in EU IDs 1 through 10.

12.2. Install and maintain a non-resettable hour meter on EU IDs 1 through 10.

12.3. Monitor and record the hours of operation each month for each of EU IDs 1 through 10 when firing ULSD exclusively.

12.4. By the end of each calendar month, calculate and record the combined hours of operation for EU IDs 1 through 10 during the previous month, then calculate the 12-month rolling combined hours for EU IDs 1 through 10 when firing ULSD exclusively.

12.5. Report in the operating report under Condition 63 the rolling 12-month combined hours of operation for EU IDs 1 through 10 when firing ULSD exclusively.

12.6. Notify the Department under Condition 62 if the consecutive 12-month combined hours of operation for EU IDs 1 through 10, when firing ULSD exclusively, exceed 1,680 hours.

[Condition 5, Minor Permit AQ1086MSS03, 11/6/2015]
[18 AAC 50.040(j) & 50.326(j)]
[40 C.F.R. 71.6(a)(1) & (a)(3)]

13. Operational Hour Limits for EU ID 11: The Permittee shall limit the operation of EU ID 11 to no more than 500 hours per year.

13.1. Install and maintain a non-resettable hour meter on EU ID 11.

13.2. Monitor and record the monthly hours of operation for EU ID 11.

13.3. By the end of each month, calculate and record the operating hours of EU ID 11 for the previous month.

13.4. Report in the operating report under Condition 63 the rolling 12-month hours of operation for EU ID 11.

13.5. Notify the Department under Condition 62 if the rolling 12-month hours of operation for EU ID 11 exceed 500 hours.

[Condition 6, Minor Permit AQ1086MSS03, 11/6/2015]
[18 AAC 50.040(j) & 50.326(j)]
[40 C.F.R. 71.6(a)(1) & (a)(3)]

14. Operational Hour Limits for EU IDs 13 and 14: The Permittee shall limit the combined hours of operation of EU IDs 13 and 14 to no more than 1,000 hours per rolling 12-month period when firing ULSD exclusively.

14.1. The Permittee shall fire only natural gas and ULSD in EU IDs 13 and 14.

14.2. Install and maintain a non-resettable hour meter on each of EU IDs 13 and 14.

14.3. Monitor and record the monthly operating hours for each of EU IDs 13 and 14 when firing ULSD exclusively.

14.4. By the end of each month, calculate and record the combined operating hours of EU IDs 13 and 14 during the previous month, then calculate the rolling 12-month combined hours for EU IDs 13 and 14 when firing ULSD exclusively.

14.5. Report in the operating report under Condition 63 the rolling 12-month combined operating hours for EU IDs 13 and 14 when firing ULSD exclusively.

14.6. Notify the Department under Condition 62 if the rolling 12-month combined hours of operation for EU IDs 13 and 14, when firing ULSD exclusively, exceed 1,000 hours.

[Condition 7, Minor Permit AQ1086MSS03, 11/6/2015]
[18 AAC 50.040(j) & 50.326(j)]
[40 C.F.R. 71.6(a)(1) & (a)(3)]

15. Control Equipment: The Permittee shall operate and maintain a combined selective catalytic reduction (SCR) and catalytic oxidation (CATOX) control equipment downstream of each of EU IDs 1 through 10 according to the manufacturer's instructions and as follows:

15.1. For the combined control equipment[4], while operating on natural gas, monitor and record hourly:

a. the rate of injection of the reducing aqueous ammonia reagent into the flue gas leaving the emission unit. The 3-hour rolling average ammonia injection rate shall be no less than 1.0 gallons per hour (gal/hr) and no more than 38.5 gal/hr[5], except during startup and shutdown.

b. the temperature of the flue gas leaving the combined control equipment. The 3-hour rolling average temperature of the flue gas leaving the combined control equipment shall be no less than 536°F and no more than 997°F[6], except during startup and shutdown.

c. the pressure drop across the combined control equipment. The 3-hour rolling average pressure drop shall be no less than 1.5 inches of water and no more than 10 inches of water, except during startup and shutdown.

15.2. Keep on site the necessary manufacturer-recommended spare parts, reagents, catalysts, and operation manual for the control equipment.

15.3. In case of equipment malfunction, implement manufacturer-recommended corrective actions and record:

a. complete description of the corrective action; and

b. date(s) of the corrective action

[4] SCR and CATOX with the CATOX downstream of the SCR.
[5] The minimum injection rate is from the permit application; maximum injection rate is from the manufacturer's specifications.
[6] The temperature rates are from the manufacturer specifications.

15.4. Keep records of:

a. all control equipment system repairs;

b. hourly operating parameters established in Condition 15.1, dates and times each control equipment is started up or shut down;

c. system alarm logs including time and date of occurrence; and

d. receipts for all aqueous ammonia purchases (with dates and quantities).

15.5. Report under Condition 62 all:

a. control equipment malfunctions and associated corrective actions;

b. operating parameters that are outside the ranges in Condition 15.1; and

c. periods (starting and ending hour) during which a control equipment was not operating within the ranges established in Condition 15.1 while its associated generator was operating.

[Condition 8, Minor Permit AQ1086MSS03, 11/6/2015]
[18 AAC 50.040(j) & 50.326(j)]
[40 C.F.R. 71.6(a)(1) & (a)(3)]

Limit to Avoid Classification as HAP Major Source

16. Formaldehyde (CH_2O) Emission Limit: The Permittee shall limit CH_2O emissions from EU IDs 1 through 10 while firing natural gas to no more than 9.6 tpy during any consecutive 12 months by operating and maintaining the control equipment as described in Condition 15.

[Condition 9, Minor Permit AQ1086MSS03, 11/6/2015]
[18 AAC 50.040(j) & 50.326(j)]
[40 C.F.R. 71.6(a)(1)]

Requirements for Ambient Air Quality Protection

17. Annual NO_2 Ambient Air Quality Protection: To protect the annual NO_2 ambient air quality standard, the Permittee shall:

17.1. For EU IDs 1 through 10, the Permittee shall maintain a release height for each stack that equals or exceeds 30.0 meters above grade.

[Condition 13, Minor Permit AQ1086MSS03, 11/6/2015]
[18 AAC 50.040(j) & 50.326(j)]
[40 C.F.R. 71.6(a)(1)]

18. Annual NO_2 and 24-hr PM-10 Ambient Air Quality Protection: To protect the annual NO_2 and 24-hr PM-10, the combined operating hours for EU IDs 12 and 18 shall not exceed 1,000 hours per rolling 12-month period.

18.1. Install and maintain a non-resettable hour meter on each of EU IDs 12 and 18.

18.2. Monitor and record the hours of operation of each emission unit and the combined hours of operation for EU IDs 12 and 18 for each month.

18.3. At the end of each month, calculate and record for the previous month, the combined hours of operation for EU ID 12 and EU ID 18 during the month, then calculate the combined 12-month rolling total hours of operation by adding the hours of operation for the previous 11 months.

18.4. Report in the operating report under Condition 63 the combined rolling 12-month hours of operation for EU IDs 12 and 18.

18.5. Notify the Department under Condition 62 should the combined consecutive 12-month operating hours for EU IDs 12 and 18 exceed 1,000 hours.

[Condition 14, Minor Permit AQ1086MSS03, 11/6/2015]
[18 AAC 50.040(j) & 50.326(j)]
[40 C.F.R. 71.6(a)(1) & (a)(3)]

Insignificant Emission Units

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

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

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

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

[18 AAC 50.055(b)(1)]

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

[18 AAC 50.055(c)]

19.4. General MR&R for Insignificant Emission Units

a. The Permittee shall submit the certification of compliance of Condition 64 based on reasonable inquiry;

b. The Permittee shall comply with the requirements of Condition 45;

c. The Permittee shall report in the operating report required under Condition 63 if an emission unit is insignificant because of actual emissions less than the thresholds of 18 AAC 50.326(e) and actual emissions become greater than any of those thresholds; and

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

[18 AAC 50.346(b)(4)]

Section 4. Federal Requirements

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

Subpart A – General Provisions

20. NSPS Subpart A Notification. For any affected facility[7] or existing facility[8] regulated under NSPS requirements in 40 C.F.R. 60, the Permittee shall furnish the Department and EPA written notification or, if acceptable to both the EPA and the Permittee, electronic notification as follows:

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

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

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

20.2. A notification of the actual date of initial startup of an affected facility postmarked within 15 days after such date.

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

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

a. information describing the precise nature of the change,

b. present and proposed emission control systems,

c. productive capacity of the facility before and after the change, and

d. the expected completion date of the change;

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

20.4. A notification of the date upon which demonstration of the continuous monitoring system performance commences in accordance with 40 C.F.R. 60.13(c). Notification shall be postmarked not less than 30 days prior to such date.

[40 C.F.R. 60.7(a)(5), Subpart A]

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

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

20.5. A notification of the anticipated date for conducting the opacity observations required by 40 C.F.R. 60.11(e)(1). The notifications shall also include, if appropriate, a request for the EPA to provide a visible emissions reader during a performance test. The notification shall be postmarked not less than 30 days prior to such date.

[40 C.F.R. 60.7(a)(6), Subpart A]

20.6. If an owner or operator of an existing facility proposes to replace components, and the fixed capital cost of the new components exceeds 50 percent of the fixed capital cost that would be required to construct a comparable entirely new facility, he shall notify EPA and the Department of the proposed replacements. The notice must be postmarked as soon as practicable, but no less than 60 days before commencement of replacement, and must include the following information:

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

a. name and address of owner or operator,

b. the location of the existing facility,

c. a brief description of the existing facility and the components that are to be replaced,

d. a description of the existing and proposed air pollution control equipment,

e. an estimate of the fixed capital cost of the replacements, and of constructing a comparable entirely new facility,

f. the estimated life of the existing facility after the replacements, and

g. a discussion of any economic or technical limitations the facility may have in complying with the applicable standards of performance after the proposed replacements.

21. NSPS Subpart A Startup, Shutdown, & Malfunction Requirements. The Permittee shall maintain records of the occurrence and duration of any start-up, shutdown, or malfunction in the operation of EU ID(s) 1 through 14 and 18, any malfunction of the air-pollution control equipment, or any periods during which a continuous monitoring system or monitoring device for EU ID(s) 1 through 14 and 18 is inoperative.

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

22. NSPS Subpart A Performance (Source) Tests. The Permittee shall conduct source tests according to Section 6 and as required in this condition on any affected facility.

[18 AAC 50.040(a)(1)]

22.1. Except as specified in paragraphs (a)(1), (a)(2), (a)(3), and (a)(4) of 40 C.F.R. 60.8, within 60 days after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial startup of such facility, or at such other times specified by 40 C.F.R. Part 60, and at such other times as may be required by EPA, the owner or operator of such facility shall conduct performance test(s) and furnish EPA and the Department a written report of the results of such performance test(s).

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

22.2. Conduct source tests and reduce data as set out in 40 C.F.R. 60.8(b), and provide the Department copies of any EPA waivers or approvals of alternative methods.

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

22.3. Conduct source tests under conditions specified by EPA to be based on representative performance of EU ID(s) 1 through 10. Operations during periods of startup, shutdown, and malfunction shall not constitute representative conditions for the purpose of a performance test nor shall emissions in excess of the level of the applicable emission limit during periods of startup, shutdown, and malfunction be considered a violation of the applicable emission limit unless otherwise specified in the applicable standard.

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

22.4. Provide the EPA and the Department at least 30 days prior notice of any performance test, except as specified under other subparts, to afford the EPA and the Department the opportunity to have an observer present. If after a 30 day notice for an initially scheduled performance test, there is a delay (due to operational problems, etc.) in conducting the scheduled performance test, the Permittee shall notify the EPA and the Department as soon as possible of any delay in the original test date, either by providing at least 7 days prior notice of the rescheduled date of the performance test, or by arranging a rescheduled date with the EPA and the Department by mutual agreement.

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

22.5. Provide or cause to be provided, performance testing facilities as follows:

a. Sampling ports adequate for test methods applicable to EU ID(s) 1 through 14 and 18. This includes (i) constructing the air pollution control system such that volumetric flow rates and pollutant emission rates can be accurately determined by applicable test methods and procedures and (ii) providing a stack or duct free of cyclonic flow during performance tests, as demonstrated by applicable test methods and procedures.

b. Safe sampling platform(s),

c. Safe access to sampling platform(s), and

d. Utilities for sampling and testing equipment.

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

22.6. Unless otherwise specified in the applicable subpart, each performance test shall consist of three separate runs using the applicable test method. Each run shall be conducted for the time and under the conditions specified in the applicable standard. For the purpose of determining compliance with an applicable standard, the arithmetic means of results of the three runs shall apply. In the event that a sample is accidentally lost or conditions occur in which one of the three runs must be discontinued because of forced shutdown, failure of an irreplaceable portion of the sample train, extreme meteorological conditions, or other circumstances, beyond the owner or operator's control, compliance may, upon the EPA's approval, be determined using the arithmetic mean of the results of the two other runs.

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

23. NSPS Subpart A Good Air Pollution Control Practice. At all times, including periods of startup, shutdown, and malfunction, the Permittee shall, to the extent practicable, maintain and operate EU ID(s) 13 and 14 including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions. The Administrator will determine whether acceptable operating and maintenance procedures are being used based on information available, which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance records, and inspections of EU ID(s) 13 and 14.

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

24. NSPS Subpart A Credible Evidence. For the purpose of submitting compliance certifications or establishing whether or not the Permittee has violated or is in violation of the standards set forth in Condition 26, 27, or 28 nothing in 40 C.F.R. Part 60 shall preclude the use, including the exclusive use, of any credible evidence or information, relevant to whether EU IDs 1 through 14 and 18 would have been in compliance with applicable requirements of 40 C.F.R. Part 60 if the appropriate performance or compliance test or procedure had been performed.

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

25. NSPS Subpart A Concealment of Emissions. The Permittee shall not build, erect, install, or use any article, machine, equipment or process, the use of which conceals an emission which would otherwise constitute a violation of a standard set forth in Condition 26, 27, or 28. Such concealment includes, but is not limited to, the use of gaseous diluents to achieve compliance with an opacity standard or with a standard that is based on the concentration of a pollutant in the gases discharged to the atmosphere.

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

NSPS Subpart Dc – Steam Generating Units

NSPS Subpart Dc Applicability

26. For EU IDs 13 and 14, the Permittee shall comply with any applicable requirement in 40 C.F.R. 60 Subpart Dc for small steam generating units for which construction is commenced after June 9, 1989 and that has a maximum design capacity of 100 MMBtu/hr or less but greater than or equal to 10 MMBtu/hr.

[18 AAC 50.040(a)(2)(D), (j)(4) & 50.326(j)]
[40 C.F.R. 71.6(a)(1)]
[40 C.F.R. 60.40c(a), Subpart Dc]

NSPS Subpart Dc Sulfur Dioxide Standard

26.1. At all times, including periods of startup, shutdown, and malfunction, when EU IDs 13 and 14 combust fuel oil, the Permittee shall **either**:

a. emit no more than 0.5 lb SO_2/MMBtu (215 ng/J) heat input from fuel oil combusted, **or**

b. combust fuel oil that contains no more than 0.5 percent sulfur by weight.

[18 AAC 50.040(a)(2)(D)]
[40 C.F.R. 60.42c(d) & (i), Subpart Dc]

NSPS Subpart Dc Monitoring, Recordkeeping, and Reporting Requirements

26.2. Compliance with the emission limits or fuel oil sulfur limits under Condition 26.1 shall be determined based on a certification from the fuel supplier and demonstrated by complying with Condition 11.2.

[40 C.F.R. 60.42c(h)(1), 60.44c(h), & 60.46c(e), Subpart Dc]

26.3. The Permittee shall maintain records consistent with Condition 58 and shall submit reports to EPA as follows:

a. Include the calendar dates covered in the reporting period and a certified statement signed by the owner or operator of the affected facility that the records of fuel supplier certifications submitted represent all of the fuel combusted during the reporting period.

[40 C.F.R. 60.48c(d), (e)(l) & (11), Subpart De]

b. Fuel supplier certification shall include the following information:

(i) The name of the oil supplier;

(ii) A statement from the oil supplier that the oil complies with the specifications under the definition of distillate oil in 40 C.F.R. 60.41c; and

(iii) The sulfur content or maximum sulfur content of the oil.

[40 C.F.R. 60.48c(f)(l), Subpart De]

c. The reporting period for the reports required under Condition 26.3 is each six-month period. All reports shall be submitted to the EPA and shall be postmarked by the 30th day following the end of the reporting period.

[40 C.F.R. 60.48c(j), Subpart Dc]

26.4. Except as provided under Condition 26.5, for each of EU IDs 13 and 14, the Permittee shall record the amount of each fuel combusted during each operating day and maintain the records consistent with Condition 58,

26.5. As an alternative to meeting the requirements of Condition 26.4, the Permittee may elect to record and maintain records of the amount of each fuel combusted during each calendar month.

[18 AAC 50.040(a)(2)(D)]
[40 C.F.R. 60.48c(g)(1) & (2), Subpart Dc]

NSPS Subpart IIII – Compression Ignition Internal Combustion Engines

NSPS Subpart IIII Applicability and Compliance Requirements

27. For EU IDs 11, 12, and 18, listed in Table A, the Permittee shall comply with all applicable requirements in 40 C.F.R. 60 Subpart IIII for stationary compression ignition (CI) internal combustion engine (ICE) whose construction[9] commences after July 11, 2005 where the stationary CI ICE is manufactured after April 1, 2006 (for emergency units, EU IDs 12 and 18) and manufactured as a certified National Fire Protection Association (NFPA) fire pump engine after July 1, 2006 (for fire pump engine, EU ID 11).

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

27.1. Comply with the applicable requirements of 40 C.F.R. 60.4208 for importing or installing stationary CI ICE.

[40 C.F.R. 60.4208, Subpart IIII]

27.2. Except as permitted under Condition 27.3, operate and maintain the stationary CI ICE and control device according to the manufacturer's written instructions over the entire life of the engine. In addition, the Permittee may only change those settings that are permitted by the manufacturer.

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

27.3. If you do not install, configure, operate, and maintain your engine and control device according to the manufacturer's emission-related written instructions, or you change emission-related settings in a way that is not permitted by the manufacturer, you must demonstrate compliance as follows:

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

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

a. For EU IDs 11, 12, and 18, you must keep a maintenance plan and records of conducted maintenance and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions. In addition, you must conduct an initial performance test to demonstrated compliance with the applicable emission standards within 1 year of startup, or within 1 year after an engine and control device is no longer installed, configured, operated, and maintained in accordance with the manufacturer's emission-related written instructions, or within 1 year after you change emission-related settings in a way that is not permitted by the manufacturer.

[40 C.F.R. 60.4211(g)(2) & (g)(3), Subpart IIII]

b. For EU IDs 12 and 18, conduct subsequent performance testing every 8,760 hours of engine operation or 3 years, whichever comes first, thereafter to demonstrate compliance with the applicable emission standards.

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

27.4. Operate EU IDs 11, 12, and 18 according to the requirements in 40 C.F.R. 60.4211(f)(1) through 40 C.F.R. 60.4211(f)(3). In order for the engine to be considered an emergency stationary ICE under NSPS Subpart IIII, any operation other than emergency operation, maintenance and testing, emergency demand response, and operation in non-emergency situations for 50 hours per year, as described in 40 C.F.R. 60.4211(f)(1) through 40 C.F.R. 60.4211(f)(3), is prohibited. If you do not operate the engine according to the requirements in 40 C.F.R. 60.4211(f)(1) through 40 C.F.R. 60.4211(f)(3), the engine will not be considered an emergency engine under 40 C.F.R. 60 Subpart IIII and must meet all requirements for non-emergency engines.

[40 C.F.R. 60.4211(f), Subpart IIII]

27.5. Comply with the applicable provisions of NSPS Subpart A as specified in Table 8 to Subpart IIII.

[40 C.F.R. 60.4218 & Table 8, Subpart IIII]

NSPS Subpart IIII Fuel Requirements

27.6. For EU IDs 11, 12, and 18, the Permittee must use diesel fuel that meets the requirements of 40 C.F.R. 80.510(b) for nonroad diesel fuel with the following specifications:

a. a maximum sulfur content of 15 ppmw,

b. cetane index or aromatic content, as follows

(i) a minimum cetane number of 40, or

(ii) a maximum aromatic content of 35 percent by volume

[18 AAC (a)(2)(OO) & 50.040(j)(4) & 50.326(j)]
[40 C.F.R. 71.6(a)(1)]
[40 C.F.R. 60.4207(b), Subpart IIII]
[40 C.F.R. 80.510(b), Subpart I]

NSPS Subpart IIII Emission Standards

27.7. The Permittee shall comply with the emission standards in Conditions 27.8 and 27.9 by purchasing an engine certified according to the emission standards specified in 40 C.F.R. 60.4205(b)(for EU IDs 12 and 18) and 60.4205(c) (for EU ID 11), as applicable, for the same model year and maximum (or in the case of fire pumps, NFPA nameplate) engine power. The engine must be installed and configured according to the manufacturer's emission-related specifications, except as permitted under Condition 27.3.[10]

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

27.8. [40 C.F.R. 60.4211(c), Subpart IIII]For EU IDs 12 and 18, the Permittee shall not exceed the following applicable exhaust emission standards for new nonroad CI engines in 40 C.F.R. 89.112 and 89.113 for all pollutants, for the same displacement and maximum engine power (i.e., Tier 2 emission standards):

a. 6.4 g/kW-hr for NMHC + NOx;

b. 3.5 g/KW-hr for CO;

c. 0.2 g/kW-hr for PM; and

d. Exhaust opacity from EU IDs 12 and 18 must not exceed:

(i) 20 percent during the acceleration mode;

(ii) 15 percent during the lugging mode; and

(iii) 50 percent during the peaks in either the acceleration or lugging modes.

18 AAC 50.040(a)(2)(OO), (j)(4) & 50.326(j)]
[40 C.F.R. 71.6(a)(1)]
[40 C.F.R. 60.4205(b) & 60.4202(a)(2), Subpart IIII]
[40 C.F.R. 89.112(a) & Table A-1 and 89.113(a), Subpart B]

27.9. For EU ID 11, the Permittee shall comply with the applicable emission standards in Table 4 to NSPS Subpart IIII, for all pollutants.

a. 4.0 g/kW-hr for NMHC + NOx;

b. 3.5 g/kW-hr for CO; and

c. 0.20 g/kW-hr for PM

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

[10] EU IDs 11, 12, and 18 were identified in the application as certified engines.

NSPS Subpart IIII Monitoring and Recordkeeping Requirements

27.10. For EU IDs 11, 12, and 18, the Permittee shall meet the monitoring and recordkeeping requirements as follows:

[18 AAC 50.040(a)(2)(OO), (j)(4) & 50.326(j)]
[40 C.F.R. 71.6(a)(1)& (a)(3)]

a. If you are an owner or operator of an emergency stationary CI internal combustion engine that does not meet the standards applicable to non-emergency engines, you must install a non-resettable hour meter prior to startup of the engine, if one is not already installed.

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

b. If you are an owner or operator of an emergency stationary CI internal combustion engine equipped with a diesel particulate filter to comply with the emission standards in Conditions 27.7 and 27.9, the diesel particulate filter must be installed with a backpressure monitor that notifies the owner or operator when the high backpressure limit of the engine is approached.

(i) Keep records of any corrective action taken after the backpressure monitor has notified the owner or operator that the high backpressure limit of the engine is approached.

[40 C.F.R. 60.4209(b) & 60.4214(c), Subpart IIII]

c. If the emergency engine does not meet the standards applicable to non-emergency engines in the applicable model year, the owner or operator must keep records of the operation of the engine in emergency and non-emergency service that are recorded through the non-resettable hour meter. The owner must record the time of operation of the engine and the reason the engine was in operation during that time.

[40 C.F.R. 60.4214(b), Subpart IIII]

NSPS Subpart IIII Reporting Requirements

27.11. Include with the operating report under Condition 63 records of the operational hours and the reason the engine was in operation as required in Condition 27.10.c for the period covered by the report.

27.12. Report in accordance with Condition 62 if any of the requirements in Conditions 27.1 through 27.10 were not met.

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

NSPS Subpart JJJJ – Spark Ignition Internal Combustion Engines

NSPS Subpart JJJJ Applicability and Compliance Requirements

28. For EU IDs 1 through 10, the Permittee shall comply with all applicable requirements of NSPS Subpart JJJJ for stationary spark ignition (SI) internal combustion engine whose construction, modification, or reconstruction commences after June 12, 2006.

[18 AAC 50.040(a)(2)(PP), (j)(4) & 50.326(j)]
[40 C.F.R. 71.6(a)(1)]
[40 C.F.R. 60.4230, Subpart JJJJ]

28.1. Operate and maintain stationary SI ICE that achieve the emission standards as required in Condition 28.4 over the entire life of the engine.

[40 C.F.R. 60.4234, Subpart JJJJ]

28.2. Comply with the applicable provisions of NSPS Subpart A as specified in Table 3 to Subpart JJJJ.

[40 C.F.R. 60.4246 & Table 3, Subpart JJJJ]

28.3. For EU ID 1 through 10, the Permittee shall comply with the following:

a. You must keep a maintenance plan and records of conducted maintenance and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions. In addition, you must conduct an initial performance test within 1 year of engine startup and conduct subsequent performance testing every 8,760 hours or 3 years, whichever comes first, thereafter to demonstrate compliance with the emission standards in Condition 28.4.

[40 C.F.R. 60.4243(b)(2)(ii), Subpart JJJJ]

NSPS Subpart JJJJ Emission Standards

28.4. For EU IDs 1 through 10, the Permittee must meet the following emission standards:

[40 C.F.R. 60.4233(e), Subpart JJJJ]

a. 1.0 g/hp-hr (82 ppmvd at 15 percent O_2) for NOx

b. 2.0 g/hp-hr (270 ppmvd at 15 percent O_2) for CO

c. 0.7 g/hp-hr (60 ppmvd at 15 percent O_2) for VOC[11]

[40 C.F.R. 60.4233(e) & Table 1, Subpart JJJJ]

NSPS Subpart JJJJ Testing Requirements

28.5. For EU ID 1 through 10, the Permittee shall comply with the following:

[11] For purposes of NSPS Subpart JJJJ, when calculating emissions of volatile organic compounds from EU IDs 1-10, emissions of formaldehyde should not be included.[Table 1 Footnote d, Subpart JJJJ]

a. Owners and operators of stationary SI ICE who conduct performance tests must follow the procedures in Conditions 28.5.a(i) through 28.5.a(vii) below.

[40 C.F.R. 60.4244, Subpart JJJJ]

(i) Each performance test must be conducted within 10 percent of 100 percent peak (or the highest achievable) load and according to the requirements in 40 C.F.R. 60.8 and under the specific conditions that are specified by Table 2 to NSPS Subpart JJJJ.

(ii) You may not conduct performance tests during periods of startup, shutdown, or malfunction, as specified in 40 C.F.R. 60.8(c). If your stationary SI internal combustion engine is non-operational, you do not need to startup the engine solely to conduct a performance test; however, you must conduct the performance test immediately upon startup of the engine.

(iii) You must conduct three separate test runs for each performance test required in this section, as specified in 40 C.F.R. 60.8(f). Each test run must be conducted within 10 percent of 100 percent peak (or the highest achievable) load and last at least 1 hour.

(iv) To determine compliance with the NO_X mass per unit output emission limitation, convert the concentration of NO_X in the engine exhaust using Equation 1 of 40 C.F.R. 60.4244.

(v) To determine compliance with the CO mass per unit output emission limitation, convert the concentration of CO in the engine exhaust using Equation 2 of 40 C.F.R. 60.4244.

(vi) For purposes of NSPS Subpart JJJJ, when calculating emissions of VOC, emissions of formaldehyde should not be included. To determine compliance with the VOC mass per unit output emission limitation, convert the concentration of VOC in the engine exhaust using Equation 3 of 40 C.F.R. 60.4244.

(vii) If the owner/operator chooses to measure VOC emissions using either Method 18 of 40 CFR part 60, appendix A, or Method 320 of 40 CFR part 63, appendix A, then it has the option of correcting the measured VOC emissions to account for the potential differences in measured values between these methods and Method 25A. The results from Method 18 and Method 320 can be corrected for response factor differences using Equations 4 and 5 of 40 C.F.R. 60.4244. The corrected VOC concentration can then be placed on a propane basis using Equation 6 of 40 C.F.R. 60.4244.

[40 C.F.R. 60.4244(a) through (g), Subpart JJJJ]

NSPS Subpart JJJJ Notification, Reporting, and Recordkeeping Requirements

28.6. For EU ID 1 through 10, the Permittee must meet the following notification, reporting and recordkeeping requirements.

[40 C.F.R. 60.4245, Subpart JJJJ]

a. Owners and operators of all stationary SI ICE must keep records of the information in Conditions 28.6.a(i) through 28.6.a(iii) of this permit.

[40 C.F.R. 60.4245(a), Subpart JJJJ]

(i) All notifications submitted to comply with NSPS Subpart JJJJ and all documentation supporting any notification.

(ii) Maintenance conducted on the engine.

(iii) If the stationary SI ICE is not a certified engine, documentation that the engine meets the emission standards.

[40 C.F.R. 60.4245(a)(1), (2) & (4), Subpart JJJJ]

b. Owners and operators of stationary SI ICE that are subject to performance testing must submit a copy of each performance test as conducted in Condition 28.5.a within 60 days after the test has been completed. Performance test reports using EPA Method 18, EPA Method 320, or ASTM D6348-03 (incorporated by reference - see 40 CFR 60.17) to measure VOC require reporting of all QA/QC data. For Method 18, report results from sections 8.4 and 11.1.1.4; for Method 320, report results from sections 8.6.2, 9.0, and 13.0; and for ASTM D6348-03 report results of all QA/QC procedures in Annexes 1-7

[40 C.F.R. 60.4245(d), Subpart JJJJ]

28.7. Report in accordance with Condition 62 if any of the requirements in Conditions 28.1 through 28.6 were not met.

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

Engines Subject to Federal NESHAP Subpart ZZZZ

29. NESHAP Subpart ZZZZ Applicability. For EU IDs 1 through 12 and 18, the Permittee shall comply with all applicable requirements of NESHAP Subpart ZZZZ for stationary reciprocating internal combustion engines (RICE) located at an area source of hazardous air pollutant (HAP) emissions.

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

29.1. For EU IDs 11, 12, and 18, the Permittee shall meet the requirements of 40 C.F.R. 63 by meeting the requirements of 40 C.F.R. 60 Subpart IIII, for CI ICE, as set out in Conditions 27.1 through 27.12. No further requirements apply for EU IDs 11, 12, and 18 under 40 C.F.R. 63.

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

29.2. For EU IDs 1 through 10, the Permittee shall meet the requirements of 40 C.F.R. 63 by meeting the requirements of 40 C.F.R. 60 Subpart JJJJ, for SI ICE, as set out in Conditions 28.1 through 28.6. No further requirements apply for EU IDs 1 through 10 under 40 C.F.R. 63.

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

40 C.F.R. Part 61 National Emission Standards for Hazardous Air Pollutants (NESHAP)

Subpart A – General Provisions & Subpart M – Asbestos

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

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

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

Subpart F – Recycling and Emissions Reduction

31. The Permittee shall comply with the standards for recycling and emission reduction of refrigerants set forth in 40 C.F.R. 82, Subpart F.

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

Subpart G – Significant New Alternatives Policy (Halon)

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

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

Subpart H – Halon Emission Reduction

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

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

General NSPS and NESHAP Requirements

34. NESHAP Applicability Determinations. The Permittee shall determine rule applicability and designation of affected sources under National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Source Categories (40 C.F.R. 63) in accordance with the procedures described in 40 C.F.R. 63.1(b) and 63.10(b)(3). If a source becomes affected by an applicable subpart of 40 C.F.R. 63, the Permittee shall comply with such standard by the compliance date established by the Administrator in the applicable subpart, in accordance with 40 C.F.R. 63.6(c).

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

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

35. NSPS and NESHAP Reports. The Permittee shall:

35.1. **Reports:** Except for federal reports and notices submitted through EPA's CDX/CEDRI on-line reporting system, attach to the operating report required under Condition 63 for the period covered by the report, a copy of any NSPS and NESHAPs reports submitted to the U.S. Environmental Protection Agency (EPA) Region 10; and

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

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

Section 5. General Conditions

Standard Terms and Conditions

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

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

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

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

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

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

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

[18 AAC 50.326(j)(1), 50.400, & 50.403]
[AS 37.10.052(b), 11/04; AS 46.14.240, 6/7/03]

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

40.1. the stationary source's assessable potential to emit of **796 tpy**; or

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

a. an enforceable test method described in 18 AAC 50.220;

b. material balance calculations;

c. emission factors from EPA's publication AP-42, Vol. I, adopted by reference in 18 AAC 50.035; or

d. other methods and calculations approved by the Department, including appropriate vendor-provided emissions factors when sufficient documentation is provided.

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

41. Assessable Emission Estimates. Emission fees will be assessed as follows:

41.1. no later than March 31 of each year, the Permittee may submit an estimate of the stationary source's assessable emissions to ADEC, Air Permits Program, ATTN: Assessable Emissions Estimate, 410 Willoughby Ave., P.O. Box 111800, Juneau, AK 99811-1800; the submittal must include all of the assumptions and calculations used to estimate the assessable emissions in sufficient detail so the Department can verify the estimates; or

41.2. if no estimate is submitted on or before March 31 of each year, emission fees for the next fiscal year will be based on the potential to emit set out in Condition 40.1.

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

42. Good Air Pollution Control Practice. The Permittee shall do the following for EU IDs 13, 14, and 17:

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

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

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

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

43. Dilution. The Permittee shall not dilute emissions with air to comply with this permit. Monitoring shall consist of an annual certification that the Permittee does not dilute emissions to comply with this permit.

[18 AAC 50.045(a)]

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

[18 AAC 50.055(g)]

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

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

45.1. Monitoring, Recordkeeping, and Reporting for Condition 45:

a. If emissions present a potential threat to human health or safety, the Permittee shall report any such emissions according to Condition 62.

b. As soon as practicable after becoming aware of a complaint that is attributable to emissions from the stationary source, the Permittee shall investigate the complaint to identify emissions that the Permittee believes have caused or are causing a violation of Condition 45.

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

a. after an investigation because of a complaint or other reason, the Permittee believes that emissions from the stationary source have caused or are causing a violation of Condition 45; or

b. the Department notifies the Permittee that it has found a violation of Condition 45.

45.3. The Permittee shall keep records of

a. the date, time, and nature of all emissions complaints received;

b. the name of the person or persons that complained, if known;

c. a summary of any investigation, including reasons the Permittee does or does not believe the emissions have caused a violation of Condition 45; and

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

45.4. With each operating report under Condition 63, the Permittee shall include a brief summary report which must include

a. the number of complaints received;

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

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

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

45.5. The Permittee shall notify the Department of a complaint that is attributable to emissions from the stationary source within 24 hours after receiving the complaint, unless the Permittee has initiated corrective action within 24 hours of receiving the complaint.

46. Technology-Based Emission Standard. If an unavoidable emergency, malfunction, or non-routine repair, as defined in 18 AAC 50.235(d), causes emissions in excess of a technology-based emission standard[12] listed in Condition 26, 27, 28, or 31 (refrigerants), the Permittee shall take all reasonable steps to minimize levels of emissions that exceed the standard. Excess emissions reporting under Condition 62 requires information on the steps taken to minimize emissions. Monitoring of compliance for this condition consists of the report required under Condition 62.

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

Open Burning Requirements

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

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

47.2. Compliance with this condition shall be an annual certification conducted under Condition 64.

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

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

Section 6. General Source Testing and Monitoring Requirements

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

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

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

[18 AAC 50.220(b)]

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

52. Test Exemption. The Permittee is not required to comply with Conditions 54, 55 and 56 when the exhaust is observed for visible emissions by Method 9 Plan (Condition 2.1) or Smoke/No Smoke Plan (Condition 2.2).

[18 AAC 50.345(a)]

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

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

54. Test Plans. Except as provided in Condition 52, before conducting any source tests, the Permittee shall submit a plan to the Department. The plan must include the methods and procedures to be used for sampling, testing, and quality assurance and must specify how the emission unit will operate during the test and how the Permittee will document that operation. The Permittee shall submit a complete plan within 60 days after receiving a request under Condition 48 and at least 30 days before the scheduled date of any test unless the Department agrees in writing to some other time period. Retesting may be performed without resubmitting the plan.

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

55. Test Notification. Except as provided in Condition 52, at least 10 days before conducting a source test, the Permittee shall give the Department written notice of the date and the time the source test will begin.

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

56. Test Reports. Except as provided in Condition 52, within 60 days after completing a source test, the Permittee shall submit two copies of the results in the format set out in the Source Test Report Outline, adopted by reference in 18 AAC 50.030. The Permittee shall certify the results in the manner set out in Condition 59. If requested in writing by the Department, the Permittee must provide preliminary results in a shorter period of time specified by the Department.

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

57. Particulate Matter Calculations. In source testing for compliance with the particulate matter standards in Conditions 5 and 19.2, the three-hour average is determined using the average of three one-hour test runs. The source testing must account for those emissions caused by soot blowing, grate cleaning, or other routine maintenance activities by ensuring that at least one test run includes the emissions caused by the routine maintenance activity and is conducted under conditions that lead to representative emissions from that activity. The emissions must be quantified using the following equation:

$$E = E_M\left[(A+B)\times\frac{S}{R\times A}\right]+E_{NM}\left[\frac{R-S}{R}-B\times\frac{S}{R\times S}\right]$$

Where:

E = the total PM emissions of the emission unit in grains per dry standard cubic foot ((gr.)/dscf)

E_M = the PM emissions in (gr.)/dscf measured during the test that included the routine maintenance activity

E_{NM} = the arithmetic average of PM emissions in (gr.)/dscf measured during the test runs that did not include the maintenance activity

A = the period of routine maintenance activity occurring during the test run that included routine maintenance activity, expressed to the nearest hundredth of an hour

B = the total period of the test run, less A

R = the maximum period of emission unit operation per 24 hours, expressed to the nearest hundredth of an hour

S = the maximum period of routine maintenance activity per 24 hours, expressed to the nearest hundredth of an hour

[18 AAC 50.220(f)]

Section 7. General Recordkeeping and Reporting Requirements

Recordkeeping Requirements

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

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

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

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

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

b. the date(s) analyses were performed;

c. the company or entity that performed the analyses;

d. the analytical techniques or methods used;

e. the results of such analyses; and,

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

Reporting Requirements

59. Certification. The Permittee shall certify any permit application, report, affirmation, or compliance certification submitted to the Department and required under the permit by including the signature of a responsible official for the permitted stationary source following the statement: *"Based on information and belief formed after reasonable inquiry, I certify that the statements and information in and attached to this document are true, accurate, and complete."* Excess emission reports must be certified either upon submittal or with an operating report required for the same reporting period. All other reports and other documents must be certified upon submittal.

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

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

b. the person providing the electronic signature has made an agreement, with the certifying authority described in Condition 59.1.a, that the person accepts or agrees to be bound by an electronic record executed or adopted with that signature.

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

60. Submittals. Unless otherwise directed by the Department or this permit, the Permittee shall submit one copy of each report, compliance certification, and/or other submittal required by this permit, certified in accordance with Condition 59, to ADEC, Air Permits Program, 610 University Ave., Fairbanks, AK 99709-3643, ATTN: Compliance Technician. The documents may be submitted either by hard copy or electronically.

60.1. Electronic submittals may be provided, upon consultation with the Compliance Technician or Department website regarding software compatibility, as follows:

a. send by E-mail under a cover letter using dec.aq.airreports@alaska.gov; or

b. use the Department's Air Online Services at http://dec.alaska.gov/applications/air/airtoolsweb/.

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

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

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

62. Excess Emissions and Permit Deviation Reports.

62.1. Except as provided in Condition 45, the Permittee shall report all emissions or operations that exceed or deviate from the requirements of this permit as follows:

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

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

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

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

c. report all other excess emissions and permit deviations

(i) within 30 days of the end of the month in which the excess emissions or deviation occurred, except as provided in Conditions 62.1.c(ii) and 62.1.c(iii);

(ii) if a continuous or recurring excess emissions is not corrected within 48 hours of discovery, within 72 hours of discovery unless the Department provides written permission to report under Condition 62.1.c(i); and

(iii) for failure to monitor, as required in other applicable conditions of this permit.

62.2. When reporting excess emissions or permit deviations, the Permittee shall report using either the Department's on-line form, which can be found at http://www.dec.state.ak.us/air/ap/site.htm or if the Permittee prefers, the form contained in Section 12 of this permit. The Permittee must provide all information called for by the form that is used.

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

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

63. Operating Reports. During the life of this permit[13], the Permittee shall submit to the Department an operating report by August 1 for the period January 1 to June 30 of the current year and by February 1 for the period July 1 to December 31 of the previous year.

63.1. The operating report must include all information required to be in operating reports by other conditions of this permit, for the period covered by the report.

63.2. When excess emissions or permit deviations that occurred during the reporting period are not included with the operating report under Condition 63.1, the Permittee shall identify

a. the date of the deviation;

b. the equipment involved;

c. the permit condition affected;

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

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

63.3. when excess emissions or permit deviations have already been reported under Condition 62 the Permittee shall cite the date or dates of those reports.

63.4. The operating report must include a listing of emissions monitored under Conditions 2.1.e and 2.2.c, which trigger additional testing or monitoring, whether or not the emissions monitored exceed an emission standard. The Permittee shall include in the report.

a. the date of the emissions;

b. the equipment involved;

c. the permit condition affected; and

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

d. the monitoring result which triggered the additional monitoring.

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

64. Annual Compliance Certification. Each year by March 31, the Permittee shall compile and submit to the Department an annual compliance certification report.

64.1. Certify the compliance status of the stationary source over the preceding calendar year consistent with the monitoring required by this permit, as follows:

a. identify each term or condition set forth in Section 3 through Section 9, that is the basis of the certification;

b. briefly describe each method used to determine the compliance status

c. state whether compliance is intermittent or continuous; and

d. identify each deviation and take it into account in the compliance certification;

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

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

65. Emission Inventory Reporting. The Permittee shall submit to the Department reports of actual emissions, by emission unit, of CO, NH_3, NO_X, PM-10, PM-2.5, SO_2, VOCs and Lead (Pb) (and lead compounds) using the form in Section 13 of this permit, as follows:

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

a. 250 tons per year (tpy) of NH_3, PM-10, PM-2.5_5 or VOCs; or

b. 2500 tpy of CO, NO_X or SO_2.

65.2. Every third year by April 30 if the stationary source's potential to emit for the previous calendar year equals or exceeds:

a. 5 tons per year of lead (Pb), or

b. 1000 tpy of CO; or

c. 100 tpy of SO_2, NH_3, PM-10, PM-2.5_5, NO_X or VOCs.

65.3. For reporting under Condition 65, the Permittee shall report in 2015 for calendar year 2014, 2018 for calendar year 2017, 2021 for calendar year 2020, etc., in accordance with the Environmental Protection Agency set schedule.

65.4. Include in the report required by this condition, the required data elements contained within the form in Section 13 or those contained in Table 2A of Appendix A to Subpart A of 40 C.F.R. 51 for each stack associated with an emission unit.

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

Section 8. Permit Changes and Renewal

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

66.1. The Permittee shall provide a copy of each application for modification or renewal of this permit, including any compliance plan, or application addenda, at the time the application or addendum is submitted to the Department[14];

66.2. The information shall be submitted to the same address as in Condition 64.2.

66.3. To the extent practicable, the Permittee shall provide to EPA applications in portable document format (PDF); MS Word format (.doc); or other computer-readable format compatible with EPA's national database management system; and

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

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

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

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

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

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

68.2. Provide contemporaneous written notice to EPA and the Department of each such change, except for changes that qualify as insignificant under 18 AAC 50.326(d) – (i). Such written notice shall describe each such change, including the date, any change in emissions, pollutants emitted, and any applicable requirement that would apply as a result of the change;

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

[14] The documents required in Condition 66.1 are submitted to the Department's Anchorage office. The current address for the Anchorage office is: ADEC, 555 Cordova Street, Anchorage, AK 99501.

68.4. The Permittee shall keep a record describing changes made at the stationary source that result in emissions of a regulated air pollutant subject to an applicable requirement, but not otherwise regulated under the permit, and the emissions resulting from those changes.

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

69. Operational Flexibility. The Permittee may make Section 502(b)(10)[15] changes within the permitted stationary source without requiring a permit revision if the changes are not modifications under any provision of Title I of the Act and the changes do not exceed the emissions allowable under this permit (whether expressed therein as a rate of emissions or in terms of total emissions):

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

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

69.3. The permit shield described in 40 C.F.R. 71.6(f) shall not apply to any change made pursuant to Condition 69.

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

70. Permit Renewal. To renew this permit, the Permittee shall submit an application under 18 AAC 50.326 no sooner than July 26, 2020 and no later than July 26, 2021. The renewal application shall be complete before the permit expiration date listed on the cover page of this permit. Permit expiration terminates the stationary source's right to operate unless a timely and complete renewal application has been submitted consistent with 40 C.F.R. 71.7(b) and 71.5(a)(1)(iii).

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

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

Section 9. Compliance Requirements

General Compliance Requirements

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

71.1. included and specifically identified in the permit; or

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

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

72. The Permittee must comply with each permit term and condition. Noncompliance with a permit term or condition constitutes a violation of AS 46.14, 18 AAC 50, and, except for those terms or conditions designated in the permit as not federally enforceable, the Clean Air Act, and is grounds for

a. an enforcement action;

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

c. denial of an operating permit renewal application.

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

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

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

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

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

75. The Permittee shall allow the Department or an inspector authorized by the Department, upon presentation of credentials and at reasonable times with the consent of the owner or operator to

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

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

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

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

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

Section 10. Permit As Shield from Inapplicable Requirements

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

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

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

76.2. The liability of an owner or operator of a source for any violation of applicable requirements prior to or at the time of permit issuance.

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

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

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

Table B - Permit Shields Granted

EU ID	Non-Applicable Requirements	Reason for Non-Applicability
1 - 10	40 C.F.R. 60 Subpart IIII – Standards of Performance for Stationary CI ICE	EUs are dual fuel, spark ignition engines, not compression ignition.
13 & 14	40 C.F.R. 60 Subpart Da – Standards of Performance for Electric Utility Steam Generating Units	EUs have a heat input less than 250 MMBtu/hr and are therefore exempt per 40 C.F.R. 60.40Da(e)(1).
13 & 14	40 C.F.R. 60 Subpart Db – Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units	EUs have a heat input less than 100 MMBtu/hr and are therefore exempt per 40 C.F.R. 60.40b(a).
13, 14, & 17	40 C.F.R. 63 Subpart DDDDD – NESHAP for major sources: industrial, commercial, and institutional boilers and process heaters	EUs are not located at a major source of HAP and are therefore exempt per 40 C.F.R. 63.7485.
13 & 14	40 C.F.R. 60 Subpart JJJJJJ – NESHAP for Industrial, Commercial, and Institutional Boilers Area Sources	EUs meet definition of gas fired boiler and are therefore exempt per 40 C.F.R. 63.11195(e).
15 & 16	40 C.F.R. 60 Subpart K – Standards of Performance for Storage Vessels for Petroleum Liquids	Tanks were constructed after the 1978 applicability date.
15 & 16	40 C.F.R. 60 Subpart Ka – Standards of Performance for Storage Vessels for Petroleum Liquids	Tanks were constructed after the 1984 applicability date.
15 & 16	40 C.F.R. 60 Subpart Kb – Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage	Tanks are exempt per 40 C.F.R. 60.110b(b)

EU ID	Non-Applicable Requirements	Reason for Non-Applicability
	Vessels)	
Stationary source-wide	40 CFR 60 Subparts C, Cb, Cc, Cd, Ce, D, Da, Db, E, Ea, Eb, Ec, F, G, Ga, H, I, J, Ja, K, Ka, Kb, L, M, N, Na, O, P, Q, R, S, T, U, V, W, X, Y, Z, AA, AAa, BB, CC, DD, EE, HH, KK, LL, MM, NN, PP, QQ, RR, SS, TT, UU, VV, VVa, WW, XX, AAA, BBB, DDD, FFF, GGG, GGGa, HHH, III, JJJ, KKK, LLL, NNN, OOO, PPP, QQQ, RRR, SSS, TTT, UUU, VVV, WWW, AAAA, BBB, CCCC, DDD, EEEE, FFFF, KKKK, LLLL, MMMM, OOOO, QQQQ, TTTT, UUUU	Not an affected stationary source, operation, or industry.
Stationary source-wide	40 CFR 61 Subpart A, B, C, D, E, F, H, I, J, K, L, M, N, O, P, Q, R, T, V, W, Y, BB, and FF	No affected EUs within the stationary source.
Stationary source-wide	40 C.F.R. 63 Subpart B, F, G, H, I, J, L, M, N, O, Q, R, S, T, U, W, X, Y, AA, BB, CC, DD, EE, GG, HH, II, JJ, KK, LL, MM, OO, PP, QQ, RR, SS, TT, UU, VV, WW, XX, YY, CCC, DDD, EEE, GGG, HHH, III, JJJ, LLL, MMM, NNN, OOO, PPP, QQQ, RRR, TTT, UUU, VVV, XXX, AAAA, CCCC, DDDD, EEEE, FFFF, GGGG, HHHH, IIII, JJJJ, KKKK, MMMM, NNNN, OOOO, PPPP, QQQQ, RRRR, SSSS, TTTT, UUUU, VVVV, WWWW, XXXX, YYYY, AAAAA, BBBBB, CCCCC, DDDDD, EEEEE, FFFFF, GGGGG, HHHHH, IIIII, JJJJJ, KKKKK, LLLLL, MMMMM, NNNNN, PPPPP, QQQQQ, RRRRR, SSSSS, TTTTT, UUUUU, WWWWW, YYYYY, ZZZZZ, BBBBBB, CCCCCC, DDDDDD, EEEEEE, FFFFFF, GGGGGG, HHHHHH, JJJJJJ, LLLLLL, MMMMMM, NNNNNN, OOOOOO, PPPPPP, QQQQQQ, RRRRRR, SSSSSS, TTTTTT, VVVVVV, WWWWWW, XXXXXX, YYYYYY, ZZZZZZ, AAAAAAA, BBBBBBB, CCCCCCC, DDDDDDD, EEEEEEE, HHHHHHH	Not an affected stationary source, operation, or industry.
Stationary source-wide	40 C.F.R. 68 Subpart C	Stationary source does not use aqueous ammonia with a concentration of 20% or greater.
Stationary source-wide	40 C.F.R. 51.308(e) and 40 C.F.R. 51 Appendix Y Guidelines for BART Determinations under the Regional Haze Rule	Stationary source is not an "existing stationary facility" as defined in 40 C.F.R. 51.301.
Stationary source-wide	40 C.F.R. 82 Subpart B	Stationary source and its employees do not perform service on motor vehicle air conditioners, for consideration or otherwise.
Stationary source-wide	18 AAC 50.055(a)(2)-(a)(9)	The stationary source does not contain any EUs subject to these opacity standards.
Stationary source-wide	18 AAC 50.055(b)(2)-(b)(6)	The stationary source does not contain any EUs subject to these particulate matter standards.
Stationary source-wide	18 AAC 50.055(d)-(f)	The stationary source does not contain any EUs subject to these sulfur standards.
Stationary source-wide	18 AAC 50.060, 50.070, 50.075, 50.076, 50.077, 50.085, 50.090	The stationary source is not an affected source regulated by these standards.

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

Section 11. Visible Emissions Forms

VISIBLE EMISSION OBSERVATION FORM

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

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

  Wet Bulb Temperature: can be measured using a sling psychrometer

  RH Percent: relative humidity measured using a sling psychrometer; use local US Weather Bureau measurements only if nearby.
- Source Layout Sketch: include wind direction, sun position, associated stacks, roads, and other landmarks to fully identify location of emission point and observer position.

  Draw North Arrow: to determine, point line of sight in direction of emission point, place compass beside circle, and draw in arrow parallel to compass needle.

  Sun's Location: point line of sight in direction of emission point, move pen upright along sun location line, mark location of sun when pen's shadow crosses the observer's position.
- Observation Date: date observations conducted.
- Start Time, End Time: beginning and end times of observation period (e.g., 1635 or 4:35 p.m.).
- Data Set: percent opacity to nearest 5%; enter from left to right starting in left column. Use a second (third, etc.) form, if readings continue beyond 30 minutes. Use dash (-) for readings not made; explain in adjacent comments section.

  Comments: note changing observation conditions, plume characteristics, and/or reasons for missed readings.

  Range of Opacity: note highest and lowest opacity number.
- Observer's Name: print in full.

  Observer's Signature, Date: sign and date after performing VE observation.
- Organization: observer's employer.

Certified By, Date: name of "smoke school" certifying observer and date of most recent certification.

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

Page No._____

Stationary Source Name		Type of Emission Unit			Observation Date		Start Time		End Time
					Sec / Min	0	15	30	45	Comments
Emission Unit Location					1					
City	State	Zip			2					
Phone # (Key Contact)		Stationary Source ID Number			3					
Process Equipment		Operating Mode			4					
Control Equipment		Operating Mode			5					
Describe Emission Point/Location					6					
Height above ground level	Height relative to observer	Clinometer Reading			7					
Distance From Observer		Direction From Observer			8					
Start End		Start End								
Describe Emissions & Color					9					
Start		End								
Visible Water Vapor Present? If yes, determine approximate distance from the					10					
No Yes	stack exit to where the plume was read									
Point in Plume at Which Opacity Was Determined					11					
Describe Plume Background		Background Color			12					
Start		Start			13					
End		End								
Sky Conditions:					14					
Start		End								
Wind Speed		Wind Direction From			15					
Start End		Start End								
Ambient Temperature		Wet Bulb Temp		RH percent	16					
SOURCE LAYOUT SKETCH:	1 Stack or Point Being Read	2 Wind Direction From			17					
3 Observer Location	4 Sun Location	5 North Arrow	6 Other Stacks							
					18					
					19					
					20					
					21					
					22					
					23					
					24					
					25					
					26					
					27					
					28					
					29					
					30					
					Range of Opacity					
					Minimum			Maximum		
I have received a copy of these opacity observations					Print Observer's Name					
Print Name:					Observer's Signature					Date
Signature:										Observer's Affiliation:
Title		Date			Certifying Organization					
					Certified By:				Date	

Data Reduction:

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

Average Opacity Summary:

Set Number	Time			Opacity		
	Start	End		Sum	Average	Comments

Section 12. ADEC Notification Form

Eklutna Generation Station	AQ1086TVP01
Stationary Source (Facility) Name	**Air Quality Permit Number**
Matanuska Electric Association, Inc.	
Company Name	**Date**

When did you discover the Excess Emissions/Permit Deviation?

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

When did the event/deviation occur?

Begin Date: _____ / _____ / _____ Time: _____ : _____ (please use 24-hr clock)

End Date _____ / _____ / _____ Time: _____ : _____ (please use 24-hr clock)

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

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

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

☐ Excess Emissions – Complete Section 1 and Certify

☐ Deviation from Permit Condition – Complete Section 2 and Certify

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

Section 1. Excess Emissions

(a) Was the exceedance: ☐ Intermittent or ☐ Continuous

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

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

☐ Control Equipment Failure ☐ Schedule Maintenance/Equipment Adjustment

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

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

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

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

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

☐ Opacity _____ % ☐ Venting _____ gas/scf ☐ Control Equipment Down
☐ Fugitive Emissions ☐ Emission Limit Exceeded ☐ Recordkeeping
☐ Marine Vessel Opacity ☐ Flaring ☐ Other _____

(f) Unavoidable Emissions:

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

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

Certify Report (go to end of form.)

Section 2. Permit Deviations

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

☐ Emission Unit-Specific
☐ Failure to Monitor/Report
☐ General Source Test/Monitoring Requirements
☐ Recordkeeping/Reporting/Compliance Certification
☐ Standard Conditions Not Included in the Permit
☐ Other Section: _____ (Title of section and section number of your permit).
☐ Generally Applicable Requirements
☐ Reporting/Monitoring for Diesel Engines
☐ Insignificant Emission Unit
☐ Stationary Source Wide

(b) Emission Unit Involved:

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

EU ID	EU Name	Permit Condition/ Potential Deviation

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

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

Certification:

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

Printed Name: _____ Title: _____ Date: _____

Signature: _____ Phone Number: _____

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

To Submit this Report:

1. Fax to: 907-451-2187; or

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

If faxed or emailed, the report must be certified within the Operating Report required for the same reporting period per Condition 63.

Or

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

Or

4. Phone Notifications: 907-451-5173

Phone notifications require a written follow-up report.

Or

5. Submission of information contained in this report can be made electronically at the following website: *http://dec.alaska.gov/Applications/Air/airtoolsweb/*

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

[18 AAC 50.346(b)(3)]

Section 13. Emission Inventory Form

ADEC Reporting Form **Emission Inventory Reporting** **State of Alaska Department of Environmental Conservation** **Division of Air Quality**	**Emission Inventory Year-[ ]**

Mandatory information is highlighted in bright yellow. Make additional copies as needed.

Stationary Source Detail		
Inventory start date		
Inventory end date		
ADEC ID or Permit Number		
EPA ID:		
Census Area/ Community		
Facility Name		
Facility Physical Location	**Address:**	
	City, State, Zip Code:	
	Latitude:	**Longitude:**
	Legal Description:	
Owner Name & Address & contact number	**Owner Name:**	
	Owner Address:	
	Phone Number:	
Mailing Contact Information	**Mailing Address:**	
Line of Business (NAICS)		
Line of Business (SIC)		
Facility Status:		

Emission Unit Data			
Specifications			
ID		**Design Capacity**	
Description			
Emission Unit Status			
Manufacturer		**Manufactured Year**	
Model Number		**Serial Number**	
Regulations			
Regulation/Description:			
Control Equipment (List All if applicable):			
ID			
System Description	-		
Equipment Type(s)			
Manufacturer			
Model			
Control Efficiency (%)			
Capture Efficiency (%)			
Pollutants Controlled		**Reduction Efficiency (%):**	
		Reduction Efficiency (%):	

Processes	
Process	**Primary Process**
SCC Code	(ex. 20100201)
	>
	>
	>
	>
Material Processed	
Period Start	
Period End	
Throughput (units)	
Summer %	
Fall %	

Winter %	
Spring %	

Operational Schedule

Days/Week	
Hours/Day	
Weeks/Year	
Hours/Year	

Fuel Characteristics

Heat Content	**Elem. Sulfur Content (%)**	**H_2S Sulfur Content**	**Ash Content (if applicable)**

Heating

Heat Input	**Heat Output**	**Heat Values Convention**

Emissions Operating Type:

Pollutant	**Emission Factor (EF)**	**EF Numerator**	**EF Denominator**	**EF Source**	**Tons**
Carbon Monoxide (CO)					
Nitrogen Oxides NOx					
PM10 Primary (PM10-PRI)					
PM2.5 Primary (PM25-PRI)					
Sulfur Dioxide (SO2)					
Ammonia (NH3)					
Lead and lead compounds					
Volatile Organic Compounds (VOC)					

Emissions' Release Point

Release Point ID					
Apportion%					

Process	**Secondary Process**
SCC Code	(ex. 20100201)
	>
	>

	>
	>
Material Processed	
Period Start	
Period End	
Throughput (units)	
Summer %	
Fall %	
Winter %	
Spring %	

Operational Schedule

Days/Week	
Hours/Day	
Weeks/Year	
Hours/Year	

Fuel Characteristics

Heat Content	Elem. Sulfur Content (%)	H_2S Sulfur Content	Ash Content (if applicable)

Heating

Heat Input	Heat Output	Heat Values Convention

Emissions Operating Type:

Pollutant	Emission Factor (EF)	EF Numerator	EF Denominator	EF Source	Tons
Carbon Monoxide (CO)					
Nitrogen Oxides NOx					
PM10 Primary (PM10-PRI)					
PM2.5 Primary (PM25-PRI)					
Sulfur Dioxide (SO2)					
Ammonia (NH3)					
Lead and lead compounds					
Volatile Organic Compounds (VOC)					

Emissions' Release Point					
Release Point ID					
Apportion%					

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

Certification:

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

Printed Name:_____Title_____Date _____

Signature:_____ Phone number_____

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

To Submit this report:

1. Fax this form to: 907-465-5129; or
2. E-mail to: DEC.AQ.airreports@alaska.gov; or
3. Mail to: ADEC
   Air Permits Program
   410 Willoughby Ave., Suite 303
   PO Box 111800
   Juneau, AK 99811-1800

Or

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

[18 AAC 50.346(b)(9)]

DEPARTMENT OF ENVIRONMENTAL CONSERVATION
AIR QUALITY CONTROL MINOR PERMIT

Permit No. AQ1086MSS03 **Final - November 06, 2015**
Rescinds Minor Permit No. AQ1086MSS02

The Alaska Department of Environmental Conservation (Department), under the authority of AS 46.14 and 18 AAC 50, issues Air Quality Control Minor Permit No. AQ1086MSS03 to the Permittee listed below.

Permittee:	**Matanuska Electric Association** PO Box 2929 163 E. Industrial Way Palmer, Alaska 99645
Owner/Operator:	Same as Permittee
Stationary Source	**Eklutna Generation Station**
Location:	Latitude: 61° 27' 34.5" N; Longitude: 149° 20' 33.9" W
Physical Address:	28705 Dena'ina Elders Road, Chugiak, Alaska 99567
Permit Contact:	Traci Bradford, (907) 761-9374; traci.bradford@mea.coop
Project:	Revise Emission Control Operating Parameters

This permit is classified under 18 AAC 50.508(6) for revising or rescinding the terms and conditions of a Title I permit. This permit also carries forward the classifications of 18 AAC 50.502(c)(1) and 18 AAC 50.508(5) from Permit No. AQ1086MSS01. The permit satisfies the obligation of the Permittee to obtain a minor permit under 18 AAC 50. As required by AS 46.14.120(c), the Permittee shall comply with the terms and conditions of this permit

for

John F. Kuterbach, Manager
Air Permits Program

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Section 1. Emission Inventory

1. Emission Unit Authorization. The Permittee is authorized to install and operate emission units (EUs) listed in Table 1. Except as noted elsewhere in the permit, the information in Table 1 is for information purposes only. The specific unit descriptions do not restrict the Permittee from replacing an emission unit identified in Table 1. The Permittee shall comply with all applicable provisions of AS 46.14 and 18 AAC 50 when installing a replacement emission unit, including any applicable minor or construction permit requirements.

Table 1 –Emission Unit Inventory

EU ID	Description	Make / Model	Rating	Fuel Type	Install Date
1	Generator Engine	Wartsila 18V50DF	17.1 MW	NG/ULSD	March 2015
2	Generator Engine	Wartsila 18V50DF	17.1 MW	NG/ULSD	March 2015
3	Generator Engine	Wartsila 18V50DF	17.1 MW	NG/ULSD	March 2015
4	Generator Engine	Wartsila 18V50DF	17.1 MW	NG/ULSD	March 2015
5	Generator Engine	Wartsila 18V50DF	17.1 MW	NG/ULSD	March 2015
6	Generator Engine	Wartsila 18V50DF	17.1 MW	NG/ULSD	March 2015
7	Generator Engine	Wartsila 18V50DF	17.1 MW	NG/ULSD	February 2015
8	Generator Engine	Wartsila 18V50DF	17.1 MW	NG/ULSD	February 2015
9	Generator Engine	Wartsila 18V50DF	17.1 MW	NG/ULSD	February 2015
10	Generator Engine	Wartsila 18V50DF	17.1 MW	NG/ULSD	February 2015
11	Firewater Pump	John Deere JU6H-UFADN0	197 hp	ULSD	October 2014
12	Black Start Generator	Cummins 1000DQFAD	1,490 hp	ULSD	April 2015
13	Auxiliary Boiler	Cleaver-Brooks FLX200-1650	15.75 MMbtu/hr	NG/ULSD	October 2014
14	Auxiliary Boiler	Cleaver-Brooks FLX200-1650	15.75 MMbtu/hr	NG/ULSD	October 2014
15	Diesel Storage Tank	Rockford Corporation	436,842 gal	Diesel	November 2014
16	Diesel Storage Tank	Rockford Corporation	436,842 gal	Diesel	November 2014
17	NG Fuel Heater	ETI	7.0 MMBtu/hr	Natural Gas	TBD
18	Black Start Generator	Cummins 1000DQFAD	1,490 hp	ULSD	April 2015

Table Notes:
NG / ULSD: Natural Gas / Ultra Low Sulfur Diesel
TBD: To Be Determined

1.1 The Permittee shall maintain the equipment listed in Table 1 according to the manufacturers' or operator's maintenance procedures and shall keep copies of the maintenance procedures.

Section 2. Emission Fees

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

2.1 the stationary source's assessable potential to emit of 795 tpy; or

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

a. an enforceable test method described in 18 AAC 50.220;

b. material balance calculations;

c. emission factors from EPA's publication AP-42, Vol. I, adopted by reference in 18 AAC 50.035; or

d. other methods and calculations approved by the Department**.**

3. Assessable Emission Estimates. Emission fees will be assessed as follows:

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

3.2 if no estimate is submitted on or before March 31st of each year, emission fees for the next fiscal year will be based on the potential to emit set forth in Condition 2.1.

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

Section 3. Requirements to Avoid Classification under PSD

5. Operation Hour Limits for EU IDs 1 through 10: The Permittee shall limit the combined hours of operation of EU IDs 1 through 10 to no more than 1,680 hours per 12-month rolling period when firing ultra-low sulfur diesel (ULSD) exclusively.

5.1 The Permittee shall burn only natural gas and ULSD in EU IDs 1 through 10.

5.2 Install and maintain a non-resettable hour meter on each of EU IDs 1 through 10.

5.3 Monitor and record the hours of operation each month for each of EU IDs 1 through 10 when firing ULSD exclusively.

5.4 By the end of each calendar month, calculate and record the combined hours of operation for EU IDs 1 through 10 when firing ULSD exclusively during the previous month, then calculate the 12-month rolling combined hours for EU IDs 1 through 10 when firing ULSD exclusively.

5.5 Report in the operating report under Condition 21 the rolling 12-month combined hours of operation for EU IDs 1 through 10 when firing ULSD exclusively.

5.6 Notify the Department under Condition 20 if the consecutive 12-month combined hours of operation for EU IDs 1 through 10, when firing ULSD exclusively, exceed 1,680 hours.

6. Operation Hour Limits for EU ID 11: The Permittee shall limit the operation of EU ID 11 to no more than 500 hours per year.

6.1 Install and maintain a non-resettable hour meter on EU ID 11.

6.2 Monitor and record the monthly hours of operation for EU ID 11.

6.3 By the end of each month, calculate and record the operating hours of EU ID 11 for the previous month.

6.4 Report in the operating report under Condition 21 the rolling 12-month hours of operation for EU ID 11.

6.5 Notify the Department under Condition 20 if the rolling 12-month hours of operation for EU ID 11 exceed 500 hours.

7. Operation Hour Limits for EU IDs 13 and 14: The Permittee shall limit the combined hours of operation of EU IDs 13 and 14 to no more than 1,000 hours per rolling 12-month period when firing ULSD exclusively.

7.1 The Permittee shall fire only natural gas and ULSD in EU IDs 13 and 14.

7.2 Install and maintain a non-resettable hour meter on each of EU IDs 13 and 14.

7.3 Monitor and record the monthly operating hours for each of EU IDs 13 and 14 when firing ULSD exclusively.

7.4 By the end of each month, calculate and record the combined operating hours of EU IDs 13 and 14 when firing ULSD exclusively during the previous month, then calculate the 12-month rolling combined hours for EU IDs 13 and 14 when firing ULSD exclusively.

7.5 Report in the operating report under Condition 21 the rolling 12-month combined operating hours for EU IDs 13 and 14 when firing ULSD exclusively.

7.6 Notify the Department under Condition 20 if the rolling 12-month combined hours of operation for EU IDs 13 and 14, when firing ULSD exclusively, exceeds 1,000 hours.

8. Control Equipment: The Permittee shall operate and maintain a combined Selective Catalytic Reduction (SCR) and Catalytic Oxidation (CATOX) control equipment downstream of each of EU IDs 1 through 10 according to the manufacturer's instructions and as follows:

8.1 For the combined control equipment[1], while operating on natural gas, monitor and record hourly:

a. the rate of injection of the reducing aqueous ammonia reagent into the flue gas leaving the emission unit. The 3-hour rolling average ammonia injection rate shall be no less than 1.0 gallons per hour (gal/hr) and no more than 38.5 gal/hr[2], except during startup and shutdown.

b. the temperature of the flue gas leaving the combined control equipment. The 3-hour rolling average temperature of the flue gas leaving the combined control equipment shall be no less than 536°F and no more than 997°F[3], except during startup and shutdown.

c. the pressure drop across the combined control equipment. The 3-hour rolling average pressure drop shall be no less than 1.5 inches of water and no more than 10 inches of water, except during startup and shutdown.

8.2 Keep on site the necessary manufacturer-recommended spare parts, reagents, catalysts, and operation manual for the control equipment.

8.3 In case of equipment malfunction, implement manufacturer-recommended corrective actions and record:

a. complete description of the corrective action; and

b. date(s) of the corrective action

8.4 Keep records of:

a. all control equipment system repairs;

[1] SCR and CATOX with the CATOX downstream of the SCR.
[2] The minimum injection rate is from the permit application. The maximum injection rate is from the manufacturer's specifications.
[3] The temperature rates are from the manufacturer specifications.

b. hourly operating parameters established in Condition 8.1, dates and times each control equipment is started up or shut down;

c. system alarm logs including time and date of occurrence; and

d. receipts for all aqueous ammonia purchases (with dates and quantities).

8.5 Report under Condition 20 all:

a. control equipment malfunctions and associated corrective actions;

b. operating parameters that are outside the ranges in Condition 8.1; and

c. periods (starting and ending hour) during which a control equipment was not operating within the ranges established in Condition 8.1 while its associated generator was operating.

Section 4. Requirements to Avoid Classification as a HAP Major Source

9. Formaldehyde (CH_2O) Emission Limit: The Permittee shall limit CH_2O emissions from EU IDs 1 through 10 while firing natural gas to no more than 9.6 tpy during any consecutive 12 months by operating and maintaining the control equipment described in Condition 8.

Section 5. State Emission Standards

10. Visible Emissions. The Permittee shall not cause or allow visible emissions (VE), excluding condensed water vapor, emitted by EU IDs 1 through 14, 17, and 18 to reduce visibility through the exhaust effluent by more than 20 percent averaged over any six consecutive minutes.

11. Particulate Matter: The Permittee shall not cause or allow particulate matter (PM) emitted from EU IDs 1 through 14, 17, and 18 to exceed 0.05 grains per dry standard cubic foot of exhaust gas corrected to standard conditions and averaged over three hours.

12. Sulfur Compound Emissions: The Permittee shall not cause or allow sulfur compound emissions, expressed as SO_2, from EU IDs 1 through 14, 17, and 18 to exceed 500 ppm averaged over three hours.

12.1 The Permittee shall monitor, record, and report as described in Condition 15.

Section 6. Protection of Ambient Air Quality

13. Annual NO_2 Ambient Air Quality Protection: To protect the annual NO_2 ambient air quality standard, the Permittee shall:

13.1 For EU IDs 1 through 10, the Permittee shall maintain a release height for each stack that equals or exceeds 30.0 meters above grade.

14. Annual NO_2 and 24-hr PM-10 Ambient Air Quality Protection: To protect the annual NO_2 and 24-hr PM-10, the combined operating hours for EU IDs 12 and 18 shall not exceed 1,000 hours per rolling 12-month period.

14.1 Install and maintain a non-resettable hour meter on each of EU IDs 12 and 18.

14.2 Monitor and record the hours of operation of each emission unit and the combined hours of operation for EU IDs 12 and 18 for each month.

14.3 At the end of each month, calculate and record for the previous month, the combined hours of operation for EU ID 12 and EU ID 18 during the month, then calculate the combined 12-month rolling total hours of operation by adding the hours of operation for the previous 11 months.

14.4 Report in the operating report under Condition 21 the combined rolling 12-month hours of operation for EU IDs 12 and 18.

14.5 Notify the Department under Condition 20 should the combined consecutive 12-month operating hours for EU IDs 12 and 18 exceed 1,000 hours.

Section 7. Requirements to Avoid Minor Permitting under 18 AAC 50.502(c)(1)(c)

15. Fuel Sulfur Requirements: The Permittee shall monitor the sulfur content of the ULSD and hydrogen sulfide (H_2S) content of the natural gas burned as follows:

15.1 The H_2S content of the natural gas burned in EU IDs 1 through 10, 13, 14, and 17 shall not exceed 20 parts per million by volume (ppmv).

a. Monitor and record the H_2S content of the natural gas monthly by obtaining and keeping a current certified letter, valid purchase contract, tariff sheet, or transportation contract from the supplier stipulating that the natural gas supplied during the month does not contain more than 20 ppmv H_2S.

b. Report in the operating report under Condition 21 the monthly H_2S content of the natural gas. Report under Condition 20 if the H_2S content of the natural gas exceeds 20 ppmv.

15.2 The sulfur content of the diesel fuel burned in EU IDs 1 through 10, 13, and 14 when burning diesel and in EU IDs 11, 12, and 18 shall not exceed 15 parts per million by weight (ppmw) of sulfur.

a. Monitor and record monthly the sulfur content of the diesel fuel burned by obtaining and keeping a current certified letter or fuel receipts from the diesel fuel supplier that the diesel fuel supplied during the month was ULSD.

b. Report in the operating report under Condition 21 the type of diesel fuel received for each shipment. Report under Condition 20 if the fuel received was not ULSD.

Section 8. General Recordkeeping, Reporting, and Certification Requirements

16. Certification. The Permittee shall certify all reports, or other documents submitted to the Department and required under the permit by including the signature of a responsible official for the permitted stationary source following the statement: "Based on information and belief formed after reasonable inquiry, I certify that the statements and information in and attached to this document are true, accurate, and complete." Excess emissions reports must be certified either upon submittal or with an operating report required for the same reporting period. All other reports and other documents must be certified upon submittal.

17. Submittals. Unless otherwise directed by the Department or this permit, the Permittee shall send an original and one copy of reports, compliance certifications, and other submittals required by this permit to ADEC, Air Permits Program, 610 University Ave., Fairbanks, AK 99709-3643, ATTN: Compliance Technician. The Permittee may upon consultation with the Compliance Technician regarding software compatibility, provide electronic copies of data reports, emission source test reports, or other records under a cover letter certified in accordance with Condition 16.

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

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

19.1 copies of all reports and certifications submitted pursuant to this section of the permit; and

19.2 records of all monitoring required by this permit, and information about the monitoring including (if applicable):

a. calibration and maintenance records, original strip chart or computer-based recordings for continuous monitoring instrumentation;

b. sampling dates and times of sampling or measurements;

c. the operating conditions that existed at the time of sampling or measurement;

d. the date analyses were performed;

e. the location where samples were taken;

f. the company or entity that performed the sampling and analyses;

g. the analytical techniques or methods used in the analyses; and

h. the results of the analyses.

20. Excess Emissions and Permit Deviation Reports.

20.1 Except as provided in Condition 22, the Permittee shall report all emissions or operations that exceed or deviate from the requirements of this permit as follows:

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

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

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

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

c. report all other excess emissions and permit deviations

(i) within 30 days of the end of the month in which emissions or deviation occurs or is discovered, except as provided in Conditions 20.1c(ii) and 20.1c(iii);

(ii) if a continuous or recurring excess emissions is not corrected within 48 hours of discovery, within 72 hours of discovery unless the Department provides written permission to report under Condition 20.1c(i); and

(iii) for failure to monitor, as required in other applicable conditions of this permit.

20.2 The Permittee must report using either the Department's on-line form, or if the Permittee prefers, the form contained in Attachment 2. The Permittee must provide all information called for by the form that is used.

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

21. Operating Reports. During the life of this permit, the Permittee shall submit to the Department an original and one copy of an operating report by August 1st for the period January 1st through June 30th of the current year and by February 1st for the period July 1st through December 31st of the previous year.

21.1 The operating report must include all information required to be in operating reports by other conditions of this permit

21.2 If excess emissions or permit deviations that occurred during the reporting period are not reported under Condition 21.1, either

a. The Permittee shall identify

(i) the date of the deviation;

(ii) the equipment involved;

(iii) the permit condition affected;

(iv) any corrective action or preventative measures taken and the date of such actions; or;

b. when excess emissions or permit deviations have already been reported under Condition 20 the Permittee may cite the date or dates of those reports.

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

22.1 If emissions present a potential threat to health or safety, the Permittee shall report any such emissions according to Condition 20.

22.2 As soon as practicable after becoming aware of a complaint that is attributable to emissions from the stationary source, the Permittee shall investigate the complaint to identify emissions that the Permittee believes have caused or are causing a violation of Condition 22.

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

a. after investigation because of complaint or other reason, the Permittee believes that emissions from the stationary source have caused or are causing a violation of Condition 22; or

b. the Department notifies the Permittee that it has found a violation of Condition 22.

22.4 The Permittee shall keep records of

a. the date and time, and nature of all emissions complaints received;

b. the name of the person or persons that complained, if known;

c. a summary of any investigation, including reasons the Permittee does or does not believe the emissions have caused a violation of Condition 22; and

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

22.5 With each operating report under Condition 21, the Permittee shall include a brief summary report which must include

a. the number of complaints received;

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

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

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

22.6 The Permittee shall notify the Department of a complaint that is attributable to emissions from the stationary source within 24 hours after receiving the complaint, unless the Permittee has initiated corrective action within 24 hours of receiving the complaint.

Section 9. General Source Test Requirements

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

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

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

24.2 at the maximum rated burning or operating capacity of the source or another rate determined by the Department to characterize the actual discharge into the ambient air

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

25.1 Source testing for the reduction in visibility through the exhaust effluent must be conducted in accordance with the procedures set out in 40 C.F.R. 60, Appendix A, Reference Method 9. The Permittee may use the form in Attachment 1 of this permit to record data.

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

25.3 Source testing for emissions of PM-10 must be conducted in accordance with the procedures specified in 40 C.F.R. 51, Appendix M, Methods 201 or 201A and 202. For EUs with stack temperatures exceeding 500 degrees Fahrenheit, source testing may be conducted in accordance with the procedures specified in 40 C.F.R. 60, Appendix A, Method 5 and 40 C.F.R. 51, Appendix M, Method 202.

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

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

27. **Test Plans.** Before conducting any source tests, the Permittee shall submit a plan to the Department. The plan must include the methods and procedures to be used for sampling, testing, and quality assurance, and must specify how the emissions unit will operate during the test and how the Permittee will document that operation. The Permittee shall submit a complete test plan at least 30 days before the scheduled date of any test unless the Department agrees in writing to some other time period. Retesting may be done without resubmitting the plan.

28. **Test Notification.** At least 10 days before conducting a source test, the Permittee shall give the Department written notice of the date and time the source test will begin.

29. **Test Reports.** Within 60 days after completing a source test, the Permittee shall submit two copies of the results in the format set out in the *Source Test Report Outline*, adopted by reference in 18 AAC 50.030. The Permittee shall certify the results as set out in Condition 16. If requested in writing by the Department, the Permittee must provide preliminary results in a shorter period of time specified by the Department.

Section 10. Standard Terms and Conditions

30. The Permittee must comply with each permit term and condition. Noncompliance with a permit term or condition constitutes a violation of AS 46.14, 18 AAC 50, and, except for those terms or conditions designated in the permit as not federally enforceable, the Clean Air Act, and is grounds for

30.1 an enforcement action; or

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

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

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

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

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

Section 11. Permit Documentation

July 23, 2015	Matanuska Electric Association (MEA) submits a minor permit application to revise Minor Permit AQ1086MSS02
October 15, 2015	MEA submits comments on preliminary permit

Attachment 1. Visible Emissions Form

VISIBLE EMISSION OBSERVATION FORM

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

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

  Wet Bulb Temperature: can be measured using a sling psychrometer

  RH Percent: relative humidity measured using a sling psychrometer; use local US Weather Bureau measurements only if nearby.
- Source Layout Sketch: include wind direction, sun position, associated stacks, roads, and other landmarks to fully identify location of emission point and observer position.

  Draw North Arrow: to determine, point line of sight in direction of emission point, place compass beside circle, and draw in arrow parallel to compass needle.

  Sun's Location: point line of sight in direction of emission point, move pen upright along sun location line, mark location of sun when pen's shadow crosses the observer's position.
- Observation Date: date observations conducted.
- Start Time, End Time: beginning and end times of observation period (e.g., 1635 or 4:35 p.m.).
- Data Set: percent opacity to nearest 5%; enter from left to right starting in left column. Use a second (third, etc.) form, if readings continue beyond 30 minutes. Use dash (-) for readings not made; explain in adjacent comments section.

  Comments: note changing observation conditions, plume characteristics, and/or reasons for missed readings.

  Range of Opacity: note highest and lowest opacity number.
- Observer's Name: print in full.

  Observer's Signature, Date: sign and date after performing VE observation.
- Organization: observer's employer.

Certified By, Date: name of "smoke school" certifying observer and date of most recent certification.

ALASKA DEPARTMENT OF ENVIRONMENTAL CONSERVATION
AIR QUALITY DIVISION - VISIBLE EMISSIONS OBSERVATION FORM

Page No.__________

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

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

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

Range of Opacity
Minimum Maximum

I have received a copy of these opacity observations	Print Observer's Name
Print Name:	Observer's Signature Date
Signature:	
Title Date	Organization
	Certified By: Date

Attachment 2. ADEC Notification Form

Eklutna Generation Station **No. AQ1086MSS03**

Stationary Source Name **Air Quality Permit No.**

Matanuska Electric Association

Company Name **Date**

When did you discover the Excess Emissions/Permit Deviation?

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

When did the event/deviation occur?

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

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

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

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

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

☐ Excess Emissions – Complete Section 1 and Certify

☐ Deviation from Permit Condition – Complete Section 2 and Certify

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

Section 1. Excess Emissions

(a) Was the exceedance: ☐ Intermittent or ☐ Continuous

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

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

☐ Control Equipment Failure ☐ Schedule Maintenance/Equipment Adjustment

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

(c) Description

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

(d) Emissions Units Involved:

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

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

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

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

☐ Fugitive Emissions ☐ Emission Limit Exceeded ☐ Other _____

☐ Marine Vessel Opacity ☐ Flaring _____

(f) Unavoidable Emissions:

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

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

Certify Report (Go to end of form.)

Section 2. Permit Deviations

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

☐ Emission Unit-Specific ☐ Generally Applicable Requirements

☐ Failure to Monitor/Report ☐ Reporting/Monitoring for Diesel Engines

☐ General Source Test/Monitoring Requirements ☐ Recordkeeping Failure

☐ Recording/Reporting/Compliance Certification ☐ Insignificant Emission Unit

☐ Standard Conditions Not Included in the Permit ☐ Stationary Source Wide

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

(b) Emission Unit Involved:

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

EU ID	EU Name	Permit Condition/ Potential Deviation

(c) Description of Potential Deviation:

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

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

Certification:

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

Printed Name: _____ Title: _____ Date: _____

Signature: _____ Phone Number: _____

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

To Submit this Report:

Fax to: 907-451-2187

Or

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

If faxed or emailed, the report must be certified within the operating report required for the same reporting period per Condition 21.

Or

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

Or

Phone Notification: 907-451-5173

Phone notifications require a written follow-up report.

Or

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

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

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

Electronic Copy of Application

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