DEPARTMENT OF ENVIRONMENTAL CONSERVATION

AIR QUALITY CONTROL MINOR PERMIT

Minor Permit: AQ0406MSS08 **Preliminary Date – July 18, 2024**
Rescinds Permit: AQ0406MSS07 Revision 1

The Alaska Department of Environmental Conservation (Department), under the authority of AS 46.14 and 18 AAC 50, issues Air Quality Control Minor Permit AQ0406MSS08 to the Permittee listed below.

Permittee:	**Northern Star (Pogo) LLC** PO Box 145 Delta Junction, AK 99737
Stationary Source:	**Pogo Mine**
Location:	64° 27’ 13.2” North; 144° 54’ 14.6” East 38 miles Northeast of Delta Junction, Alaska
Project:	Permit Hygiene
Permit Contact:	Russell Gossett rgossett@nsrltd.com 907-895-2831

The Permittee submitted an application for Minor Permit AQ0406MSS08 under 18 AAC 50.508(6) in order to revise the terms and conditions of a Title I permit. The project is also classified under 18 AAC 50.508(5) for Owner Requested Limits (ORLs) to avoid being classified as a Title V major source under 18 AAC 50.326.

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

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Abbreviations and Acronyms

AAAQS .....Alaska Ambient Air Quality Standard
AAC.....Alaska Administrative Code
ADEC .....Alaska Department of Environmental Conservation; the Department
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
cfm.....cubic feet per minute
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
GAPCP .....Good Air Pollution Control Practices
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
kWe .....Kilowatt-electric
kWm .....Kilowatt-mechanical
lb/kW-hr .....pounds per kilowatt-hour.
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
TPD .....tons per day
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	EU Type	EU Description	Fuel	Rating/ Max Capacity[8]	Maximum Allowable Operation	Installation/ Construction Date
104	Various Heaters	Water Treatment Plant Heaters, 6 total	Diesel	2.97 MMBtu/hr total	8,760 hrs/yr	2005
106	Various Heaters	Mill Building Heaters, 25 total	Diesel	20.51 MMBtu/hr total[9]	8,760 hrs/yr	2006
107	Various Heaters	Filter/Backfill Plant Heaters, 23 total	Diesel	9.23 MMBtu/hr total[9]	8,760 hrs/yr	2006
108	Various Heaters	Permanent Camp Heaters, 60 total	Diesel	6.03 MMBtu/hr total[9]	8,760 hrs/yr	2005
110a	Various Heaters	Truck Shop Complex Heaters, 17 total	Diesel	2.67 MMBtu/hr total	8,760 hrs/yr	2005
110b	Heater	Truck Shop Complex Heater	Diesel	3.93 MMBtu/hr	8,760 hrs/yr	2005
111	Heater	Sewage Treatment Plant Heater	Diesel	1.70 MMBtu/hr	8,760 hrs/yr	2006
113	Various Heaters	Lower Warehouse Heaters, 2 total	Diesel	0.90 MMBtu/hr total	8,760 hrs/yr	2005
114	Heater	Redpath Construction Office Heaters, 2 total	Diesel	0.25 MMBtu/hr total	8,760 hrs/yr	2004
116	Heater	Lower Warehouse Mattress Ranch Heater	Diesel	0.19 MMBtu/hr	8,760 hrs/yr	2005
118	Various Heaters	1875 Portal Shop Heaters, 4 total	Diesel	0.74 MMBtu/hr total	8,760 hrs/yr	2005
119	Various Heaters	Mill Bench Maintenance Office Heaters, 8 total	Diesel	0.77 MMBtu/hr total	8,760 hrs/yr	2004
209	Cummins QST30-G5 Emergency Generator Engine	Mill Bench Bank Unit No. 1 - GEN-01	Diesel	1,111 kWm	153,311 gal/yr[6] (500 hrs per EU)	2006
210	Cummins QST30-G5 Emergency Generator Engine	Mill Bench Bank Unit No. 2 - GEN-02	Diesel	1,111 kWm		2005
220	Caterpillar 3516 Emergency Engine	Lower Camp Emergency Engine - GEN-04	Diesel	2,145 kWm		2011
218A[1b, 2]	John Deere Emergency Engine	Fire Water Pump Building Emergency Engine	Diesel	147 kWm	200 hrs/yr	2019

EU ID	EU Type	EU Description	Fuel	Rating/ Max Capacity[8]	Maximum Allowable Operation	Installation/ Construction Date
223[2]	John Deere 3029TFG89 Emergency Engine	Server Emergency Engine GEN-06	Diesel	35 kWm	500 hrs/yr	2017
224[2]	Perkins 403D-11G Emergency Engine	Mill Bench Bank Emergency Engine GEN-07	Diesel	11.8 kWm	500 hrs/yr	2018
420[1c, 2]	Portable Heaters	Various Portable Heaters	Diesel	14 MMBtu/hr[3]	8,760 hrs/yr	N/A
420A[2, 4]	Portable Heater Engines (NRE)	Portable Heater Blower Engine (14 NREs)	Diesel	198 kWm[4] total	8,760 hrs/yr	
623[2]	Heater	Core Shack Maintenance Shop Heater	Diesel	0.10 MMBtu/hr	8,760 hrs/yr	2011
624[2]	Heater	Core Shack South Tent Heater	Diesel	0.10 MMBtu/hr	8,760 hrs/yr	2011
625[2]	Various Heaters	Swick Shop Heater	Diesel	0.56 MMBtu/hr	8,760 hrs/yr	2005
626[2]	Heater	Yurt Heater	Diesel	0.04 MMBtu/hr	8,760 hrs/yr	2013
636	Water Heater	Water Heater Conex	Diesel	0.62 MMBtu/hr	8,760 hrs/yr	2003
637	Water Heater	Water Heater Conex	Diesel	0.25 MMBtu/hr	8,760 hrs/yr	2003
302	Explosives (underground)	Exhaust from Portals	N/A	26,000 lb/day	365 days/yr	N/A
414	Heater	1525 Mine Air Heater	Propane	42.4 MMBtu/hr	3,000,000 gal/yr[7]	2006
415	Heater	1875 Mine Air Heater	Propane	42.4 MMBtu/hr		2006
419[5]	Heater	2150 Portal	Propane	42.2 MMBtu/hr		2014
542	Propane Vaporizer	1875 Portal	Propane	1.0 MMBtu/hr		2005
543	Propane Vaporizer	1875 Portal	Propane	1.0 MMBtu/hr		2005
544	Propane Vaporizer	1525 Portal	Propane	1.0 MMBtu/hr		2005
545	Propane Vaporizer	1525 Portal	Propane	1.0 MMBtu/hr		2005
546[5]	Propane Vaporizer	2150 Portal	Propane	1.0 MMBtu/hr		2014
547[5]	Propane Vaporizer	2150 Portal	Propane	1.0 MMBtu/hr		2014
601[2]	Water Heater	D600A Water Heater	Propane	0.25 MMBtu/hr	8,760 hrs/yr	2022
602[2]	Various Heaters	D600A Heaters	Propane	0.48 MMBtu/hr	8,760 hrs/yr	2022
603[2]	Water Heater	D700A Water Heater	Propane	0.25 MMBtu/hr	8,760 hrs/yr	2022
604[2]	Various Heaters	D700A Heaters	Propane	0.48 MMBtu/hr	8,760 hrs/yr	2022
605[2]	Water Heater	D700B Water Heater	Propane	0.25 MMBtu/hr	8,760 hrs/yr	2022
606[2]	Various Heaters	D700B Heaters	Propane	0.48 MMBtu/hr	8,760 hrs/yr	2022
607[2]	Various Heaters	Thunderdome Heaters	Propane	0.53 MMBtu/hr	8,760 hrs/yr	2022
608[2]	Various Heaters	Thunderdome Heaters	Propane	0.35 MMBtu/hr	8,760 hrs/yr	2022
609[2]	Water Heater	D600B Water Heater	Propane	0.25 MMBtu/hr	8,760 hrs/yr	2023
610[2]	Various Heaters	D600B Heaters	Propane	0.48 MMBtu/hr	8,760 hrs/yr	2023
611[2]	Water Heaters	Laundry Cart Water Heaters	Propane	0.15 MMBtu/hr	8,760 hrs/yr	2023

EU ID	EU Type	EU Description	Fuel	Rating/ Max Capacity[8]	Maximum Allowable Operation	Installation/ Construction Date
612[2]	Dryers	Laundry Cart Dryers	Propane	0.35 MMBtu/hr	8,760 hrs/yr	2023
613[2]	Water Heater	KDR Water Heater	Propane	0.08 MMBtu/hr	8,760 hrs/yr	2023
614[2]	Makeup Air Unit	KDR Makeup Air Unit	Propane	0.50 MMBtu/hr	8,760 hrs/yr	2023
615[2]	Water Heater	Dry Locker Water Heater	Propane	0.27 MMBtu/hr	8,760 hrs/yr	2022
616[2]	Water Heater	Dry Locker Water Heater	Propane	0.27 MMBtu/hr	8,760 hrs/yr	2022
617[2]	Dryer	Dry Laundry Room Dryer	Propane	0.02 MMBtu/hr	8,760 hrs/yr	2010
618[2]	Dryer	Dry Laundry Room Dryer	Propane	0.02 MMBtu/hr	8,760 hrs/yr	2010
619[2]	Heater	Water Ops Shack Heater	Propane	0.10 MMBtu/hr	8,760 hrs/yr	2010
620[2]	Makeup Air Unit	Thunderdome Makeup Air Unit	Propane	1.14 MMBtu/hr	8,760 hrs/yr	TBD
621[2]	Various Heaters	D400 Heaters (8 total)	Propane	0.56 MMBtu/hr total	8,760 hrs/yr	2023
622[2]	Various Water Heaters	D400 Water Heaters (8 total)	Propane	0.29 MMBtu/hr	8,760 hrs/yr	2023
627[2]	Various Heaters	Water Treatment Plant #3 Heaters (5 total)	Propane	4.22 MMBtu/hr total	8,760 hrs/yr	2015
628[2]	Makeup Air Unit	Kitchen Dining Makeup Air Unit	Propane	1.18 MMBtu/hr	8,760 hrs/yr	2023
629	Makeup Air Unit	Mens Dry 2012 Addition	Propane	0.30 MMBtu/hr	8,760 hrs/yr	2012
630	Heater	Mens Original D Wing Dry	Propane	0.40 MMBtu/hr	8,760 hrs/yr	2010
631	Heater	Mens Dry 2012 Addition	Propane	0.13 MMBtu/hr	8,760 hrs/yr	2012
632	Heater	Womens Original D Wing Dry	Propane	0.10 MMBtu/hr	8,760 hrs/yr	2010
633	Heater	Mens Dry 2012 Addition	Propane	0.13 MMBtu/hr	8,760 hrs/yr	2010
634	Makeup Air Unit	Mens Original D Wing Dry	Propane	0.40 MMBtu/hr	8,760 hrs/yr	2010
635	Makeup Air Unit	Womens Original D Wing Dry	Propane	0.40 MMBtu/hr	8,760 hrs/yr	2010
532	Baghouse	Backfill Plant Cement Silo	N/A	750 cfm	8,760 hrs/yr	2005
532A	Baghouse	Cement Screw Conveyor	N/A	3,000 cfm	8,760 hrs/yr	2005
533	Baghouse	Conveyor to Surface Coarse Ore Bin/Aboveground	N/A	5,000 cfm	8,760 hrs/yr	2005
534	Baghouse	Surface Coarse Ore Bin Apron Feeder/ Aboveground	N/A	5,000 cfm	8,760 hrs/yr	2005
534A	Bin	Surface Course Ore Bin	N/A	1,000 tph	8,760 hrs/yr	2006

EU ID	EU Type	EU Description	Fuel	Rating/ Max Capacity[8]	Maximum Allowable Operation	Installation/ Construction Date
534B	Conveyor	Convey to SAG Mill/Aboveground	N/A	150 tph	8,760 hrs/yr	2006
534C	Screen	Gravity Feed Screens (Two)	N/A	500 tph	8,760 hrs/yr	2006
534D	Screen	Trash Screen	N/A	15 tph	8,760 hrs/yr	2006
534E	Screen	Safety Screen	N/A	15 tph	8,760 hrs/yr	2006
535	Roads	Haul Truck-BF Plant to Drystack	N/A	N/A	8,760 hrs/yr	N/A
536	Roads	Haul Truck-Waste Stockpile to Drystack	N/A	N/A	8,760 hrs/yr	N/A
537	Roads	Misc. Pickup Truck Trips	N/A	N/A	8,760 hrs/yr	N/A
538	Roads	Misc. Cargo Truck Trips	N/A	N/A	8,760 hrs/yr	N/A
539	Roads	Misc. Bus Trips	N/A	N/A	8,760 hrs/yr	N/A
540	Ducon Venturi Packed Tower Scrubber	Smelting Furnace	N/A	2,500 cfm	8,760 hrs/yr	2005
541A[1b, 2]	Duall Ceco Environmental Company Venturi Scrubber	Electric Carbon Kiln	N/A	800 cfm	8,760 hrs/yr	2014
ALAB	Baghouse	Assay Lab	N/A	8,500 cfm	8,760 hrs/yr	2005
ALAB2	Scrubber	Assay Lab	N/A	4,000 cfm	8,760 hrs/yr	2005
ALAB3	Scrubber	Assay Lab	N/A	1,000 cfm	8,760 hrs/yr	2005
ALAB4	Baghouse	Assay Lab	N/A	10,000 cfm	8,760 hrs/yr	2005
CG	Cement Guppies	Cement Guppies	N/A	22 tpd	365 days/yr	2005
CP	Portable Crusher	Portable Crusher	N/A	145 tph	8,760 hrs/yr	N/A

Notes:

1. The following EUs listed in the EU Inventory table of Minor Permit AQ0406MSS07 are not shown in Table 1 to Minor Permit AQ0406MSS08 because:
   a. EU IDs 102, 112, 208, 218, 221, 222, 411, 412, 528, and 541 have been permanently removed from service in 2023, 2022, 2010, 2019, 2022, 2022, 2012, 2019, and 2017, respectively.
   b. EU IDs 218 and 541 have been replaced by EU IDs 218A and 541A, respectively; and
   c. EU IDs 416, 417, and 418 are included in the heaters contained in EU ID 420.
2. EU IDs 218A, 223, 224, 420, 420A, 541A, and 601 through 637 are new EUs added in the inventory list in Table 1.
3. EU ID 420 consists of various portable heaters with cumulative rated capacity limited to 14 MMBtu/hr, as required in Condition 24.
4. EU ID 420A consists of 14 portable engines (NREs) each rated at 19 bhp (14.17 kWm) that serve the heaters in EU ID 420. EU ID 420A must meet the definition of "Nonroad Engine" under 40 CFR 1068.30 to be exempt from the state emission standards under Section 3.
5. EU IDs 419, 546, and 547 were disconnected in June 2022, and the electronics and propane fuel sources were removed. These EUs remain physically on site and are expected to be repurposed in the future.
6. EU IDs 209, 210, and 220 are subject to a combined fuel consumption limit of 153,311 gallons to protect the Alaska Ambient Air Quality Standards (AAAQS) NO_2 increment and to avoid Title V major classification. See Conditions 22.1 and 25.

7. EU IDs 414, 415, 419 and 542 through 547 are subject to a combined propane fuel consumption ORL of 3,000,000 gallons per year to protect the Alaska Ambient Air Quality Standards (AAAQS) NO_2 increment and to avoid Title V major classification. See Conditions 22.2 and 26.
8. No individual heater from the group of heaters in each of EU IDs 106, 107, and 108 has potential emissions that exceed any of the significant emissions thresholds for any of the criteria pollutants listed in 18 AAC 50.326(e).
9. Per the Permittee's request, MMBtu/hr ratings of all heaters (except for EU ID 420, which is subject to a limit in Condition 24), dryers, and air units are set to two decimal places for consistency.

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

Section 2 Fee Requirements

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

3. Assessable Emissions. For each period from July 1 through the following June 30, 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 Department will assess fees per ton of each air pollutant that the stationary source emits or has the potential to emit. The quantity for which fees will be assessed is the lesser of the stationary source's:

3.1 potential to emit of 419.13 TPY; or

3.2 projected annual rate of emissions, in TPY, based upon actual annual emissions for the most recent calendar year, or another 12 month period approved in writing by the Department, when demonstrated by credible evidence of actual emissions, based upon the most representative information available from one or more of the following methods:

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

b. material balance calculations;

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

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

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

4.1 No later than March 31 of each year, the Permittee may submit an estimate of the stationary source's assessable emissions as determined in Condition 3.2. Submit actual emissions estimates in accordance with the submission instructions on the Department's Standard Permit Conditions web page at http://dec.alaska.gov/air/air-permit/standard-conditions/standard-condition-i-submission-instructions/.

4.2 The Permittee shall include with the assessable emissions report all of the assumptions and calculations used to estimate the assessable emissions in sufficient detail so the Department can verify the estimates.

4.3 If the stationary source has not commenced construction or operation on or before March 31, the Permittee may submit to the Department's Anchorage office a waiver letter certified under 18 AAC 50.205 that states the stationary source's actual annual emissions for the previous calendar year are zero TPY and provides estimates for when construction or operation will commence.

4.4 If no estimate or waiver letter is submitted on or before March 31 of each year, emission fees for the next fiscal year will be based on the potential to emit set out in Condition 3.1.

Section 3 State Emission Standards

Visible Emissions Standard

5. 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 104, 106 through 108, 110a, 110b, 111, 113, 114, 116, 118, 119, 209, 210, 218A, 220, 223, 224, 302, 414, 415, 419, 420, 532, 532A, 533, 534, 540, 541A, 542 through 547, 601 through 637, ALAB through ALAB4, CG, and CP listed in Table 1 to reduce visibility through the exhaust effluent by more than 20 percent averaged over any six consecutive minutes.

5.1 For EU ID 218A (fire water pump emergency diesel engine), as long as the emission unit does not exceed the operational hour limit in Condition 27, certify in each operating report under Condition 37, compliance with the visible emissions standard based on reasonable inquiry. Otherwise comply with Condition 5.2.

5.2 For EU IDs 218A, 209, 210, 220, 223, and 224 (emergency diesel generator engines), as long as actual emissions from the emission units are less than the significant thresholds listed under 18 AAC 50.326(e)[1] during any consecutive 12-month period, the Permittee shall:

a. Certify in each operating report required under Condition 37, compliance with the visible emissions standard based on reasonable inquiry.

b. Report in the operating report required by Condition 37 if any of EU IDs 218A, 209, 210, 220, and 223 reaches any of the significant thresholds listed in 18 AAC 50.326(e). If so, monitor, record, and report in accordance with Conditions 6 through 8 for the remainder of the permit term[2] for that emissions unit.

5.3 For EU ID 532 (baghouse), certify in each operating report required in Condition 37, compliance with the visible emissions standard based on reasonable inquiry.

5.4 For EU IDs 532A, 533, 534, ALAB, and ALAB4 (baghouses), EU ID 110b (heater), EU IDs 540, 541A, ALAB2 and, ALAB3 (scrubbers), EU ID 302 (explosives), CG (Cement Guppies), and CP (Portable Crusher), monitor, record, and report as described in Conditions 6 through 8.

5.5 For each of the diesel-fired heaters under EU IDs 104, 106 through 108, 110a, 111, 113, 114, 116, 118, 119, 420, 623 through 626, 636, and 637, the Permittee shall:

a. Certify in each operating report required in Condition 37, compliance with the visible emissions standard based on reasonable inquiry.

[1] The significant emissions thresholds for NO_x (2 tpy) is reached for EU IDs 218A, 209, 210, 220, and 223 at the following operational hours per 12 consecutive-month period, respectively: 2,450, 163, 163, 128, and 5,500 hours. The 2-tpy significant emissions threshold for NO_x is used as a conservative basis for determining significant emissions operational-hour thresholds because NO_x has the highest emission factor. EU ID 224 remains insignificant at full-time (8,760 hours per year) operations.

[2] For the purposes of this minor permit, "*permit term*" means the whole period during which this permit is in effect, unless any of the requirements pertaining to EU IDs 218A, 209, 210, 220, 223, or 224 under Condition 5 has been revised or rescinded.

b. Report in the operating report required by Condition 37 if any of the individual heaters under EU ID 420 has potential or actual emissions greater than the thresholds of 18 AAC 50.326(e) [3]. If so, monitor, record, and report in accordance with Conditions 6 through 8 for the remainder of the permit term[4] for that individual heater.

5.6 For the propane–fired EU IDs 414, 415, 419, 542 through 547, 601 through 622, and 627 through 635, burn only propane[5] as fuel. In each operating report under Condition 37, indicate whether each of these emissions units burned only propane during the period covered by the report. Report under Condition 36 if any fuel other than propane is burned.

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

6. Visible Emissions Monitoring. When required by Conditions 5.2b, 5.4, and 5.5b, or in the event of replacement[6] during the permit term, the Permittee shall observe the exhausts of the diesel-fired generators (EU IDs 209, 210, 220, 218A, and 223), and any significant individual heater under EU ID 420, and dust emissions from explosives (EU ID 302), baghouses (EU IDs 532A, 533, 534, ALAB, and ALAB4), heater (EU ID 110b), scrubbers (EU IDs 540, 541A, ALAB2, and ALAB3), crusher (EU ID CP), and cement guppies (EU ID CG) for visible emissions using either the Method 9 Plan under Condition 6.3 or the Smoke/No-Smoke Plan (Dust/No Dust for dust units) under Condition 6.4.

6.1 The Permittee may change the visible emissions monitoring plan for an emissions unit at any time unless prohibited from doing so by Condition 6.5.

6.2 The Permittee may for each unit elect to continue the visible emissions monitoring schedule specified in Conditions 6.3b through 6.3e or Conditions 6.4b through 6.5 that remains in effect from a previous permit.

6.3 **Method 9 Plan.** For all observations in this plan, observe emissions unit exhaust, following 40 C.F.R. 60, Appendix A-4, Method 9 for 18 minutes to obtain 72 consecutive 15-second opacity observations.[7]

a. First Method 9 Observation. Except as provided in Condition 6.2 or Condition 6.5c(ii), observe exhausts of EU IDs 110b, 209, 210, 220, 218A, 223, any

[3] The minimum rating for any individual heater under EU ID 420 at which significant threshold for NO_x (2 tpy) is reached is 3.12 MMBtu/hr, assumed operating 8,760 hours per 12 consecutive-month period. The 2-tpy significant emissions threshold for NO_x is used as a conservative basis for determining significant emissions operational-hour thresholds because NO_x has the highest emission factor.

[4] For the purposes of this minor permit, *"permit term"* means the whole period during which this permit is in effect, unless any of the requirements pertaining to EU IDs 104, 106 through 108, 110a, 111, 113, 114, 116, 118, 119, 420, 623 through 626, 636, or 637 under Condition 5 has been revised or rescinded.

[5] Propane (otherwise known Liquefied petroleum gas or LPG) is a byproduct of natural gas processing and petroleum refining. In its natural state, propane is a colorless, nontoxic gas—at least 90 percent propane, 2.5 percent butane and higher hydrocarbons, and the balance ethane and propylene. An odorant is added to the gas so it can be detected for safety reasons. Under moderate pressure, propane gas turns into a liquid mixture, making it easier to transport and store in vehicle fuel tanks. *[Source: Clean Alternative Fuels: Propane, EPA420-F-00-039, March 2002]*
LPG is considered a "clean" fuel because it does not produce visible emissions. *[Source: AP 42, Fifth Edition, Volume I Chapter 1: External Combustion Sources, Section 1.5.3.1, July 2008]*

[6] *"Replacement,"* as defined in 40 C.F.R. 51.166(b)(32).

[7] Visible emissions observations are not required during emergency operations.

significant individual heater under EU ID 420, and dust emissions from EU IDs 532A, 533, 534, 540, 541A, and ALAB through ALAB4 according to the following criteria:

(i) For any unit, observe emissions unit exhaust within 14 calendar days after changing from the Smoke/No-Smoke Plan (or Dust/No Dust Plan) of Condition 6.4.

(ii) Except as provided in Condition 6.3a(iii) for any of EU IDs 110b, 209, 210, 220, 218A, 223, any significant individual heater under EU ID 420, EU IDs 532A, 533, 534, 540, 541A, and ALAB through ALAB4, observe exhaust within six months after the effective date of this permit.

(iii) For any unit replaced, observe exhaust within 60 days of the newly installed emissions unit becoming fully operational.[8] Except as provided in Condition 6.3e, after the First Method 9 observation:

(A) For EU IDs 110b, 532A, 533, 534, 540, 541A, and ALAB through ALAB4, continue with the monitoring schedule of the replaced emissions unit; and

(B) For EU IDs 209, 210, 220, 218A, and 223, and individual heater(s) under EU ID 420, comply with Conditions 5.2 and 5.5, as applicable.

(iv) For each of EU IDs 209, 210, 220, 218A, 223, and any significant individual heater under EU ID 420, observe the exhaust of the emissions unit within 30 days after the end of the calendar month during which monitoring was triggered under Conditions 5.2b and/or 5.5b; or for an emissions unit with intermittent operations, within 30 days during the unit's next scheduled operation.

b. Monthly Method 9 Observations. After the first Method 9 observation conducted under Condition 6.3a, perform observations at least once in each calendar month that the emissions unit operates.

c. Semiannual Method 9 Observations. After at least three monthly observations under Condition 6.3b unless a six-consecutive-minute average opacity is greater than 15 percent and one or more individual observations are greater than 20 percent, perform semiannual observations

(i) no later than seven months, but not earlier than five months, after the preceding observation; or

(ii) for an emissions unit with intermittent operations, during the next scheduled operation immediately following seven months after the preceding observation.

[8] "*Fully operational*" means upon completion of all functionality checks and commissioning after unit installation. "*Installation*" is complete when the unit is ready for functionality checks to begin.

d. Annual Method 9 Observations. After at least two semiannual observations under Condition 6.3c, unless a six-consecutive-minute average opacity is greater than 15 percent and one or more individual observations are greater than 20 percent, perform annual observations

(i) no later than 13 months, but not earlier than 11 months, after the preceding observation; or

(ii) for an emissions unit with intermittent operations, during the next scheduled operation immediately following 14 months after the preceding observation.

e. Increased Method 9 Frequency. If a six-consecutive-minute average opacity is observed during the most recent set of observations to be greater than 15 percent and one or more individual observations are greater than 20 percent, then increase or maintain the observation frequency for that emissions unit to at least monthly intervals as described in Condition 6.3b, and continue monitoring in accordance with the Method 9 Plan.

6.4 **Smoke/No Smoke (or Dust/No Dust) Plan.** Observe the emissions unit exhaust for the presence or absence of visible emissions, excluding condensed water vapor.

a. Initial Monitoring Frequency. Observe the emissions unit exhaust during each calendar day that the emissions unit operates for a minimum of 30 days.

b. Reduced Monitoring Frequency. If the emissions unit operates without visible emissions for 30 consecutive operating days as required in Condition 6.4a, observe the emissions unit exhaust at least once in every calendar month that the emissions unit operates.

c. Smoke or Dust Observed. If visible emissions are observed, comply with Condition 6.5.

6.5 **Corrective Actions Based on Smoke/No Smoke (or Dust/No Dust) Observations.** If visible emissions are present in the emissions unit exhaust during an observation performed under the Smoke/No Smoke (or Dust/No Dust) Plan of Condition 6.4, then the Permittee shall either begin the Method 9 Plan of Condition 6.3 or:

a. Initiate actions to eliminate visible emissions from the emissions 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 visible emissions; and

c. After completing the actions required under Condition 6.5a,

(i) conduct Smoke/No Smoke (or Dust/No Dust) observations in accordance with Condition 6.4:

(A) at least once per day for the next seven operating days and, if applicable, until the initial 30-day observation period of Condition 6.4a is completed; and

(B) continue as described in Condition 6.4b; or

(ii) if subsequent visible emissions are observed under the schedule of Condition 6.5c(i)(A), then observe the emissions unit exhaust using the Method 9 Plan unless the Department gives written approval to resume observations under the Smoke/No Smoke (or Dust/No Dust) Plan. After observing visible emissions and making observations under the Method 9 Plan, the Permittee may at any time take corrective action that eliminates visible emissions and restart the Smoke/No Smoke (or Dust/No Dust) Plan under Condition 6.4a.

(iii) For EU IDs 302, CP, and CG, EUs that have no stack or are allowed by the Department to resume observations under the Smoke/No Smoke Plan(or Dust/No Dust) Plan, if subsequent visible emissions are observed under the schedule of Condition 6.5c(i)(A), the Permittee shall continue to take corrective action(s) to eliminate visible emissions and restart the Smoke/No Smoke (or Dust/No Dust) Plan under Condition 6.4a.

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

7.1 For all Method 9 observations,

a. the observer shall record the following:

(i) the name of the stationary source, emissions unit and location, emissions unit type, observer's name and affiliation, and the date on the Visible Emissions Observation Form in Section 12;

(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 12; 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,

(i) divide the observations recorded on the record sheet into sets of 24 consecutive observations;

(ii) sets need not be consecutive in time and in no case shall two sets overlap;

(iii) for each set of 24 observations, calculate the average by summing the opacity of the 24 observations and dividing this sum by 24; and

(iv) record the average opacity on the sheet.

c. Calculate and record the highest six- and 18-consecutive-minute average opacities observed.

7.2 If using the Smoke/No Smoke Plan (or Dust/No Dust) of Condition 6.4, 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. the EU ID of the emissions unit observed;

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

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

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

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

g. operating rate (load or fuel consumption rate or best estimate**,** if unknown).

7.3 The records required by Conditions 7.1 and 7.2 may be kept in electronic format.

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

8.1 In the first operating report required in Condition 37 under this permit term, the Permittee shall state the intention to either continue the visible emissions monitoring schedule in effect from the previous permit or reset the visible emissions monitoring schedule.

8.2 Include in each operating report required under Condition 37 for the period covered by the report:

a. which visible emissions plan of Condition 6 was used for each emissions unit; if more than one plan was used, give the time periods covered by each plan;

b. for all Method 9 Plan observations:

(i) copies of the observation results (i.e., opacity observations) for each emissions unit, except for the observations the Permittee has already supplied to the Department; and

(ii) a summary to include:

(A) number of days observations were made;

(B) highest six-consecutive- and 18-consecutive-minute average opacities observed; and

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

c. for each emissions unit under the Smoke/No Smoke (or Dust/No Dust) Plan, the number of days that smoke/no smoke or dust/no dust observations were made and which days, if any, that visible emissions were observed; and

d. a summary of any monitoring or recordkeeping required under Conditions 6 and 7 that was not done.

8.3 Report under Condition 36:

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

b. if any monitoring under Condition 6 was not performed when required, report within three days of the date that the monitoring was required.

Particulate Matter (PM) Emissions Standard

9. Industrial Process and Fuel-Burning Equipment PM Emissions. The Permittee shall not cause or allow particulate matter emitted from EU IDs 104, 106 through 108, 110a, 110b, 111, 113, 114, 116, 118, 119, 209, 210, 218A, 220, 223, 224, 302, 414, 415, 419, 420, 532, 532A, 533, 534, 540, 541A, 542 through 547, 601 through 637, ALAB through ALAB4, CP, and CG listed in Table 1, to exceed 0.05 grains per dry standard cubic foot of exhaust gas corrected to standard conditions and averaged over three hours.

9.1 For EU ID 218A (fire water pump emergency diesel engine), as long as the emission unit does not exceed the operational hour limit in Condition 27, certify in each operating report under Condition 37, compliance with the PM standard based on reasonable inquiry. Otherwise comply with Condition 9.2.

9.2 For EU IDs 218A, 209, 210, 220, 223, and 224 (emergency diesel generator engines), as long as actual emissions from the emission units are less than the significant thresholds listed under 18 AAC 50.326(e)[9] during any consecutive 12-month period, the Permittee shall:

a. Certify in each operating report under Condition 37, compliance with the PM standard based on reasonable inquiry.

b. Report in the operating report required by Condition 37 if any of EU IDs 218A, 209, 210, 220, and 223 exceeds any of the signficant thresholds listed in 18 AAC 50.326(e). If so, monitor, record, and report in accordance with

[9] See footnote 1.

Conditons 10 through 12 for the remainder of the permit term[10] for that emissions unit.

9.3 For EU ID 532 (baghouse), certify in each operating report required in Condition 37, compliance with the PM standard based on reasonable inquiry.

9.4 For EU IDs 532A, 533, 534, ALAB, and ALAB4 (baghouses) and EU IDs 540, 541A, ALAB2 and, ALAB3 (scrubbers), monitor, record, and report as described in Conditions 13 through 15.

9.5 For EU ID 110b (heater), monitor, record, and report as described in Conditions 16 through 18.

9.6 For each of the diesel-fired heaters under EU IDs 104, 106 through 108, 110a, 111, 113, 114, 116, 118, 119, 420, 623 through 626, 636, and 637, the Permittee shall:

a. Certify in each operating report required in Condition 37, compliance with the PM standard based on reasonable inquiry.

b. Report in the operating report required by Condition 37 if any of the individual heaters under EU ID 420 has potential or actual emissions greater than the thresholds of 18 AAC 50.326(e)[11]. If so, monitor, record, and report in accordance with Conditions 16 through 18 for the remainder of the permit term[12] for that significant individual heater.

9.7 For the propane–fired EU IDs 414, 415, 419, 542 through 547, 601 through 622, and 627 through 635, the Permittee shall comply with Condition 5.6.

9.8 For EU IDs 302 (explosives), CP (portable crusher), and CG (cement guppies), comply with the requirements of Condition 21.

PM MR&R

For Diesel Fired Engines (EU IDs 209, 210, 220, 218A, and 223)

10. PM Monitoring. When required by Condition 9.2, the Permittee shall conduct source tests on diesel fired engines, EU IDs 209, 210, 220, 218A, and 223 to determine the concentration of PM in the exhaust of a unit, as follows:

10.1 If the result of any Method 9 observation conducted under Condition 6.3 for any of EU ID(s) 209, 210, 220, 218A, and 223 is greater than the criteria of Condition 10.2a or Condition 10.2b, the Permittee shall, within six months of that Method 9 observation, either:

a. take corrective action and observe the emissions unit under load conditions comparable to those when the criteria were exceeded, following 40 C.F.R. 60,

[10] For the purposes of this minor permit, *"permit term"* means the whole period during which this permit is in effect, unless any of the requirements pertaining to EU IDs 218A, 209, 210, 220, 223, or 224 under Condition 9 has been revised or rescinded.
[11] See footnote 3.
[12] For the purposes of this minor permit, *"permit term"* means the whole period during which this permit is in effect, unless any of the requirements pertaining to EU IDs 104, 106 through 108, 110a, 111, 113, 114, 116, 118, 119, 420, 623 through 626, 636, or 637 under Condition 9 has been revised or rescinded.

Appendix A-4 Method 9 for 18 minutes to obtain 72 consecutive 15-second opacity observations, to show that emissions are no longer greater than the criteria of Condition 10.2; or

b. except as exempted in Condition 10.4, conduct a PM source test according to the requirements set out in Section 9.

10.2 Take corrective action or conduct a PM source test, in accordance with Condition 10.1, if any Method 9 observation under Condition 6.3 results in an 18-minute average opacity greater than:

a. 20 percent for an emissions unit with an exhaust stack diameter that is equal to or greater than 18 inches; or

b. 15 percent for an emissions unit with an exhaust stack diameter that is less than 18 inches, unless the Department has waived this requirement in writing.

10.3 During each one-hour PM source test run under Condition 10.1b, observe the emissions unit exhaust for 60 minutes in accordance with Method 9 and calculate the highest 18-consecutive-minute average opacity measured during each one-hour test run. Submit a copy of these observations with the source test report.

10.4 The PM source test requirements in Condition 10.1b are waived for an emissions unit if

a. a PM source test on that unit has shown compliance with the PM standard during this permit term; or

b. corrective action was taken to reduce visible emissions and two consecutive 18-minute Method 9 visible emissions observations (as described in Condition 6.3) conducted thereafter within a six-month period show visible emissions less than the threshold in Condition 10.2.

11. PM Recordkeeping. The Permittee shall comply with the following:

11.1 Within 30 calendar days of the effective date of this permit, the Permittee shall record the exhaust stack diameter(s) of EU ID(s) 218A and 223.

11.2 Keep records of any source test and visible emissions observations conducted under Condition 10.

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

12.1 Notify the Department of any Method 9 observation results that are greater than the threshold of either Condition 10.2a or 10.2b within 30 days of the end of the month in which the observations occurred. Include the dates, EU ID(s), and results when an observed 18-minute average opacity was greater than an applicable threshold in Condition 10.2.

12.2 In each operating report under Condition 37, include:

a. a summary of the results of any PM source test and visible emissions observations conducted under Condition 10; and

b. copies of any visible emissions observations results greater than the thresholds of Condition 10.2, if they were not already submitted.

12.3 Report the stack diameter(s) of EU IDs 218A and 223 in the next operating report under Condition 37 following the date in Condition 11.1 for collecting the stack diameter records.

12.4 Report in accordance with Condition 36:

a. anytime the results of a PM source test exceed the PM emissions standard in Condition 9; or

b. if the requirements under Condition 10.1 were triggered and the Permittee did not comply on time with either Condition 10.1a or 10.1b. Report the deviation within 24 hours of the date compliance with Condition 10.1 was required.

For Baghouses (EU IDs 532A, 533, 534, ALAB, and ALAB4) and Scrubbers (EU IDs 540, 541A, ALAB2, and ALAB3)

13. PM Monitoring. The Permittee shall conduct source tests to determine the concentration of PM in the exhaust of EU IDs 532A, 533, 534, 540, 541A, ALAB, and ALAB2 through ALAB4, as follows:

13.1 Conduct a PM source test according to the requirements set out in Section 9 no later than 90 calendar days after any time corrective maintenance fails to eliminate visible emissions greater than the 20 percent opacity threshold for two or more 18-minute observations in a consecutive six-month period.

13.2 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.

13.3 The PM source test requirement in Condition 13.1 is waived for an emission unit if:

a. a PM source test during the most recent semiannual reporting period on that emission unit shows compliance with the PM standard since permit issuance; or

b. if a follow-up visible emission observation conducted using Method 9 during the 90 days shows that excess visible emissions described in Condition 6.3e no longer occur.

14. PM Recordkeeping. The Permittee shall keep records of the results of any PM testing and visible emissions observations conducted under Conditions 13.1 and 13.2, in accordance with Condition 36.

15. PM Reporting. The Permittee shall report as follows:

15.1 In each stationary source operating report required by Condition 37, include:

a. the dates, and results when an 18-minute opacity observation was greater than the applicable threshold criterion in Condition 6.3e; and

b. a summary of the results of any PM testing and visible emissions observations conducted under Conditions 13.1 and 13.2.

15.2 Report as excess emissions and permit deviation in accordance with Condition 36 if a source test for PM exceeds the emission limit in Condition 9, or if the requirements of Conditions 13 through 15 are not met.

Liquid Fuel-Burning Heaters (EU ID 110b and any significant individual heater under EU ID 420)

16. PM Monitoring. The Permittee shall conduct source tests on EU ID 110b and any significant individual heater under EU ID 420 to determine the concentration of PM in the exhaust of the emission unit as follows:

16.1 If the result of any Method 9 observation conducted under Condition 6.3 for EU ID 110b and any significant individual heater under EU ID 420 results in an 18-minute average opacity greater than 20 percent opacity, the Permittee shall, within six months of that Method 9 observation, either:

a. take corrective action and observe the emissions unit exhaust under load conditions comparable to those when the criteria were exceeded, following 40 C.F.R. 60, Appendix A-4 Method 9 for 18 minutes to obtain 72 consecutive 15-second opacity observations, to show that emissions are no longer greater than an 18-minute average opacity of 20 percent; or

b. except as exempted under Condition 16.3, conduct a PM source test according to the requirements in Section 9.

16.2 During each one-hour PM source test run under Condition 16.1, observe the emissions unit exhaust for 60 minutes in accordance with Method 9 and calculate the highest 18-consecutive minute opacity measured during each one-hour test run. Submit a copy of these observations with the source test report.

16.3 The PM source test requirement in Condition 16.1 is waived for an emissions unit if:

a. a source test on that unit has shown compliance with the PM standard during the permit term; or

b. corrective action was taken to reduce visible emissions and two consecutive 18-minute Method 9 visible emissions observations (as described in Condition 6.3) conducted thereafter within a six-month period show visible emissions less than the threshold in Condition 16.1.

17. PM Recordkeeping. The Permittee shall keep records of the result of any source test and visible emissions observations conducted under Condition 16.

18. PM Reporting. The Permittee shall report as follows:

18.1 Notify the Department of any Method 9 observation results that are greater than the threshold of Condition 16.1 within 30 days of the end of the month in which the observations occurred. Include the dates, EU ID(s), and results when an observed 18-minute average opacity was greater than the threshold in Condition 16.1.

18.2 In each stationary source operating report required by Condition 37, include:

a. a summary of the results of any PM testing and visible emissions observations conducted under Condition 16; and

b. copies of any visible emissions observations results greater than the threshold in Condition 16.1, if they were not already submitted.

18.3 Report as excess emissions and permit deviation in accordance with Condition 36 if a source test for PM exceeds the emission limit in Condition 9, or if the requirements of Conditions 16 through 18 are not met.

Sulfur Compound Emissions Standard

19. Sulfur Compound Emissions. The Permittee shall not cause or allow sulfur compound emissions, expressed as SO_2, from EU IDs 104, 106 through 108, 110a, 110b, 111, 113, 114, 116, 118, 119, 209, 210, 218A, 220, 223, 224, 414, 415, 419, 420, 542 through 547, and 601 through 637 in Table 1, to exceed 500 parts per million (ppm) averaged over three hours.

19.1 For diesel-fired EU IDs 104, 106 through 108, 110a, 110b, 111, 113, 114, 116, 118, 119, 209, 210, 218A, 220, 223, 224, 420, 623 through 626, 636, and 637, demonstrate compliance with the sulfur compound emissions standard in Condition 19 by complying with the fuel sulfur content limits in Conditions 28.1a and 28.1b. Monitor, record, and report in accordance with Conditions 28.2, 28.3, and 28.5.

19.2 For propane–fired EU IDs 414, 415, 419, 542 through 547, 601 through 622, and 627 through 635, use only propane as fuel. In each operating report under Condition 37, indicate whether each of these emissions units burned only propane during the period covered by the report. Report under Condition 36 if any fuel other than propane is burned.

Section 4 Ambient Air Quality Protection Requirements

20. Public Access Control Plan. The Permittee shall comply with the provisions of the Public Access Control Plan contained in the application dated April 2003 and as follows:

20.1 The ambient air boundary shall be completely within the Millsite Lease Boundary established by the Alaska Department of Natural Resources.

20.2 Do not revise the ambient air boundary without Department approval. Submit changes to the ambient air boundary, along with a revised ambient air impact analysis, to the Department prior to any change in the ambient air boundary.

20.3 Do not revise the Public Access Control Plan without Department concurrence. Submit revisions to the Public Access Control Plan (other than changes to the Ambient Air Boundary) in accordance with Condition 34 for approval prior to implementing changes to the plan.

21. Fugitive Dust Requirements. In addition to complying with the general requirements of controlling fugitive dust in Condition 30, the Permittee shall comply with the following requirements specific to the Pogo Mine Project.

21.1 Perform a daily inspection of all unpaved roads (EU IDs 535 through 539), temporary ore stockpiles and rock storage areas, drystack tailings facility, and gravel pits for fugitive dust. If dust is present, and the road or stockpile is unfrozen, apply water or suitable dust suppression chemicals on roads and stockpiles, or cover the stockpiles. Maintain a log of daily inspection and actions to keep dust down. Keep the records for five years.

21.2 For the baghouses on EU IDs 532, 532A, 533, 534, ALAB and ALAB4:

a. Monitor the pressure drop across each baghouse daily to ensure that it is within the limits recommended by the manufacturer.

b. Inspect each baghouse whenever the pressure drop across the baghouse is not within the limits recommended by the manufacturer, and every 180 days of operation. Following inspection, replace worn or damaged bags prior to restarting the baghouse or within 72 hours of discovery, whichever occurs later.

c. Maintain maintenance logs detailing pressure drop across baghouse, baghouse inspections, and bag replacements. Keep records for five years.

21.3 For the scrubbers on EU IDs 540, 541A, ALAB2 and ALAB3:

a. Operate the scrubbers with the recommended operational parameters per manufacturers recommendations.

b. Maintain logs detailing operational parameters, scrubber inspections, and scrubber part replacements. Keep records for five years.

21.4 During operation, use water control techniques to control dust only when dust is observed under Condition 6.4 on EU IDs 302 (explosives), CG (cement guppies), and CP (portable crusher).

21.5 Report as permit deviation in accordance with Condition 36 if the requirements of Conditions 21.1 through 21.5 are not met.

22. Specific Requirements to Protect the Alaska Ambient Air Quality Standard (AAAQS) for Nitrogen Dioxide (NO_2) Increment. To protect the AAAQS for NO_2 Increment, the Permittee shall comply with the following:

22.1 Limit the combined annual fuel consumption for EU IDs 209, 210, and 220 as required in Condition 25; and

22.2 Limit the combined annual fuel consumption for EU IDs 414, 415, 419 and 542 through 547 as required in Condition 26.

23. Sulfur Dioxide Standards and Increments. The Permittee shall restrict the fuel sulfur content as described in Condition 28.

Section 5 ORLs to Avoid Title V Major Permit Classification under 18 AAC 50.326

24. Rated Capacity Limit, EU ID 420. The Permittee shall limit the cumulative rated capacity of the portable heaters under EU ID 420 to no more than 14 MMBtu/hr. Monitor, record, and report as follows:

24.1 Any time a change is made to the inventory of EU ID 420, calculate and record the total rated capacity of EU ID 420 in MMBtu/hr.

24.2 Include the maximum total rated capacity of EU ID 420 for the reporting period in each operating report under Condition 37.

24.3 Report as excess emissions and permit deviation in accordance with Condition 34 anytime the total rated capacity of EU ID 420 exceeds the limit in Condition 24, or if the requirements of Conditions 24.1 and 24.2 are not met.

25. Diesel Fuel Limit, EU IDs 209, 210, and 220. For EU IDs 209, 210, and 220, the Permittee shall limit the combined annual fuel consumption to no more than 153,311 gallons of diesel fuel per 12 consecutive months. Monitor, record and report as follows:

25.1 Operate a dedicated continuous fuel monitoring system for recording fuel consumption that is accurate to within two percent for each unit or combined units. Track and record the monthly fuel consumption for EU IDs 209, 210, and 220. By the 15th of each month, calculate and record the monthly fuel consumption in gallons for the previous month, and add to the total for the previous 11 months to get the 12-month rolling total.

25.2 Report in the operating report as set out in Condition 37, the monthly and the consecutive 12-month fuel consumption records obtained in accordance with Condition 25.1 for the period covered by the report.

25.3 Report as excess emissions and permit deviation in accordance with Condition 36 if the fuel consumption calculated under Condition 25.1 exceeds the limit in Condition 25, or the requirements of Conditions 25.1 and 25.2 are not met.

26. Propane Fuel Limit, EU IDs 414, 415, 419, and 542 through 547. For EU IDs 414, 415, 419, and 542 through 547, the Permittee shall limit the combined propane fuel consumption to no more than 3,000,000 gallons per rolling 12-consecutive months. Monitor, record, and report as follows:

26.1 Operate a fuel monitoring system that is accurate to within two percent for each unit or combined units. Track and record the monthly fuel consumption for EU IDs 414, 415, 419, and 542 through 547. By the 15th of each month, calculate and record the monthly fuel consumption in gallons for the previous month, and add to the total for the previous 11 months to get the 12-month rolling total.

26.2 Report in the operating report as set out in Condition 37, the monthly and the consecutive 12-month fuel consumption records obtained in accordance with Condition 26.1 for the period covered by the report.

26.3 Report as excess emissions and permit deviation in accordance with Condition 36 if the fuel consumption calculated under Condition 26.1 exceeds the limit in Condition 26, or the requirements of Conditions 26.1 and 26.2 are not met.

27. Hour Limit, EU ID 218A. For EU ID 218A, the Permittee shall limit the hours of operation to no more than 200 hours per rolling 12 consecutive months. Monitor, record, and report as follows:

27.1 Operate EU ID 218A with a dedicated non-resettable engine-hour meter.

27.2 After startup of EU ID 218A, record the hour-meter reading by the end of each calendar month.

27.3 Report as set out in Condition 37, the monthly hours of operation and the rolling 12 consecutive months operational hours for each calendar month of the reporting period.

27.4 Report as excess emissions and permit deviation in accordance with Condition 36 if any of the 12-consecutive-month hours of operation exceed the limit in Condition 27, or the requirements of Conditions 27.1 through 27.3 are not met.

28. Fuel Sulfur Content Limits. The Permittee shall restrict fuel sulfur content as follows:

28.1 Do not allow diesel fuel sulfur content to exceed the following:

a. 0.3 wt%S_{fuel} for EU IDs 106 through 108, 636, and 637; and

b. 0.0015 wt%S_{fuel} (15 ppmw, ULSD) for EU IDs 104, 110a, 110b, 111, 113, 114, 116, 118, 119, 209, 210, 218A, 220, 223, 224, 420, and 623 through 626.

28.2 Monitor the diesel fuel sulfur content by either:

a. testing the sulfur content for each shipment of fuel oil delivered to the source by using methods described in 18 AAC 50.035(b)-(c) and 40 C.F.R. 60.17 incorporated by reference in 18 AAC 50.040(a)(1); or

b. obtaining test results showing the sulfur content of the fuel from the supplier or refinery for each shipment delivered to the source; the test results must include a statement signed by the supplier or refinery of what the fuel represents.

28.3 Include in the operating report required under Condition 37, the test results of the fuel sulfur content for the fuel received at the stationary source during the reporting period.

28.4 For propane–fired EU IDs 414, 415, 419, 542 through 547, 601 through 622, and 627 through 635, the Permittee shall comply with Condition 19.2.

28.5 Report as excess emissions and permit deviation in accordance with Condition 36 if the requirements of Conditions 28.1 through 28.3 are not met.

Section 6 General Conditions

29. Good Air Pollution Control Practice (GAPCP). The Permittee shall do the following for all EUs listed in Table 1:

29.1 Perform regular maintenance considering the manufacturer's or the operator's maintenance procedures.

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

29.3 Keep a copy of either the manufacturer's or the operator's maintenance procedures.

30. Reasonable Precautions to Prevent Fugitive Dust. A person who causes or permits bulk materials to be handled, transported, or stored, or who engages in an industrial activity or construction project shall take reasonable precautions to prevent particulate matter from behind emitted into the ambient air.

30.1 The Permittee shall keep records of

a. complaints received by the Permittee and complaints received by the Department and conveyed to the Permittee; and

b. any additional precautions that are taken

(i) to address complaints described in Condition 30.1 or to address the results of Department inspections that found potential problems; and

(ii) to prevent future dust problems.

30.2 The Permittee shall report according to Condition 31.3.

31. 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.

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

a. As soon as practicable after becoming aware of a complaint that is attributable to emissions from the stationary source, the Permittee shall investigate the complaint to identify emissions that the Permittee believes have caused or are causing a violation of Condition 31.

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

(i) after an investigation because of a complaint or other reason, the Permittee believes that emissions from the stationary source have caused or are causing a violation of Condition 31; or

(ii) the Department notifies the Permittee that it has found a violation of Condition 31.

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

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

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

c. a summary of any investigation, including reasons the Permittee does or does not believe the emissions have caused a violation of Condition 31; and

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

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

a. With each stationary source operating report under Condition 37, the Permittee shall include a brief summary report which must include the following for the period covered by the report:

(i) the number of complaints received;

(ii) the number of times the Permittee or the Department found corrective action necessary;

(iii) the number of times action was taken on a complaint within 24 hours; and

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

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

c. If emissions present a potential threat to human health or safety, the Permittee shall report any such emissions according to Condition 36.

Section 7 General Recordkeeping, Reporting, and Certification Requirements

32. Recordkeeping Requirements. The Permittee shall keep all records required by this permit for at least five-years after the date of collection, including:

32.1 copies of all reports and certifications submitted pursuant to this section of the permit; and

32.2 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 sampling and analyses;

d. the analytical techniques or methods used in the analyses;

e. the results of the analyses; and

f. the operating conditions that existed at the time of sampling or measurement

33. 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.

33.1 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.

34. 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.

34.1 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/.

35. 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.

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

36.1 **Excess Emissions Reporting.** Except as provided in Condition 39, the Permittee shall report all emissions or operations that exceed emissions standards or limits of this permit as follows:

a. In accordance with 18 AAC 50.240(c), as soon as possible after the event commenced or is discovered, report

(i) excess emissions that present a potential threat to human health or safety; and

(ii) excess emissions that the Permittee believes to be unavoidable.

b. In accordance with 18 AAC 50.235(a), within two working days after the event commenced or was discovered, report an unavoidable emergency, malfunction, or nonroutine repair that causes emissions in excess of a technology-based emissions standard.

c. If a continuous or recurring excess emissions is not corrected within 48 hours of discovery, report within 72 hours of discovery unless the Department provides written permission to report under Condition 36.1d.

d. Report all other excess emissions not described in Conditions 36.1a, 36.1b, and 36.1c within 30 days after the end of the month during which the excess emissions occurred or as part of the next routine operating report in Condition 37 for excess emissions that occurred during the period covered by the report, whichever is sooner.

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

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

a. Report all other permit deviations within 30 days after the end of the month during which the deviation occurred or as part of the next routine operating report in Condition 37 for permit deviations that occurred during the period covered by the report, whichever is sooner.

36.3 **Reporting Instructions.** When reporting either excess emissions or permit deviations, the Permittee shall report using the Department's online form for all such submittals, beginning no later than September 7, 2023. The form can be found at the Division of Air Quality's Air Online Services (AOS) system webpage http://dec.alaska.gov/applications/air/airtoolsweb using the Permittee Portal option. Alternatively, upon written Department approval, the Permittee may submit the form contained in Section 13 of this permit. The Permittee must provide all information called for by the form that is used. Submit the report in accordance with the submission instructions on the Department's Standard Permit Conditions webpage found at http://dec.alaska.gov/air/air-permit/standard-conditions/standard-conditions-iii-and-iv-submission-instructions/.

37. Operating Reports. During the life of this permit[13], the Permittee shall submit to the Department an operating report in accordance with Conditions 33 and 34 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.

37.1 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.

37.2 When excess emissions or permit deviations that occurred during the reporting period are not included with the operating report under Condition 37.1, the Permittee shall identify

a. the date of the excess emissions or permit 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

37.3 when excess emissions or permit deviation reports have already been reported under Condition 36 during the period covered by the operating report, the Permittee shall either

a. include a copy of those excess emissions or permit deviation reports with the operating report; or

b. cite the date(s) of those reports.

38. Annual Affirmation. The Permittee shall submit to the Department by March 31 of each year an affirmation certified according to Condition 33 of whether the stationary source is still accurately described by the application and this permit, and whether any changes have

[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.

been made to the stationary source that would trigger the requirement for a new permit under 18 AAC 50.

39. Triennial Emission Inventory Reporting. The Permittee shall submit to the Department reports of actual emissions for the previous calendar year, by emissions unit, of CO, NH_3, NO_x, PM_{10}, $PM_{2.5}$, SO_2, VOC and lead (Pb) and lead compounds, as follows:

39.1 The Permittee shall report the annual emissions and the required data elements under Condition 39.2 every third year for the previous calendar year as scheduled by the EPA.[14]

39.2 For each emissions unit and the stationary source, include in the report the required data elements[15] contained within the form included in the Emission Inventory Instructions available at the Department's AOS system on the Point Source Emission Inventory webpage at http://dec.alaska.gov/Applications/Air/airtoolsweb/PointSourceEmissionInventory.

39.3 Submit the report in accordance with the submission instructions on the Department's Standard Permit Conditions webpage at http://dec.alaska.gov/air/air-permit/standard-conditions/standard-conditions-xv-and-xvi-submission-instructions/.

40. Consistency of Reporting Methodologies. Regardless of permit classification, as of September 7, 2022, all stationary sources operating in the state shall report actual emissions to the Department, either upon request or to meet individual permit requirements, in order for the state to meet federal reporting requirements under 40 C.F.R. Part 51, Subpart A.

40.1 For the purposes of reporting actual or assessable emissions required under Condition 39 and Condition 3.2, the Permittee shall use consistent pollutant-specific emission factors and calculation methods for all reporting requirements for the stationary source.

[14] The calendar years for which reports are required are based on the triennial reporting schedule in 40 C.F.R. 51.30(b)(1), which requires states to report emissions data to the EPA for inventory years 2011, 2014, 2017, 2020, and every 3rd year thereafter. Therefore, the Department requires Permittees to report emissions data for the same inventory years by April 30 of the following year (e.g., triennial emission inventory report for 2020 is due April 30, 2021, triennial emission inventory report for 2023 is due April 30, 2024, etc.).

[15] The required data elements to be reported to the EPA are outlined in 40 C.F.R. 51.15 and Tables 2a and 2b to Appendix A of 40 C.F.R. 51 Subpart A.

Section 8 Standard Permit Conditions

41. 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

41.1 an enforcement action; or

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

42. 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.

43. 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.

44. 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.

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

46. 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

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

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

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

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

Section 9 General Source Test Requirements

47. 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.

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

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

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

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

49.1 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.

49.2 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.

49.3 Source testing for emissions of PM_{10} and $PM_{2.5}$ must be conducted in accordance with the procedures specified in 40 C.F.R. 51, Appendix M, Methods 201 or 201A and 202.

49.4 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.

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

51. Test Exemption. The Permittee is not required to comply with Conditions 53, 54 and 55 when the exhaust is observed for visible emissions by Method 9 Plan (Condition 6.3).

52. 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.

53. **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 plan within 60 days after receiving a request under Condition 47 and at least 30 days before the scheduled date of any test unless the Department agrees in writing to some other time period. Retesting may be done without resubmitting the plan.

54. **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.

55. **Test Reports.** Within 60 days after completing a source test, the Permittee shall submit one certified copy of the results in the format set out in the *Source Test Report Outline*, adopted by reference in 18 AAC 50.030. The Permittee shall certify the results in the manner set out in Condition 33. 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 Permit Documentation

Date	Document Details
November 2, 2023	Application Received
March 1, 2024	Information request sent to Permittee regarding installation and construction dates for EUs, composition of grouped heater EUs, timeline for removed EUs, and PM EF calculations.
March 12, 2024	Response received from Permittee regarding information request and received application addendum.
May 14, 2024	Pre-PN draft sent to Permittee for technical review.
June 7, 2024	Completed technical review of pre-PN draft received from Permittee.
July 18, 2024	Preliminary draft sent for public notice.

Section 11 Complaint Form

COMPLAINT FORM

Date Time:

Activities Involved:

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

If applicable, operational conditions which contributed to the complaint:

If applicable, ambient conditions which contributed to the complaint:

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

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

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

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

_____	_____	_____
Printed Name	Signature	Date

Section 12 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? If yes, determine approximate distance from the stack exit to where the plume was read: No / Yes	
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		
	Start	End		Sum	Average	Comments

Section 13 Notification Form[16]

Pogo Mine	**AQ0406MSS08**
Stationary Source Name	**Air Quality Permit Number**

Northern Star **(Pogo) LLC**
Company Name

When did you discover the Excess Emissions/Permit Deviation?

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

When did the event/deviation occur?

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

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

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

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

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

☐ Excess Emissions - Complete Section 1 and Certify

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

☐ Deviation from Permit Conditions - Complete Section 2 and Certify

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

☐ Deviation from COBC[17], CO[18], or Settlement Agreement - Complete Section 2 and Certify

[16] Revised as of July 22, 2020.
[17] Compliance Order By Consent
[18] 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 33.)*

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.

[18 AAC 50.346(b)(3)]