DEPARTMENT OF ENVIRONMENTAL CONSERVATION
AIR QUALITY CONTROL MINOR PERMIT

Minor Permit: **AQ0307MSS05** **Preliminary Date – February 15, 2024**
Rescinds Permit: AQ0307MSS04

The Alaska Department of Environmental Conservation (Department), under the authority of AS 46.14 and 18 AAC 50, issues Air Quality Control Minor Permit AQ0307MSS05 to the Permittee listed below.

Permittee:	**United States Air Force** PACAF Regional Support Center (PRSC)/CC 10471 20th St. Suite 265 Joint Base Elmendorf-Richardson (JBER), Alaska 99506-2101
Stationary Source:	**Eareckson Air Station**
Location:	52º 42′ 45" North; 174º 6′ 49" West
Project:	Revisions to Permit AQ0307MSS04
Permit Contact:	William “Randy” Reed, (907 552-4498, william.reed.36@us.af.mil

The Permittee submitted an application for Minor Permit AQ0307MSS05 under 18 AAC 50.508(6) in order to revise the terms and conditions of a Title I permit.

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

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James R. Plosay, Manager
Air Permits Program

Table of Contents

Abbreviations and Acronyms

AAC.....Alaska Administrative Code
ADEC.....Alaska Department of Environmental Conservation
AOS.....Air Online Services
AS.....Alaska Statutes
ASTM.....American Society for Testing and Materials
BACT.....best available control technology
bhp.....brake horsepower
CDX.....Central Data Exchange
CEDRI.....Compliance and Emissions Data Reporting Interface
C.F.R.....Code of Federal Regulations
CAA.....Clean Air Act
CO.....carbon monoxide
Department.....Alaska Department of Environmental Conservation
dscf.....dry standard cubic foot
EPA.....US Environmental Protection Agency
EU.....emissions unit
gr/dscf.....grain per dry standard cubic foot (1 pound = 7000 grains)
gph.....gallons per hour
HAPs.....hazardous air pollutants [as defined in AS 46.14.990]
hp.....horsepower
ID.....emissions unit identification number
kPa.....kiloPascals
LAER.....lowest achievable emission rate
MACT.....maximum achievable control technology [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
NESHAPs.....National Emission Standards for Hazardous Air Pollutants [as contained in 40 C.F.R. 61 and 63]
NO_x.....nitrogen oxides
NRE.....nonroad engine
NSPS.....New Source Performance Standards [as contained in 40 C.F.R. 60]
O & M.....operation and maintenance
O_2.....oxygen
PAL.....plantwide applicability limitation
PM_{10}.....particulate matter less than or equal to a nominal 10 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
SIC.....Standard Industrial Classification
SIP.....State Implementation Plan
SPC.....Standard Permit Condition or Standard Operating Permit Condition
SO_2.....sulfur dioxide
The Act.....Clean Air Act
TPH.....tons per hour
tpy.....tons per year
VOC.....volatile organic compound [as defined in 40 C.F.R. 51.100(s)]
VOL.....volatile organic liquid [as defined in 40 C.F.R. 60.111b, Subpart Kb]
vol%.....volume percent
wt%.....weight percent
wt%S_{fuel}.....weight percent of sulfur in fuel

Section 1 Emissions Unit Inventory

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

Table 1 – EU Inventory[1]

EU ID	Building No.	Description (make, model, and/or serial)	Rating/Size	Construction/ Installation Date	Model Year
Main Generators (JP-8 Fired, JP-8/UO)					
7	3049	Engine #1, Caterpillar, Model # C280-3616, SN: NKB00320	4,600 ekW/ 7,268 hp	Jan. 2015	2013
8	3049	Engine #2, Caterpillar, Model # C280-3616, SN: NKB00317	4,600 ekW/ 7,268 hp	Jan. 2015	2013
9	3049	Engine #3, Caterpillar, Model # C280-3616, SN: NKB00315	4,600 ekW/ 7,268 hp	July 2014	2013
10	3049	Engine #4, Caterpillar, Model # C280-3616, SN: NKB00316	4,600 ekW/ 7,268 hp	July 2014	2013
Firewater Pump Engines (JP-8 Fired)					
13	3057	Firewater Pump #2, Clarke, Model # DDFP-04AT, SN:4A-250901 Emergency	188 bhp	Oct. 1988	April 1981
14	3057	Firewater Pump #1, Clarke, Model # DDFP-04AT, SN: 4A-256080 Emergency	235 bhp	Oct. 1988	Oct. 1981
15	3051	Firewater Pump, Clarke, Model # JU6H-UF30, SN: PE6068T407586 Emergency	160 bhp	Feb. 2005	Feb. 2005
16	3051	Firewater Pump #1, Clarke, Model # JU6H-UF30, SN: PE6068T228685 Emergency	160 bhp	2004	July 2003
17	3051	Firewater Pump #2, Clarke, Model # JU6H-UF30, PE6068T228691 Emergency	160 bhp	2004	July 2003
Emergency Generators (JP-8 Fired)					
24	629	EB Generator, Cummins, Model # 4B-3.9, SN: 44220019 Emergency	66 hp	1987	Sept. 1987
27	76-558	EB Generator, Mitsubishi, Model # 4D31-PT, SN: 81473-A Emergency	74 hp/ 40 ekW	Jan. 1987	--
30	3049	EB Generator, Caterpillar, Model # 3406B, SN: 2WB04370 Emergency	333 hp/ 248 ekW	Jan. 1990	--
30a	3049	EB Generator, Caterpillar, Model # C9, SN: S9L01601 Emergency	480 hp/ 319 ekW	2020	2007
32	4014	EB Generator, Mitsubishi, Model # S6N-PTA, SN: 12939 Emergency	540 hp/ 350 ekW	Jan. 1990	--
33	4014	EB Generator, Mitsubishi, Model # S6N-PTA, SN: 12940 Emergency	540 hp/ 350 ekW	Jan. 1991	Feb. 1989
34	600	EB Generator, Caterpillar, Model # 3406B D1, SN: 2WB10512 Emergency	417 hp/ 283 kW	Jan. 1991	Pre-1992
35	609	EB Generator, Cummins, Model # 6CT-8.3, SN: 44219953 Emergency	207 hp/ 154 ekW	Jan. 1995	--
36	754	EB Generator, Caterpillar, Model # 3412, SN: 81Z04233 Emergency	665 hp/ 496 ekW	1995	--
39	110	EB Generator, Cummins, Model # NTA855Q3, SN: 30338752	535 hp/ 409 ekW	Jan. 1996	--
40	628	EB Generator, Caterpillar, Model # 3406BD1,	405 hp/	Jan. 1998	--

EU ID	Building No.	Description (make, model, and/or serial)	Rating/Size	Construction/ Installation Date	Model Year
		SN: 2WB11445 Emergency	302 ekW		
41	718	EB Generator, Cummins, Model # 4BT-3.9 Series B, SN: 44232592 Emergency	102 hp/ 76.1 ekW	Jan. 2000	Dec. 1987
42	775	EB Generator, Cummins, Model # VT A2862, SN: 49951 Emergency	900 hp/ 500 ekW	Jan. 2001	Nov. 1987
87	620	EB Generator, Volvo Penta, Model # TAD1630G, SN: 2160 033833 Emergency	672 hp/ 494 ekW	2004	Pre-2004
91	585	Fermont Engine, Model # MEP-701A, SN: 100284 Emergency	134 hp/ 100 kW	2018	3/2007
92	585	Fermont Engine, Model # MEP-701A, SN: 100165 Emergency	134 hp/ 100 kW	2018	10/2006
Emergency Barrier Engines (JP-8-Fired)					
50a	74-041-1a	Deutz, Model # D2011L04i, SN: 11813377 – South Side	64 hp/ 47.5 ekW	Mar. 2017	2012
51a	74-041-2b	Deutz, Model # D2011L04i, SN: 21508033 – North Side	64 hp/ 47.5 ekW	Mar. 2017	2012
Boilers (JP-8/UO-Fired)					
54a	515	Boiler, Burnham, Model # 4FHW-107A-50.0PF, SN: 1108999LB	0.716 MMBtu/hr	Sep. 2012	--
55a	110	Boiler, Columbia, Model # WO-BC800, SN: NB 152809	0.8 MMBtu/hr	2015	--
61	3045	Boiler, Burnham, Model # 4FW-63-50-O-PF, SN: 20870	0.528 MMBtu/hr	Jan. 1994	
62a	600	Process Heater, Riello, RTC-80 550, SN: 20158764CA01QC00058	5.5 MMBtu/hr	2021	2021
63	752	Boiler #2, Kewanee, Model # M205 KX, SN: 801071	2.05 MMBtu/hr	Jan. 1994	--
64	752-2	Boiler, Kewanee, Model # M205KX, SN: 801071	2.05 MMBtu/hr	Jan. 1994	
67	599	Boiler, Burnham, Model # 4FW-675A-45-0-PF, SN: 18730	6.319 MMBtu/hr	2004	--
68	755	Boiler #2, Kewanee, Model M205-KX, Order # 813212	2.05 MMBtu/hr	Jan. 1995	--
70a	611	Boiler, Burnham, Model # 4FHW-180A-50-0/JP-PF, Order # 1209603LB	1.24 MMBtu/hr	2015	--
71	743	Boiler, Burnham, Model # 3W-100-50-0-PF, SN: 22318	4.185 MMBtu/hr	1996	--
72	743	Boiler, Burnham, Model # 3W-100-50-0-PF, SN: 22319	4.185 MMBtu/hr	1996	--
73	618	Boiler, Burnham, Model # 4FW-63-50-0-PF, SN: 20874	0.528 MMBtu/hr	Jan. 1998	--
74a	600	Process Heater, Riello, RTC-80 550, SN: 20158764CA01QC00059	5.5 MMBtu/hr	2021	2021
75	598	Boiler, Burnham, Model # 4FW-675A-45-0-PF, SN: 18730	8.675 MMBtu/hr	2002	--
77	729	Boiler, Weil-McLain, Model # 488, SN: CP2039826	0.810 MMBtu/hr	Unknown	--
78	755	Boiler #1, Kewanee, Model # 7L-280-KX, SN: 813211 (DF8/UO)	2.66 MMBtu/hr	2004	--
79	597	Boiler #1, Burnham, Model # 4FW-240-40-0-PF,	2.51 MMBtu/hr	2005	--

EU ID	Building No.	Description (make, model, and/or serial)	Rating/Size	Construction/ Installation Date	Model Year
		SN: 19537			
80	597	Boiler #2, Burnham, Model # 4FW-240-40-0-PF, SN: 19428	2.51 MMBtu/hr	2005	--
81	754	Boiler, Burnham, Model # 4FW-450A-50-0-PF, SN: 28496	3.015 MMBtu/hr	2004	--
82	754	Boiler, Burnham, Model # 4FW-450A-50-0-PF, SN: 28498	3.015 MMBtu/hr	2004	--
86	490	Boiler, Columbia, Model # WL90, SN: 149359	1.014 MMBtu/hr	14 Nov, 2012	--
90	743	Hot Water Boiler, PVI Industries, Model # 500N300A-TPO, SN: 39481649	0.399 MMBtu/hr	1994	--
Microturbines					
95	585	Capstone C30 Microturbine #1	0.394 MMBtu/hr	2004	2004
96	585	Capstone C30 Microturbine #2	0.394 MMBtu/hr	2004	2004
97	585	Capstone C30 Microturbine #3	0.394 MMBtu/hr	2004	2004
98	585	Capstone C30 Microturbine #4	0.394 MMBtu/hr	2004	2004
99	585	Capstone C30 Microturbine #5	0.394 MMBtu/hr	2004	2004
100	585	Capstone C30 Microturbine #6	0.394 MMBtu/hr	2004	2004
101	585	Capstone C30 Microturbine #7	0.394 MMBtu/hr	2004	2004
102	585	Capstone C30 Microturbine #8	0.394 MMBtu/hr	2004	2004
103	585	Capstone C30 Microturbine #9	0.394 MMBtu/hr	2004	2004
104	585	Capstone C30 Microturbine #10	0.394 MMBtu/hr	2004	2004
105	585	Capstone C30 Microturbine #11	0.394 MMBtu/hr	2004	2004
106	585	Capstone C30 Microturbine #12	0.394 MMBtu/hr	2004	2004
107	585	Capstone C30 Microturbine #13	0.394 MMBtu/hr	2004	2004
108	585	Capstone C30 Microturbine #14	0.394 MMBtu/hr	2004	2004
109	585	Capstone C30 Microturbine #15	0.394 MMBtu/hr	2004	2004
110	585	Capstone C30 Microturbine #16	0.394 MMBtu/hr	2004	2004
111	585	Capstone C30 Microturbine #17	0.394 MMBtu/hr	2004	2004
112	585	Capstone C30 Microturbine #18	0.394 MMBtu/hr	2004	2004
Miscellaneous					
85	Landfill	Solid Waste Landfill, Permit SW2A013-25	77,333 cubic yards	2005	--

EU ID	Building No.	Description (make, model, and/or serial)	Rating/Size	Construction/ Installation Date	Model Year
88	618	Reznor Space heater	200,000 btu/hr	Unknown	4/2007
93	729	Elastec "Smart Ash" Burn Barrel	64 lb/hr	Pre-2004	--
94	729	Elastec "Smart Ash" Burn Barrel	64 lb/hr	2004	--

Notes:

1. EU IDs 74a and 78 burn JP-8 and a blend of JP-8/UO.
2. The Permittee decommissioned EU IDs 1-6 (generators), EU ID 25 (emergency generator), and EU ID 84 (incinerator).
3. The Permittee never installed EU IDs 18-23, 44, 45, 52, and 53 listed in Permit No. AQ0307TVP02
4. The Permittee has indicated that the EU information in this table is current as of 1 June 2023.
5. The acronym 'UO' represents used oil.

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

2. **Verification of Equipment Specifications and Maintenance of Equipment.** The Permittee shall install and maintain the equipment listed in Table 1 according to the manufacturer's or operator's maintenance procedures. Keep a copy of the manufacturer's or operator's maintenance procedure onsite and make records available to the Department personnel upon request. The records may be kept in electronic format.

Section 2 Fee Requirements

3. Fee Requirements. The Permittee shall pay to the Department all assessed permit fees. Fee rates are set out in 18 AAC 50.400 – 499.

Section 3 State Emission Standards

4. Visible Emissions for Industrial Process and Fuel-Burning Equipment. The Permittee shall not cause or allow visible emissions, excluding condensed water vapor, emitted from EUs 30a, 87, 88, and 90-112 to reduce visibility through the exhaust effluent by more than 20 percent averaged over any six consecutive minutes.

4.1 Monitor, record, and report visible emissions as described in the operating permit issued for the stationary source under AS 46.14.130(b) and 18 AAC 50.

5. Particulate Matter for Industrial Process and Fuel-Burning Equipment. The Permittee shall not cause or allow particulate matter emitted from EUs 7 – 10, 30a, 54a, 55a, 61, 62a, 63, 64, 67, 68, 70a-75, 77-82, 86, 87, 88, and 90 - 112 to exceed 0.05 grains per dry standard cubic foot of exhaust gas corrected to standard conditions and averaged over three hours.

5.1 Monitor, record, and report PM emissions as described in the operating permit issued for the stationary source under AS 46.14.130(b) and 18 AAC 50; and

5.2 Fuel Blending Requirements for EUs 7 – 10:

a. Use the WOTEC[1] system to blend at the higest blending ratio at which the emission unit was tested and no more than 1 part used oil with 57 parts JP-8 (1.75% blend ratio).

b. Record the blend ratio setting in the WOTEC system each time the setting is changed and submit the records upon request.

5.3 Fuel Blending Requirement for EUs 54a, 55a, 61, 62a, 63, 64, 67, 68, 70a – 75, 77 – 82, 86, 88, and 90:

a. Blend the used oil in the ratio of no more than 1 part used oil with 2 parts JP-8 oil; and

b. Record the blend ratio each time used oil is added to the fuel tank and submit the records on request.

6. Sulfur Compound Emissions. The Permittee shall not cause or allow sulfur compound emissions, expressed as SO_2, from EUs 30a, 87, and 90 – 112, to exceed 500 parts per million (ppm) averaged over three hours.

6.1 Monitor, record, and report sulfur compounds emissions as described in the operating permit issued for the stationary source under AS 46.14.130(b) and 18 AAC 50, and by complying with Condition 8.

[1] WOTEC: Waste Oil to Energy Converter Filtration System

Section 4 Ambient Air Quality Protection Requirements[2]

7. Fuel Specifications. The Permittee

7.1 shall burn only JP-8 that has the specifications of diesel fuel in all emission units except EUs 7 – 10, 54a, 55a, 61, 62a, 63, 64, 67, 68, 70a – 75, 77 – 82, 86, 88, and 90;

7.2 may burn used oil in EUs 7 – 10, 54a, 55a, 61, 62a, 63, 64, 67, 68, 70a – 75, 77 – 82, 86, 88, and 90 as long as the used oil complies with the fuel blending requirements specified in

a. Condition 5.2a for EUs 7 – 10; and

b. Condition 5.3a for EUs 54a, 55a, 61, 62a, 63, 64, 67, 68, 70a – 75, 77 – 82, 86, 88, and 90;

7.3 shall maintain records showing the fuels used in each EU listed in Conditions 7.1 and 7.2 and submit the records upon request.

8. Sulfur Content of Fuels. The Permittee shall:

8.1 limit the sulfur content of liquid fuels fired in all EUs to no more than 0.3-percent by weight (wt%)[3]; and

8.2 monitor, record, and report the sulfur content of liquied fuels fired as described in the operating permit issued for the stationary source under AS 46.14.130(b) and 18 AAC 50.

9. Nonroad Engine Use. Track and record in the operating report as described in the operating permit issued for the stationary source under AS 46.14.130(b) and 18 AAC 50, the use of permanent and temporary nonroad engines[4] installed at the stationary source that have a rating greater than 400 brake horsepower. Include in the report the engine's size, serial number, tag number if assigned, installation date, initial startup date, shut down date, and date the engine was removed from the facility.

[2] The conditions in this section are predicated upon a legacy modeling analysis from Construction Permit No 307CP01 or the stationary source's prior permit to operate. The associated terms and conditions remain applicable and have been carried forward through multiple minor permit revisions and recissions.
[3] For oil combusted in EUs 7 – 10, the sulfur content of the used lubricating oil must be less than 200 parts per million and the used lubricating oil must meet the on-specification levels and properties for used oil in 40 C.F.R. 279.11 (40 C.F.R. 60.4207).
[4] A nonroad engine is a transportable internal combustion unit that is on site for no more than 12 consecutive months or seasonally for no more than 24 months. Transportability includes, but is not limited, wheels, skids, carrying handles, dolly, trailer, or platform. A complete definition of a nonroad engine can be found in 40 C.F.R. 1068.30.

Section 5 Best Available Control Techonlogy (BACT) Requirements

10. BACT Limits and MR&R Requirements: The Permittee shall comply with BACT limits as set out in Conditions 10.1 through 10.3.

10.1 Nitrogen Oxides (NO_x): Operate the following EUs with good combustion practices:

a. firewater pump engine EUs 13, 14, 16, and 17; and

b. boilers EUs 78 – 82.

10.2 Carbon monoxide (CO): Operate the firewater pump engines, EUs 13 and 14 with good combustion practices.

10.3 SO_2: Limit the sulfur content in the fuel oil burned in EUs 16, 17, and 78 – 82 to no greater than 0.3 percent by weight. Monitor, record, and report in accordance with the terms and conditions of the operating permit issued for the stationary source under AS 46.14.130(b) and 18 AAC 50.

Section 6 ORLs to Avoid PSD Review for Modification

Avoidance Limits for SO_2:

11. SO_2 Emissions Limit. The Permittee shall limit the emissions of SO_2 from EUs 7 – 10 to no greater than 71.7 tons in any 12 consecutive month period to avoid permit classification as a prevention of significant deterioration (PSD) major modification.

11.1 **SO_2 Operating Limit.** To ensure compliance with the SO_2 emissions limit in Condition 11, the Permittee shall:

a. limit the sulfur content of liquid fuels fired in EUs 7 – 10 to no greater than 0.3 percent by weight;

b. limit the combined total amount of fuel fired in EUs 7 – 10 to no greater than 3,390,000 gallons in any 12 consecutive month period; and

c. monitor, record, and report in accordance with the terms and conditions of the applicable operating permit issued to the stationary source under AS 46.14 and 18 AAC 50.

Avoidance Limits for NO_x:

12. NO_x Emissions Limit. The Permittee shall limit the emissions of NO_x from EUs 7 – 10 to no greater than 874.2 tons in any 12 consecutive month period to avoid permit classification as a PSD major modification.

12.1 **NO_x Operating Limit.** To ensure compliance with the NO_x emissions limit in Condition 12, the Permittee shall:

a. continuously monitor the operations of EUs 7 – 10 using totalizing kilowatt-hour (kWh) meters installed on each engine.

b. no later than the last day of each calendar month, calculate and record the sum total of kilowatt-hours produced by EUs 7 – 10 in the prior month and the rolling 12 consecutive month total kilowatt-hours produced from the combined operation of EUs 7 – 10;

(i) If the kilowatt-hour meter is found to be inoperable, calculate emissions using one of the two following methods until a new meter is installed and operating properly:

(A) Record operating hours and operating load rate on an hourly basis for each of EUs 7 – 10, and retain records in accordance with this condition. Calculate the total kilowatt-hours of production using the following equation:

$$\sum_{n=EU7}^{EU\,10} [n\ operating\ hours] * [n\ average\ operating\ load\ rate\ (kW)]$$

(1) For any hours of operation that have occurred after the kilowatt hour meter became inoperable but for which operating hours and/or load rate were not recorded, assume maximum kilowatt hour production.

(B) Alternatively, assume maximum kilowatt-hour production and apply this rate to the known operating hours for each engine during the period that the totalizing kilowatt-hour meter is out of operation.

c. no later than the last day of each calendar month, calculate and record the rolling 12 consecutive month total NO_x emissions for the preceding 12 months by applying one of the following emission factors to the 12 consecutive month rolling sum of kilowatt-hours recorded for each month in Condition 12.1b:

(i) 0.021 lb/kW-hr, or

(ii) the maximum emission rate found in the most recent Department-approved source test;

d. report the 12 consecutive month rolling total kilowatt-hours produced and the 12 consecutive month rolling total NO_x emissions as recorded in Conditions 12.1b and 12.1c, respectively, in accordance with the terms and conditions of the applicable operating permit issued to the stationary source under AS 46.14 and 18 AAC 50; and

e. report as excess emissions and permit deviation (as described in the operating permit issued for the stationary source under AS 46.14.130(b) and 18 AAC 50) if the 12 consecutive month rolling total NO_x emissions calculated in Condition 12.1c exceed the limit listed in Condition 12.

12.2 If the 12 consective month rolling total NO_x emissions calculated in Condition 12.1c exceeds 655.6 tons[5], then conduct a source test to verify the NO_x emission rate for EUs 7 – 10 within 180 days of discovery.

a. Conduct the source test on one of EUs 7 – 10 on a rotating basis.

b. Conduct the source tests at 100% load. Monitor and record the fuel consumption and average load during each test. List the average operating parameters for each run in the source test report.

c. Determine the NO_x emission factor using exhaust properties determined by either Method 19 or Methods 1 – 4, for each load. If using Method 19, the use the higher heating value throughout the analysis.

d. Within 45 days of Department approval of the source test report, provided in accordance with Condition 12.2, calculate the 12 consecutive month rolling NO_x emissions for EUs 7 – 10 for the preceding 12 months since the source test, following the method laid out in Condition 12.1c, using the new emission factor determined in Condition 12.2c.

[5] 75% of the emissions limit listed in Condition 12.

e. In the first operating report (required by the applicable operating permit issued to the stationary source under AS 46.14 and 18 AAC 50) due after the source test, report the newly calculated 12 consecutive month rolling NO_x emissions from Condition 12.2d.

Section 7 Recordkeeping, Reporting, and Certification Requirements

13. Certification. The Permittee shall certify any permit application, report, affirmation, or compliance certification submitted to the Department and required under the permit by including the signature of a responsible official for the permitted stationary source following the statement: "*Based on information and belief formed after reasonable inquiry, I certify that the statements and information in and attached to this document are true, accurate, and complete.*" Excess emissions reports must be certified either upon submittal or with an operating report required for the same reporting period. All other reports and other documents must be certified upon submittal.

13.1 The Department may accept an electronic signature on an electronic application or other electronic record required by the Department if the person providing the electronic signature

a. uses a security procedure, as defined in AS 09.80.190, that the Department has approved; and

b. accepts or agrees to be bound by an electronic record executed or adopted with that signature.

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

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

Section 8 Standard Permit Conditions

15. 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

15.1 an enforcement action; or

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

16. 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.

17. 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. 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.

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

20. 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

20.1 enter upon the premises where an emissions unit subject to this permit is located or where records required by the permit are kept;

20.2 have access to and copy any records required by this permit;

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

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

Section 9 Permit Documentation

Date	Document Details
July 28, 2020	Application Received
March 01, 2023	Department received Application Appendum 1 to revoke emergency engine ORL
March 10, 2023	Department and USAF discussed comments from AQ0307MSS05, AQ0307TVP04 technical review
June 1, 2023	Department received Application Appendum 2 to add alternative MR&R to NO_x ORL and revise EU inventory
February 15, 2024	AQ0307MSS05 sent to public notice

Section 10 Visible Emissions Form

VISIBLE EMISSIONS OBSERVATION FORM

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

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

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

Page No.____________

Stationary Source Name	Type of Emission Unit	
Emission Unit Location		
City	State	Zip
Phone # (Key Contact)	Stationary Source ID Number	
Process Equipment	Operating Mode	
Control Equipment	Operating Mode	
Describe Emission Point/Location		
Height above ground level	Height relative to observer	Clinometer Reading
Distance From Observer Start End	Direction From Observer Start End	
Describe Emissions & Color Start	End	
Visible Water Vapor Present? No / Yes	If yes, determine approximate distance from the stack exit to where the plume was read	
Point in Plume at Which Opacity Was Determined		
Describe Plume Background Start End	Background Color Start End	
Sky Conditions: Start	End	
Wind Speed Start End	Wind Direction From Start End	
Ambient Temperature	Wet Bulb Temp	RH percent
SOURCE LAYOUT SKETCH: 1 Stack or Point Being Read 2 Wind Direction From 3 Observer Location 4 Sun Location 5 North Arrow 6 Other Stacks		
Additional Information:		
I have received a copy of these opacity observations Print Name: Signature:		
Title	Date	

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

Range of Opacity: Minimum	Maximum
Print Observer's Name	
Observer's Signature	Date Observer's Affiliation:
Certifying Organization: Certified By:	Date

Data Reduction:

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

Average Opacity Summary:

Set Number	Time			Opacity		Comments
	Start	End		Sum	Average	

Section 11 Notification Form[6]

Eareckson Air Station	**AQ0307MSS05**
Stationary Source Name	**Air Quality Permit Number.**

United States Air Force
Company Name

When did you discover the Excess Emissions/Permit Deviation?

Date: ____/____/____ Time: ____:____

When did the event/deviation occur?

Begin: Date: ____/____/____ Time: ____:____ (please use 24-hr clock)

End: Date: ____/____/____ Time: ____:____ (please use 24-hr clock)

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

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

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

☐ Excess Emissions - Complete Section 1 and Certify

Note: All "excess emissions" are also "permit deviations." However, use only Section 1 for events that involve excess emissions.

☐ Deviation from Permit Conditions - Complete Section 2 and Certify

Note: Use only Section 2 for permit deviations that do not involve excess emissions.

☐ Deviation from COBC[7], CO[8], or Settlement Agreement - Complete Section 2 and Certify

[6] Revised as of July 22, 2020.
[7] Compliance Order By Consent
[8] Compliance Order

Section 1. Excess Emissions

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

(b) **Cause of Event** (Check one that applies. Complete a separate form for each event, as applicable.):

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

(c) **Description**

Describe briefly what happened and the cause. Include the parameters/operating conditions exceeded, limits, monitoring data and exceedance. Attach supporting information if necessary.

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

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

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

(e) **Type of Incident:** (Please check all that apply and provide the value requested, if any):

- ☐ Opacity _____%
- ☐ Control Equipment Down
- ☐ Emission Limit Exceeded
- ☐ Flaring
- ☐ Other**:** _____
- ☐ Venting _____(gas/scf)
- ☐ Fugitive Emissions
- ☐ Marine Vessel Opacity

(f) **Corrective Actions:**

Describe actions taken to restore the system to normal operation and to minimize or eliminate chances of a recurrence. Attach supporting information if necessary.

(g) **Unavoidable Emissions:**

Do you intend to assert that these excess emissions were unavoidable? ☐ YES ☐ NO

Do you intend to assert the affirmative defense of 18 AAC 50.235? ☐ YES ☐ NO

Certify Report (<u>go to end of form</u>)

Section 2. Permit Deviations

(a) **Permit Deviation Type:** (Check all boxes that apply per event. Complete a separate form for each event, as applicable.)

- ☐ Emissions Unit-Specific Requirements
- ☐ Stationary Source-Wide Specific Requirements
- ☐ Monitoring/Recordkeeping/Reporting Requirements
- ☐ General Source Test Requirements
- ☐ Compliance Certification Requirements
- ☐ Standard/Generally Applicable Requirements
- ☐ Insignificant Emissions Unit Requirements
- ☐ Other: _____

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

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

EU ID	EU Name	Permit Condition /Potential Deviation

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

Describe briefly what happened and the cause. Include the parameters/operating conditions and the potential deviation. Attach supporting information if necessary.

(d) **Corrective Actions:**

Describe actions taken to correct the deviation or potential deviation and to prevent future recurrence. Attach supporting information if necessary.

Certification:

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

Printed Name:_____Title_____Date _____

Signature:_____ Phone number_____

NOTE: *This document must be certified in accordance with 18 AAC 50.345(j). Read and sign the certification in the bottom of the form above. (See Condition 13.)*

Beginning September 7, 2023, Excess Emissions and Permit Deviations must be submitted through the AOS Permittee Portal at http://dec.alaska.gov/applications/air/airtoolsweb/.

This Notification Form may only be used to satisfy the reporting requirements if the Department has approved alternative reporting options in writing prior to submittal. Submit this report in accordance with the submission instructions on the Department's Standard Permit Conditions web page at http://dec.alaska.gov/air/air-permit/standard-conditions/standard-conditions-iii-and-iv-submission-instructions/.

[18 AAC 50.346(b)(3)]