

# DEPARTMENT OF ENVIRONMENTAL CONSERVATION AIR QUALITY CONTROL CONSTRUCTION PERMIT

Permit AQ0934CPT02  
Rescinds AQ0934CPT01

Preliminary Date – December 12, 2022

The Alaska Department of Environmental Conservation (Department), under the authority of AS 46.14 and 18 AAC 50, issues Air Quality Control Construction Permit AQ0934CPT01 to the Permittee listed below.

**Operator and Permittee:** Donlin Gold LLC  
2525 C St., Suite 450  
Anchorage, AK 99503

**Owner:** Same as Permittee

**Stationary Source** Donlin Gold Project

**Location:** Latitude: 62° 1' 12"; Longitude: -158° 11' 59.9"

**Physical Address:** Within T22N and 23N/R48W and T22N and 23N/R49W, Seward Meridian

**Permit Contact:** Dan Graham, General Manager

**Project:** Mine Construction

This permit is classified under 18 AAC 50.306 as a Prevention of Significant Deterioration (PSD) major stationary source for oxides of nitrogen (NO<sub>x</sub>), carbon monoxide (CO), particulate matter (PM), particulate matter with an aerodynamic diameter not exceeding a nominal 10 micrometers (PM<sub>10</sub>), particulate matter with an aerodynamic diameter not exceeding a nominal 2.5 micrometers (PM<sub>2.5</sub>), volatile organic compounds (VOC), and greenhouse gases (GHGs). The project is also classified under 18 AAC 50.502(b)(3) for operating a rock crusher; and under 18 AAC 50.508(5) for Owner Requested Limits (ORLs) to avoid PSD classification under 18 AAC 50.306 for sulfur dioxide (SO<sub>2</sub>), and to avoid Hazardous Air Pollutants (HAPs) major stationary source classification under 18 AAC 50.316. As required by AS 46.14.120(c) the Permittee shall comply with the terms and conditions of this permit.

---

James R. Plosay, Manager  
Air Permits Program

## Table of Contents

|             |  |    |
|-------------|--|----|
| Section 1.  | Emissions Unit Inventory .....   | 3  |
| Section 2.  | Fee Requirements.....  | 10 |
| Section 3.  | State Emission Standards.....  | 11 |
| Section 4.  | Ambient Air Quality Protection Requirements.....   | 12 |
| Section 5.  | Best Available Control Technology.....   | 17 |
| Section 6.  | Owner Requested Limits to Avoid Prevention of Significant Deterioration (PSD)<br>Review Under 18 AAC 50.306..... | 33 |
| Section 7.  | Owner Requested Limit to Avoid HAPs Major Source Classification Under 18<br>AAC 50.316 .....                     | 34 |
| Section 8.  | Record Keeping, Reporting, and Certification Requirements .....  | 36 |
| Section 9.  | Standard Permit Conditions .....   | 42 |
| Section 10. | General Source Test Requirements.....  | 43 |
| Section 11. | Permit Documentation .....   | 45 |
| Section 12. | Complaint Form .....   | 46 |
| Section 13. | Visible Emissions Form.....  | 47 |
| Section 14. | ADEC Notification Form.....  | 49 |
| Section 15. | Public Access Control Plan.....  | 54 |
| Section 16. | Fugitive Dust Control Plan .....   | 79 |
| Section 17. | Fugitive Dust Inspection Log.....  | 88 |

## 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 information 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 – Permit Emission Unit Inventory**

| EU ID                   | EU Description (Model/Engine)  | Fuel Type        | Rating/size <sup>1</sup>      |
|-------------------------|--|------------------|-------------------------------|
| <b>Power Generation</b> |  |                  |                               |
| 1                       | Wärtsilä 18V50DF #1  | ULSD/Natural Gas | 17,076 kW                     |
| 2                       | Wärtsilä 18V50DF #2  | ULSD/Natural Gas | 17,076 kW                     |
| 3                       | Wärtsilä 18V50DF #3  | ULSD/Natural Gas | 17,076 kW                     |
| 4                       | Wärtsilä 18V50DF #4  | ULSD/Natural Gas | 17,076 kW                     |
| 5                       | Wärtsilä 18V50DF #5  | ULSD/Natural Gas | 17,076 kW                     |
| 6                       | Wärtsilä 18V50DF #6  | ULSD/Natural Gas | 17,076 kW                     |
| 7                       | Wärtsilä 18V50DF #7  | ULSD/Natural Gas | 17,076 kW                     |
| 8                       | Wärtsilä 18V50DF #8  | ULSD/Natural Gas | 17,076 kW                     |
| 9                       | Wärtsilä 18V50DF #9  | ULSD/Natural Gas | 17,076 kW                     |
| 10                      | Wärtsilä 18V50DF #10   | ULSD/Natural Gas | 17,076 kW                     |
| 11                      | Wärtsilä 18V50DF #11   | ULSD/Natural Gas | 17,076 kW                     |
| 12                      | Wärtsilä 18V50DF #12   | ULSD/Natural Gas | 17,076 kW                     |
| 13                      | Airport Generator #1   | Diesel           | 200 kW                        |
| 14                      | Airport Generator #2   | Diesel           | 200 kW                        |
| <b>Boilers</b>          |  |                  |                               |
| 15                      | POX Boiler #1  | ULSD/Natural Gas | 29.29 MMBtu/hr                |
| 16                      | POX Boiler #2  | ULSD/Natural Gas | 29.29 MMBtu/hr                |
| 17                      | Oxygen Plant Boiler  | ULSD/Natural Gas | 20.66 MMBtu/hr                |
| 18                      | Carbon Elution Heater  | ULSD/Natural Gas | 16 MMBtu/hr                   |
| 19                      | Power Plant Auxiliary Heater #1  | ULSD/Natural Gas | 16.5 MMBtu/hr                 |
| 20                      | Power Plant Auxiliary Heater #2  | ULSD/Natural Gas | 16.5 MMBtu/hr                 |
| 21                      | SO <sub>2</sub> Burner   | Natural Gas      | 2 MMBtu/hr                    |
| 22                      | Auxiliary SO <sub>2</sub> Burner   | ULSD             | 2 MMBtu/hr                    |
| 23                      | Building Heaters (138 units)   | Natural Gas      | 0.175 MMBtu/hr<br>(each unit) |
| 24                      | Air Handler Heaters 81-HVA-104 to 107, 109, 111 to 113, 126, 201 to 207, 220, 230 (19 units) | Natural Gas      | 5 MMBtu/hr<br>(each unit)     |
| 25                      | Air Handler Heaters 81-HVA-108, 119, 231, 233, 234, 253, 257 (7 units)                       | Natural Gas      | 2.5 MMBtu/hr<br>(each unit)   |
| 26                      | Portable Heaters (20 Units)  | ULSD             | 0.86 MMBtu/hr<br>(each unit)  |

| EU ID                        | EU Description (Model/Engine)                         | Fuel Type | Rating/size <sup>1</sup>                 |
|------------------------------|---|-----------|--|
| <b>Incinerators</b>          |   |           |  |
| 27                           | Camp Waste Incinerator                                |           | 990 lb/hr                                |
| 28                           | Sewage Sludge Incinerator                             |           | 0.058 ton/day                            |
| <b>Emergency Equipment</b>   |   |           |  |
| 29                           | Black Start Generator BEDG1                           | ULSD      | 600 kW                                   |
| 30                           | Black Start Generator BEDG2                           | ULSD      | 600 kW                                   |
| 31                           | Camp Site Emergency Generator CEDG1                   | ULSD      | 1,500 kW                                 |
| 32                           | Camp Site Emergency Generator CEDG2                   | ULSD      | 1,500 kW                                 |
| 33                           | Camp Site Emergency Generator CEDG3                   | ULSD      | 1,500 kW                                 |
| 34                           | Camp Site Emergency Generator CEDG4                   | ULSD      | 1,500 kW                                 |
| 35                           | Mine Site Tank Farm Fire Pump FP1                     | ULSD      | 252 hp                                   |
| 36                           | Mine Site Mill Fire Pump FP2                          | ULSD      | 252 hp                                   |
| 37                           | Camp Site Fire Pump FP3                               | ULSD      | 252 hp                                   |
| <b>Processing Operations</b> |   |           |  |
| 38                           | Gyratory Crusher Dump Pocket 11-BIN-100               |           | 5,100 ton/hr                             |
| 39                           | Gyratory Crusher Circuit                              |           | 5,100 ton/hr                             |
| 40                           | Gyratory Crusher Circuit<br>Dust Collector 81-DCL-100 |           | 25,015 ACFM                              |
| 41                           | Gyratory Crusher 11-CRU-100                           |           | 5,100 ton/hr                             |
| 42                           | Gyratory Crusher Surge Pocket 11-BIN-150              |           | 5,100 ton/hr                             |
| 43                           | Gyratory Crusher Apron Feeder 11-FEE-150              |           | 5,100 ton/hr                             |
| 44                           | Gyratory Crusher Discharge Conveyor 11-CVB-100        |           | 5,100 ton/hr                             |
| 45                           | Stockpile Feed Conveyor 14-CVB-200                    |           | 5,100 ton/hr                             |
| 46                           | Apron Feeder 14-FEE-200                               |           | 3,303 ton/hr (all 4<br>feeders combined) |
| 47                           | Apron Feeder 14-FEE-200<br>Dust Collector 81-DCL-200  |           | 5,591 ACFM                               |
| 48                           | Apron Feeder 14-FEE-210                               |           | 3,303 ton/hr (all 4<br>feeders combined) |
| 49                           | Apron Feeder 14-FEE-210<br>Dust Collector 81-DCL-300  |           | 5,591 ACFM                               |
| 50                           | Apron Feeder 14-FEE-220                               |           | 3,303 ton/hr (all 4<br>feeders combined) |
| 51                           | Apron Feeder 14-FEE-220<br>Dust Collector 81-DCL-400  |           | 5,591 ACFM                               |
| 52                           | Apron Feeder 14-FEE-230                               |           | 3,303 ton/hr (all 4<br>feeders combined) |
| 53                           | Apron Feeder 14-FEE-230<br>Dust Collector 81-DCL-500  |           | 5,591 ACFM                               |
| 54                           | SAG Mill Feed Conveyor 16-CVB-300                     |           | 3,303 ton/hr                             |
| 55                           | Pebble Crusher 16-CRU-200                             |           | 660 ton/hr (both                         |

| EU ID | EU Description (Model/Engine)  | Fuel Type | Rating/size <sup>1</sup>                   |
|-------|--|-----------|--|
|       |  |           | pebble crushers combined)                  |
| 56    | Pebble Crusher 16-CRU-300  |           | 660 ton/hr (both pebble crushers combined) |
| 57    | Pebble Crusher 16-CRU-200, 16-CRU-300<br>Dust Collector 81-DCL-600       |           | 30,017 ACFM                                |
| 58    | Pebble Discharge Conveyor 16-CVB-480                                     |           | 660 ton/hr                                 |
| 59    | Lime Hopper 15-HOP-535   |           | 121 tons                                   |
| 60    | Lime Hopper 15-HOP-535<br>Dust Collector 15-FIL-535                      |           | 1,500 ACFM                                 |
| 61    | Lime Silo 15-BIN-800   |           | 135tons                                    |
| 62    | Lime Silo 15-BIN-800<br>Dust Collector 15-DCL-700                        |           | 1,500 ACFM                                 |
| 63    | Lime Slaker 15-MIL-400   |           |  |
| 64    | Lime Slaker 15-MIL-400<br>Wet Scrubber 15-SBW-550                        |           | 628 ACFM                                   |
| 65    | Flocculant Handling and Mixing 15-FLOC                                   |           | 3,662 ton/yr                               |
| 66    | Flocculant Handling and Mixing 15-FLOC<br>Dust Collector 15-DCL-XFL      |           | 840 ACFM                                   |
| 67    | Caustic Soda Handling and Mixing 15-NAOH                                 |           | 304 ton/yr                                 |
| 68    | Caustic Soda Handling and Mixing 15-NAOH<br>Dust Collector 15-DCL-100    |           | 1,324 ACFM                                 |
| 69    | Copper Sulfate Handling and Mixing 15-CUSO4                              |           | 2,436 ton/yr                               |
| 70    | Copper Sulfate Handling and Mixing 15-CUSO4<br>Dust Collector 15-DCL-105 |           | 3,002 ACFM                                 |
| 71    | Xanthate (PAX) Handling and Mixing 15-PAX                                |           | 4,306 ton/yr                               |
| 72    | PAX Handling and Mixing 15-PAX<br>Dust Collector 15-DCL-110              |           | 3,002 ACFM                                 |
| 73    | Soda Ash Handling 15-SODA1   |           | 1,076 ton/yr                               |
| 74    | Soda Ash Handling 15-SODA1<br>Dust Collector 15-DCL-520                  |           | 2,000 ACFM                                 |
| 75    | Soda Ash Mixing 15-SODA2   |           | 1,076 ton/yr                               |
| 76    | Soda Ash Mixing 15-SODA2<br>Dust Collector 15-DCL-115                    |           | 3,002 ACFM                                 |
| 77    | Autoclave 17-AUT-101   |           | 210 ton/hr                                 |
| 78    | Autoclave 17-AUT-101<br>Condenser 17-VEA-103                             |           |  |
| 79    | Autoclave 17-AUT-101<br>Venturi Scrubber 17-SBW-101                      |           |  |

| EU ID | EU Description (Model/Engine)  | Fuel Type | Rating/size <sup>1</sup>       |
|-------|--|-----------|--------------------------------|
| 80    | Autoclave 17-AUT-101<br>VOC/Hg Carbon Filter 17-VEA-104  |           | 7,764 WSCFM                    |
| 81    | Autoclave 17-AUT-201   |           | 210 ton/hr                     |
| 82    | Autoclave 17-AUT-201<br>Condenser 17-VEA-203   |           |                                |
| 83    | Autoclave 17-AUT-201<br>Venturi Scrubber 17-SBW-201  |           |                                |
| 84    | Autoclave 17-AUT-201<br>VOC/Hg Carbon Filter 17-VEA-204  |           | 7,764 WSCFM                    |
| 85    | Hot Cure Tank 17-TNK-302   |           | 137 ACFM                       |
| 86    | Hot Cure Tank 17-TNK-303   |           | 137 ACFM                       |
| 87    | Hot Cure Tank 17-TNK-304   |           | 137 ACFM                       |
| 88    | Carbon Regeneration Kiln 56-KLN-100  |           | 1.65 ton/hr                    |
| 89    | Carbon Regeneration Kiln 56-KLN-100<br>Off Gas Cooler 56-CDO-300   |           |                                |
| 90    | Carbon Regeneration Kiln 56-KLN-100<br>Carbon Filter 56-FIL-205  |           | 2,346 DSCFM                    |
| 91    | Electrowinning Circuit Cell 37-EWN-100   |           | 211 gpm (all 4 cells combined) |
| 92    | Electrowinning Circuit Cell 37-EWN-200   |           |                                |
| 93    | Electrowinning Circuit Cell 37-EWN-300   |           |                                |
| 94    | Electrowinning Circuit Cell 37-EWN-400   |           |                                |
| 95    | Electrowinning Circuit Cells<br>Demister 37-DEM-XEW  |           |                                |
| 96    | Electrowinning Circuit Cells<br>Carbon Filter 37-FIL-110   |           | 4,189 DSCFM                    |
| 97    | Mercury Retort 19-VEZ-100  |           |                                |
| 98    | Mercury Retort 19-VEZ-100<br>Condenser 19-CDO-100  |           |                                |
| 99    | Mercury Retort 19-VEZ-100<br>Carbon Filter 19-COL-100  |           | 203 DSCFM                      |
| 100   | Induction Smelting Furnace 19-FUR-100  |           |                                |
| 101   | Induction Smelting Furnace 19-FUR-100<br>Dust Collector 19-DCL-XFU   |           |                                |
| 102   | Induction Smelting Furnace 19-FUR-100<br>Carbon Filter 19-FIL-XFU  |           | 22,006 DSCFM                   |
| 103   | Sample Receiving and Preparation<br>Drying Ovens (2 Grieve 350 Dryers) 24-LAB1   |           | 3,575 lb/day                   |
| 104   | Sample Receiving and Preparation<br>Crushers, Pulverizers, Splitters, and Screens 24-LAB1                              |           | 3,575 lb/day                   |
| 105   | Sample Receiving and Preparation<br>Crushers, Pulverizers, Splitters, and Screens 24-LAB1<br>Dust Collector 24-DCL-XL1 |           | 5,886 ACFM                     |
| 106   | Assay Furnaces 24-LAB2   |           | 3,575 lb/day                   |

| EU ID                    | EU Description (Model/Engine)   | Fuel Type | Rating/size <sup>1</sup>           |
|--------------------------|---|-----------|------------------------------------|
| 107                      | Assay Furnaces 24-LAB2<br>Dust Collector 24-DCL-XL2   |           | 29,429 ACFM                        |
| 108                      | Metallurgical Drying Oven<br>Grieve 350 Dryer 24-LAB3   |           | 3,575 lb/day                       |
| 109                      | Metallurgical Material Testing<br>Grinding, Rollers, Screens 24-LAB3                              |           | 3,575 lb/day                       |
| 110                      | Metallurgical Material Testing<br>Grinding, Rollers, Screens 24-LAB3<br>Dust Collector 24-DCL-XL3 |           | 5,886 ACFM                         |
| 111                      | Water Treatment Plant Water Conditioning 61-COND  |           |                                    |
| 112                      | Water Treatment Plant Water Conditioning 61-COND<br>Dust Collector 54-DCL-710                     |           | 1,500 SCFM                         |
| <b>Mining Activities</b> |   |           |                                    |
| 113                      | Drilling  |           | 21,064-193,629<br>holes/yr         |
| 114                      | Blasting  |           | 236-641 blasts/yr                  |
| 115                      | Ore Loading (In-Pit)  |           | 4,748,869 –<br>39,922,756 ton/yr   |
| 116                      | Ore Unloading (Short-Term Stockpile)  |           | 2,136,991 - 9,816,777<br>ton/yr    |
| 117                      | Ore Unloading (Long-Term Stockpile)   |           | 0 – 19,288,627 ton/yr              |
| 118                      | Ore Reloading (Long-Term Stockpile)   |           | 0 – 21,549,629 ton/yr              |
| 119                      | Waste Loading (In-Pit)  |           | 9,565,683 -<br>152,286,568 ton/yr  |
| 120                      | Waste Unloading and Reloading   |           | 14,302,556 -<br>155,123,914 ton/yr |
| 121                      | Water Truck   | Diesel    | 37,090 – 183,604<br>VMT/yr         |
| 122                      | Dozer   | Diesel    | 39,868 – 77,567 hr/yr              |
| 123                      | Grader  | Diesel    | 3,970 – 45,778 hr/yr               |
| <b>Tanks</b>             |   |           |                                    |
| 124                      | Acidulation Tank  |           |                                    |
| 125                      | Neutralization Tank   |           |                                    |
| 126                      | Tank Farm Tank #1   | ULSD      | 2,500,000 gal                      |
| 127                      | Tank Farm Tank #2   | ULSD      | 2,500,000 gal                      |
| 128                      | Tank Farm Tank #3   | ULSD      | 2,500,000 gal                      |
| 129                      | Tank Farm Tank #4   | ULSD      | 2,500,000 gal                      |
| 130                      | Tank Farm Tank #5   | ULSD      | 2,500,000 gal                      |
| 131                      | Tank Farm Tank #6   | ULSD      | 2,500,000 gal                      |
| 132                      | Tank Farm Tank #7   | ULSD      | 2,500,000 gal                      |
| 133                      | Tank Farm Tank #8   | ULSD      | 2,500,000 gal                      |
| 134                      | Tank Farm Tank #9   | ULSD      | 2,500,000 gal                      |

| EU ID                   | EU Description (Model/Engine)               | Fuel Type | Rating/size <sup>1</sup>              |
|-------------------------|---|-----------|---------------------------------------|
| 135                     | Tank Farm Tank #10                          | ULSD      | 2,500,000 gal                         |
| 136                     | Tank Farm Tank #11                          | ULSD      | 2,500,000 gal                         |
| 137                     | Tank Farm Tank #12                          | ULSD      | 2,500,000 gal                         |
| 138                     | Tank Farm Tank #13                          | ULSD      | 2,500,000 gal                         |
| 139                     | Tank Farm Tank #14                          | ULSD      | 2,500,000 gal                         |
| 140                     | Tank Farm Tank #15                          | ULSD      | 2,500,000 gal                         |
| 141                     | Fuel Station 1 Tank                         | ULSD      | 25,000 gal                            |
| 142                     | Fuel Station 2 Tank                         | ULSD      | 25,000 gal                            |
| 143                     | ANFO Mixing Plant Tank                      | ULSD      | 10,000 gal                            |
| 144                     | Mill Fire Pump Tank                         | ULSD      | 270 gal                               |
| 145                     | Tank Farm Fire Pump Tank                    | ULSD      | 270 gal                               |
| 146                     | POX Boiler Tank                             | ULSD      | 5,000 gal                             |
| 147                     | Oxygen Plant Boiler Tank                    | ULSD      | 5,000 gal                             |
| 148                     | Carbon Elution Heater Tank                  | ULSD      | 5,000 gal                             |
| 149                     | Auxiliary SO <sub>2</sub> Burner Tank       | ULSD      | 500 gal                               |
| 150                     | Power Plant A Tank                          | ULSD      | 33,000 gal                            |
| 151                     | Power Plant B Tank                          | ULSD      | 33,000 gal                            |
| 152                     | Camp Emergency Generators Tank              | ULSD      | 25,000 gal                            |
| 153                     | Camp Fire Pump Tank                         | ULSD      | 270 gal                               |
| 154                     | Jet Fuel Tank #1                            | Jet A     | 9,900 gal                             |
| 155                     | Jet Fuel Tank #2                            | Jet A     | 9,900 gal                             |
| 156                     | Aviation Gasoline Tank                      | 100 LL    | 5,000 gal                             |
| 157                     | Airport Generators Tank                     | ULSD      | 9,900 gal                             |
| <b>Roads</b>            |   |           |                                       |
| 158                     | Access Road - Camp to Mine Site             |           | 101,367 VMT/yr                        |
| 159                     | Access Road - Airport to Camp               |           | 60,173 VMT/yr                         |
| 160                     | Haul Road                                   |           | 4,847,140 VMT/yr                      |
| 162                     | Access Road - Jungjuk Port to Mine Site     |           | 651,046 VMT/yr                        |
| <b>Wind Erosion</b>     |   |           |                                       |
| 161                     | Wind Erosion                                |           |                                       |
| <b>Exploratory Camp</b> |   |           |                                       |
| EG-2                    | Electric Generator (Caterpillar / C9-230AG) | ULSD      | 230 kW                                |
| EG-3                    | Electric Generator (Caterpillar / C9-230AG) | ULSD      | 230 kW                                |
| WI-1                    | Waste Incinerator (EWI / ICI06)             |           | 0.5 ton per day<br>waste incineration |
| AG-1                    | Auxiliary Generator (Kubota / GL7000)       | ULSD      | 7 kW                                  |
| SG-1                    | Standby Generator (Caterpillar / 3404)      | ULSD      | 275 kW                                |
| SG-2                    | Standby Generator (John Deere / CD6059TF)   | ULSD      | 100 kW                                |



Table Notes:

<sup>1</sup> Mining activity rates are included in Table 1 as ranges as they vary by year.

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. The Permittee shall commence<sup>1</sup> construction of the stationary source authorized under Construction Permit AQ0934CPT02 within 18 months of the issuance of the permit. The permit becomes invalid if construction is not commenced within 18 months after the approval takes effect, is discontinued for a period of 18 months or more, or is not completed within a reasonable time, unless granted an extension in writing from the Department.

---

<sup>1</sup> Commence has the meaning given in 40 C.F.R. 52.21(b)(9).

---

## **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.
4. **Assessable Emissions.** For each period from July 1 through the following June 30, the Permittee shall pay to the Department an annual emission fee based on the stationary source's assessable emissions, as determined by the Department under 18 AAC 50.410. The 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:
  - 4.1 potential to emit of 11,413 TPY; or
  - 4.2 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.
5. **Assessable Emission Estimates.** The Permittee shall comply as follows:
  - 5.1 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 5.2. 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/>.
  - 5.2 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.
  - 5.3 If the stationary source has not commenced construction or operation on or before March 31st, 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.
  - 5.4 If no estimate is submitted on or before March 31 of each year, emission fees for the next fiscal year will be based on the potential to emit in Condition 4.1.

### **Section 3. State Emission Standards**

- 6. Visible Emissions for Industrial Process and Fuel-Burning Equipment:** The Permittee shall not cause or allow visible emissions, excluding water vapor, emitted from any of the EU IDs 1 through 38, 40, 44, 45, 47, 49, 51, 53, 57, 60, 62, 64, 66, 68, 70, 72, 74, 76, 80, 84 through 87, 90, 96, 99, 102, 105, 107, 110, and 112 listed in Table 1, to reduce visibility through the exhaust effluent by more than 20 percent averaged over any six consecutive minutes.
- 6.1 For each of EU IDs 1 through 22, 24, 27 through 38, 40, 44, 45, 47, 49, 51, 53, 57, 60, 62, 64, 66, 68, 70, 72, 74, 76, 80, 84 through 87, 90, 96, 99, 102, 105, 107, 110, and 112 record the date of initial startup.
- 6.2 For EU IDs 1 through 22, 24, 27 through 38, 40, 44, 45, 47, 49, 51, 53, 57, 60, 62, 64, 66, 68, 70, 72, 74, 76, 80, 84 through 87, 90, 96, 99, 102, 105, 107, 110, and 112, verify initial compliance with Condition 6 no later than 90 days after each EU becomes fully operational<sup>2</sup> as follows:
- Obtain a certified manufacturer’s guarantee that shows that each EU will comply with Condition 6; or
  - Conduct VE observations for each EU as described in 40 C.F.R. 60, Appendix A-4 Method 9 and/or Appendix A-7 Method 22.
  - Report in the first operating report required under Condition 43 the manufacturer’s guarantee or the results of VE observations required in Condition 6.2a or 6.2b for each EU.
- 7. Particulate Matter (PM) Emission Standards:** The Permittee shall not cause or allow PM emitted from EU IDs 1 through 26, 29 through 38, 40, 44, 45, 47, 49, 51, 53, 57, 60, 62, 64, 66, 68, 70, 72, 74, 76, 80, 84 through 87, 90, 96, 99, 102, 105, 107, 110, 112 through 14, and EG-2, EG-3, AG-1, SG-1 and SG-2, listed in Table 1, to exceed 0.05 grains per cubic foot of exhaust gas corrected to standard conditions and averaged over three hours.
- 8. Sulfur Compounds Emission Standards Requirements:** The Permittee shall not cause or allow sulfur-compound emissions, expressed as SO<sub>2</sub>, from EU IDs 1 through 26, 29 through 37, 80, 84, and EG-2 through SG-2 listed in Table 1, to exceed 500 parts per million by volume (ppm) averaged over three hours.
- 8.1 For the liquid fuel consumed in the EUs listed in Table 1 (excluding NREs), demonstrate compliance with the SO<sub>2</sub> standard by complying with Condition 36.1.

---

<sup>2</sup> *Fully operational* is defined as completing all testing and commissioning requirements after unit installation. Installation is defined as the point when unit is ready for operational testing. Operational testing and commissioning requirements shall not exceed 60 days after unit installation. The Permittee may request an extension in writing from the Department to this 60-day requirement in circumstances beyond the Permittee’s reasonable control.

## **Section 4. Ambient Air Quality Protection Requirements**

### **Initial Requirements**

9. The Permittee shall limit the NO<sub>x</sub> emissions from EU IDs EG-2, EG-3, WI-1, AG-1, SG-1, and SG-2 to less than 40 tons per year by limiting the hours of operation of EU SG-1 and EU SG-2 to 500 hours per rolling 12-month period and 120 hours per rolling 12-month period, respectively. Monitor, record, and report as follows:
  - 9.1 Install, maintain, and operate an hour meter on each of EU IDs SG-1 and SG-2;
  - 9.2 Record the hour meter reading for each of EU IDs SG-1 and SG-2 on the last day of each month;
  - 9.3 By the end of each month, calculate and record:
    - a. the number of operational hours recorded on the hour meter of each of EU IDs SG-1 and SG-2 during the previous month;
      - (i) if the hour meter was not operational during any day of that month, calculate the hours of operation based on the operation logs if available, otherwise, assume continuous operation for that day; and
    - b. the total number of hours that each of EU IDs SG-1 and SG-2 operated during the previous 12 consecutive months;
  - 9.4 Provide in each operating report required by Condition 43 the following information for each month of the reporting period:
    - a. the monthly and the 12-consecutive-month operational hours determined under Condition 9.3 for each of EU IDs SG-1 and SG-2; and
  - 9.5 Report as described in Condition 42 whenever an hour limit in Condition 9 is exceeded, or if any of Conditions 9.1 through 9.4 are not met.
10. The Permittee shall decommission<sup>3</sup> EU IDs EG-2, EG-3, AG-1, SG-1, and SG-2 within 60 days of when any of the following electrical generators become fully operational: EU IDs 1 through 12, or EU IDs 31 through 34. Record and report as follows:
  - 10.1 Notify the Department in writing within 30 days of decommissioning each of EU IDs EG-2, EG-3, AG-1, SG-1, and SG-2; and
  - 10.2 Report as described in Condition 42 if Condition 10 is not met.
11. The Permittee shall remove EU ID WI-1 from the Donlin Gold Project stationary source within 90 days of when EU ID 27 becomes fully operational. Record and report as follows:
  - 11.1 Notify the Department in writing within 30 days of removing EU ID WI-1; and
  - 11.2 Report as described in Condition 42 if Condition 11 is not met.

---

<sup>3</sup> In this permit decommission means the fuel system and generator electrical leads have been disconnected.

## General Requirements

12. Construction and operation of EU IDs 1 through 157 is prohibited until all easements or rights-of-way within the Core Operating Area (COA), as illustrated in Figure 3 of the September 2022 Public Access Control Plan (PACP) provided in Section 15 of this permit, have either been extinguished or relocated to areas outside the COA. Monitor, record, and report as follows:
  - 12.1 Prior to beginning construction of the stationary source, provide the approval date of the Permittee’s public easement plan for relocating/extinguishing the easements/rights-of-ways within the COA, along with a copy of the approval document issued by the Department of Natural Resources (DNR) and/or the Department of Transportation (DOT).
  - 12.2 Provide the date construction started within 30 days of starting construction.
  - 12.3 Report as described in Condition 42 if construction started prior to receiving DNR’s or DOT’s approval of the Permittee’s public easement plan.
13. Upon beginning onsite construction or mining activities, the Permittee shall maintain the ambient air boundary between the public and COA as described in the September 2022 PACP. Monitor, record, and report as follows:
  - 13.1 Record all signs of trespass, or actual trespassing events, and what, if any, action was taken to resolve the concern. Records may be kept in electronic format, but must be kept on-site for a minimum of two years.
  - 13.2 Confirm in each operating report required under Condition 43 that the ambient air boundary is being maintained as required by the September 2022 PACP.
  - 13.3 Report as described in Condition 42 if any of the requirements in Condition 13 are not met.
14. The Permittee shall limit the rated capacity of the Gyratory Crusher (EU ID 41) to no more than 5,100 tons per hour. Monitor, record, and report as follows:
  - 14.1 Provide within 60 days of installing or replacing EU ID 41 a copy of the manufacturer’s specifications; and
  - 14.2 Report as described in Condition 42 if the rated capacity of EU ID 41 exceeds 5,100 tons per hour.
15. The Permittee shall limit the SAG Mill Feed Conveyor (EU ID 54) throughput to 3,303 tons per hour. Monitor, record, and report as follows:
  - 15.1 Provide within 60 days of installing or replacing EU ID 54 a copy of the manufacturer’s specifications; and
  - 15.2 Report as described in Condition 42 if the rated capacity of EU 54 exceeds 3,303 tons per hour.

- 
- 16.** The Permittee shall limit the total combined rated capacity of the primary power plant generator engines (EU IDs 1 through 12) to 210 megawatts. Monitor, record, and report as follows:
- 16.1 Provide within 60 days of installing or replacing a primary power plant generator engine a copy of the manufacturer’s specifications for that EU, along with a tally (in megawatts) of the total installed rated capacity for EU IDs 1 through 12. If the rated capacity varies by fuel for a given EU, use the largest rated capacity in the tally.
  - 16.2 Report as described in Condition 42 if the total combined installed rated capacity of EU IDs 1 through 12 exceeds 210 megawatts. Do not include the power generated from the combined cycle steam turbine in the tally.
- 17.** For EU ID 114, the Permittee shall limit the amount of blasting agent to 60,000 metric tons per consecutive 12-month period. Monitor, record, and report as follows:
- 17.1 Record the date of each blast, and the amount of blasting agent used per blast, in a monthly log.
  - 17.2 By the end of each month, calculate and record:
    - a. the total quantity of blasting agent used during the previous month, and
    - b. the total quantity of blasting agent used during the previous 12-month period;
  - 17.3 Provide in each operating report required by Condition 43 the following information for each month of the reporting period:
    - a. the monthly and the 12-consecutive-month total quantities of blasting agents used as determined under Condition 17.2 for each month of the reporting period; and
  - 17.4 Report as described in Condition 42 whenever the limit in Condition 17 is exceeded.
- 18.** For each of the primary power plant generator engines, EU IDs 1 through 12, the Permittee shall comply as follows:
- 18.1 Construct and maintain a vertical uncapped exhaust stack with a minimum stack height of 49 meters above grade; this condition does not preclude the use of flapper valve rain covers, or other similar designs, that do not hinder the vertical momentum of the exhaust plume;
  - 18.2 Confirm in the first operating report required under Condition 43, that would be due after installing or replacing any of EU IDs 1 through 12, that the exhaust stack for that EU complies with Conditions 18.1.
  - 18.3 Report as described in Condition 42 if Condition 18.1 is not met.

---

## Pollutant-Specific Requirements

- 19.** To protect the Alaska Ambient Air Quality Standard (AAAQS) for the 1-hour and annual nitrogen dioxide (NO<sub>2</sub>) and annual PM<sub>2.5</sub>, and the annual Class II increments for NO<sub>2</sub>, PM<sub>10</sub>, and PM<sub>2.5</sub>, the Permittee shall limit the operation of the black start generators (EU IDs 29 and 30), the camp emergency generators (EU IDs 31 through 34) and the fire pump engines (EU IDs 35 through 37) to no more than 500 hours per year per unit. Monitor, record, and report as follows:
- 19.1 Install, maintain, and operate an hour meter on each EU listed in Condition 19;
- 19.2 Record the hour meter reading for each EU listed in Condition 19 on the last day of each month;
- 19.3 By the end of each month, calculate and record:
- a. the number of operational hours recorded on the hour meter of each EU listed in Condition 19 during the previous month;
    - (i) if the hour meter was not operational during any day of that month, calculate the hours of operation based on the operation logs if available, otherwise, assume continuous operation for that day; and
  - b. the total number of hours each EU operated during the previous 12 consecutive months;
- 19.4 Provide in each operating report required by Condition 43 the following information for each month of the reporting period:
- a. the monthly and the 12-consecutive-month operational hours determined under Condition 19.3 for each EU listed in Condition 19; and
- 19.5 Report as described in Condition 42 whenever the limit in Condition 19 is exceeded, or if any of Conditions 19.1 through 19.4 are not met.
- 20.** To protect AAAQS for the 1-hour, the annual, and the Class II increment for annual NO<sub>2</sub>, the Permittee shall comply with the NO<sub>x</sub> Best Available Control Technology (BACT) limits in Section 5 of this permit.
- 21.** To protect AAAQS for the 1-hour and the 8-hour CO, the Permittee shall comply with the CO BACT limits in Section 5 of this permit.
- 22.** To protect AAAQS for the 24-hour PM<sub>10</sub>, and the Class II increments for 24-hour and annual for PM<sub>10</sub>, the Permittee shall comply with 18 AAC 50.045(d) and with Conditions 22.1 through 22.4 as follows:
- 22.1 Comply with the PM<sub>10</sub> BACT limits in Section 5 of this permit.
- 22.2 For EU ID 114, limit the blasting area footprint to 120,000 square feet per blast. Monitor, record, and report as described in Conditions 22.2a through 22.2c.

- 
- a. Include the size of each blast, in square feet of area blasted, in the monthly log required under Condition 17.1.
  - b. Provide in each operating report required by Condition 43 the maximum area blasted, in square feet, for each month of the reporting period.
  - c. Report as described in Condition 42 whenever the limit in Condition 22.2 is exceeded.
- 22.3 Limit the fugitive PM emissions from all construction and maintenance activities, including, but not limited to road grading, bulldozing, and earth moving, by complying with the Best Practical Methods (BPMs) for Construction and Maintenance specified in Section 2.5 of the Fugitive Dust Control Plan (FDCP) contained in Section 16. Monitor, record, and report as described in Condition 22.3a through 22.3c.
- a. Perform an inspection at least once per calendar quarter that the mine is in operation of all construction and maintenance activities. If excessive dust is present, apply water spray on the affected area; or otherwise take action to reduce fugitive dust.
  - b. Keep records describing all inspections and precautions taken to prevent PM from becoming airborne in accordance with Condition 22.3 using the Fugitive Dust Inspection Log in Section 17. Keep the records at the mine site for five years.
  - c. Report as described in Condition 42 if the requirements of Condition 22.3 were not followed.
- 22.4 Record and report all fugitive dust complaints as follows:
- a. Keep records of any complaints received and any additional precautions that are taken to address the results of Department inspections that found potential dust problems.
  - b. Maintain records of complaints by utilizing the complaint form in Section 12.
  - c. For any dust complaints received relating to fugitive emissions that cross the ambient air quality boundary and that are directly attributable to their operations or activities, the Permittee shall review its fugitive dust plan, and submit to the Department the results of the fugitive dust plan review.
  - d. Submit any completed complaint form in Section 12 to the Department in accordance with Condition 40 within 30 days after receiving the complaint.
23. To protect AAAQS for the 24-hour and annual PM<sub>2.5</sub>, and the Class II increments for 24-hour and annual PM<sub>2.5</sub>, the Permittee shall comply with the PM<sub>2.5</sub> BACT limits in Section 5 of this permit and with Conditions 22.2 and 22.3.



## Section 5. Best Available Control Technology

### Power Generation

24. **Power Plant BACT Emission Limits:** Limit the emissions from the primary power plant generator engines, EU IDs 1 through 12, at all times as specified in Table 2, except during the allowable hours for startups as specified in Condition 24.1:

**Table 2: EU IDs 1 through 12 – BACT Limits**

| Pollutant                                    | BACT Control  | Fuel Type   | BACT Emission Limits      |
|--|---|-------------|---------------------------|
| CO   | Oxidation Catalyst and Good Combustion Practices            | ULSD        | 0.18 g/kW-hr              |
|  |   | Natural Gas | 0.12 g/kW-hr              |
| NOx  | Selective Catalytic Reduction and Good Combustion Practices | ULSD        | 0.53 g/kW-hr              |
|  |   | Natural Gas | 0.08 g/kW-hr              |
| PM, PM <sub>10</sub> , and PM <sub>2.5</sub> | Clean Fuel and Good Combustion Practices                    | ULSD        | 0.29 g/kW-hr <sup>4</sup> |
|  |   | Natural Gas | 0.13 g/kW-hr              |
| VOC (as CH <sub>4</sub> )                    | Oxidation Catalyst and Good Combustion Practices            | ULSD        | 0.21 g/kW-hr              |
|  |   | Natural Gas | 0.09 g/kW-hr              |
| GHG  | Good Combustion Practices                                   | ULSD        | 1,233,790 tpy (combined)  |
|  |   | Natural Gas | 882,130 tpy (combined)    |

- 24.1 Limit the number of hours EU IDs 1 through 12 operate without the selective catalytic reduction (SCR) and oxidation catalyst pollution control systems in full operation to 2,190 hours combined per 12 consecutive month period. Monitor, record, and report as described below:
- a. Calculate and record monthly, the number of times each of EU IDs 1 through 12 performed a startup, for the previous month.
  - b. Calculate and record monthly, the number of times each of EU IDs 1 through 12 performed a startup for the previous 12 consecutive month period.
  - c. Multiply the number of startups calculated in Condition 24.1b by 0.5 hours per startup to get the combined number of hours EU IDs 1 through 12 operated without the SCR and oxidation catalyst pollution control systems in full operation during the previous 12 consecutive month period.
  - d. Report in the operating report required in Condition 43 for each month covered in the operating report, the total combined hours that EU IDs 1 through 12 operated without the SCR and oxidation catalyst pollution control systems in full operation as recorded in Condition 24.1c.

<sup>4</sup> Note that the particulate matter BACT emission limit is for total PM (filterable and condensable). PM limits in NSPS Subpart IIII for EU IDs 1 through 12 only include front-half (filterable) emissions, as measured by EPA Reference Method 5 (NSPS Subpart IIII, Table 7).

24.2 For EU IDs 1 through 12, the Permittee shall:

- a. Install, operate, and maintain SCR and oxidation catalyst emissions controls on EU IDs 1 through 12, according to the manufacture’s specifications, at all times the units are operating, except during the allowable startup hours as specified in Condition 24.1.
  - (i) Limit emissions of ammonia slip downstream of the SCR to no greater than 10 ppmv as measured at maximum achievable load in accordance with Condition 24.3c.
- b. Notify the Department within 60 days of the first of EU IDs 1 through 12 becoming fully operational firing ULSD and firing natural gas, one notification for each fuel type.
- c. Perform regular maintenance considering the manufacturer’s or the operator’s maintenance procedures.
- d. Keep records of any maintenance that would have a significant effect on emissions. The records may be kept in electronic format.
- e. Keep a copy of either the manufacturer’s or the operator’s maintenance procedures.

24.3 To show compliance with the NO<sub>x</sub>, CO, and VOC emission limits set out in Table 2, the Permittee shall:

- a. Submit to the Department at least 60 days before startup of any of EU IDs 1 through 12 a vendor verification that the SCR and catalytic oxidation control systems will comply with the NO<sub>x</sub>, CO and VOC limits established in Table 2.
- b. Conduct a source test while firing ULSD and while firing natural gas on three<sup>5</sup> of EUs 1 through 12, within 180 days<sup>5</sup> from the first of EU IDs 1 through 12 becoming fully operational firing ULSD and firing natural gas, in accordance with Section 10, to demonstrate initial compliance with the NO<sub>x</sub>, CO, and VOC limits listed in Table 2 as described in Conditions 24.3b(i) through 24.3b(v).
  - (i) Conduct the source test for at least three loads representative of the normal operating range of the EU.
  - (ii) Use the applicable test method set out in 40 C.F.R. 60, Appendix A. Source test downstream of the SCR control system for NO<sub>x</sub> and downstream of the catalytic oxidation control system for CO and VOC.

---

<sup>5</sup> Note that source testing (performance tests) to demonstrate compliance with an emission limit in 40 C.F.R. Subparts IIII or JJJJ need to be completed on each emissions unit and conducted within 60 days after achieving the maximum production rate at which the EU IDs will be operated, but not later than 180 days after initial startup of the EU under 40 C.F.R. 60.8(a).

- (iii) Each source test shall consist of at least three 1-hour or longer valid test runs. Emission results shall be reported as the arithmetic average of all valid test runs and shall be expressed in the corresponding pollutant units listed in Table 2.
  - (iv) During each test run, the inlet air temperature and pressure drop across the SCR unit and oxidation catalyst shall be measured.
  - (v) The Permittee shall report the results of the source test to the Department in accordance with Condition 61.
- c. During each source test required by Conditions 24.3b, measure the ammonia slip using the U.S. EPA Method 320 or ASTM D6348 for Fourier Transform Infrared Spectroscopy (FTIR), CTM-027, or Bay Area Source Test Procedure ST-1B, as applicable. The test shall be completed at maximum achievable load. The highest urea injection rate setting (gallons per hour) of the three runs shall become the maximum ammonia injection rate for the SCR equipped engines.
- d. Monitor the SCR control system and the oxidation catalyst operating parameters as follows:
- (i) Install temperature sensing devices to monitor the inlet temperature of each installed SCR control system and oxidation catalyst.
    - (A) Monitor engine exhaust temperature at the inlet to each SCR unit and each oxidation catalyst unit at least once per hour during all periods of operation. Record for each calendar day the minimum and maximum inlet gas temperature of each SCR unit and each oxidation catalyst unit. Data capture and recording may be electronic.
    - (B) Report the minimum and maximum daily inlet gas temperature of each SCR control and each oxidation catalyst unit for each calendar month in the operating report required by Condition 43.
    - (C) Report in accordance with Condition 42, whenever the inlet gas temperature of an SCR unit or an oxidation catalyst unit is outside the acceptable range identified in the manufacturer's specifications. The report should include any corrective actions taken.
  - (ii) Install, operate, and maintain a flow meter for measuring urea injection flowrate.
    - (A) Monitor and record the urea injection flowrate in gallons per hour at least once per hour during all periods of operation, excluding engine startup when the SCR is not fully operational. Record for each calendar day the minimum and maximum urea injection flowrate for each SCR unit. Data capture and recording may be electronic.

- (B) Report the minimum and maximum daily urea injection flowrate for each SCR control for each calendar month in the operating report required by Condition 43.
  - (C) Report in accordance with Condition 42, whenever the urea injection flowrate is higher than the maximum urea injection rate identified in Condition 24.3c. The report should include any corrective actions taken.
- (iii) Install gauges before and after the oxidation catalyst controls to monitor the pressure drop across each installed oxidation catalyst unit.
- (A) Maintain the oxidation catalyst such that the pressure drop across each oxidation unit is within the acceptable range identified in the manufacturer’s specifications.
  - (B) If the pressure drop exceeds the acceptable differential identified in the manufacturer’s specifications, the oxidation catalyst unit shall be inspected, cleaned, or replaced, as necessary.
  - (C) Report in accordance with Condition 42, whenever the pressure drop across an oxidation catalyst unit is outside the acceptable range identified in the manufacturer’s specifications. The report should include any corrective actions taken.
- 24.4 To show compliance with the PM, PM<sub>10</sub>, and PM<sub>2.5</sub> emission limits set out in Table 2, the Permittee shall:
- a. Submit to the Department at least 60 days before startup of any of EU IDs 1 through 12 a certified manufacturer’s guarantee demonstrating that EU IDs 1 through 12 will comply with the emission limits in Table 2; and
  - b. Conduct a source test while firing ULSD and at the Department’s discretion while firing natural gas on three of EU IDs 1 through 12, within 180 days of the first of EU IDs 1 through 12 becoming fully operational firing ULSD and firing natural gas, in accordance with Section 10;
  - c. The Permittee shall report the results of the source test to the Department in accordance with Condition 61.
- 24.5 To show compliance with the GHG emission limits set out in Table 2, the Permittee shall:
- a. Maintain good combustion practices at all times the units are in operation; and
  - b. Comply with Conditions 24.2c through 24.2e.
- 24.6 Report as described in Condition 42 if any of:

- a. the combined operating hour limit in Condition 24.1 allowed for EU IDs 1 through 12 to operate without the SCR and oxidation catalyst pollution control systems in full operation is exceeded;
- b. the emission rates determined by the source tests required by Conditions 24.3 through 24.4, exceed the limits in Table 2 or Condition 24.2a(i), or
- c. the requirements of Conditions 24.1 through 24.5 are not met.

**25. Small Diesel Engines BACT Emission Limits:** Limit the emissions from EU IDs 13 and 14 as specified in Table 3:

**Table 3: EU IDs 13 and 14 – BACT Limits**

| Pollutant                                    | BACT Control   | BACT Emission Limit  |
|--|--|----------------------|
| CO   | Good Combustion Practices and Certified to EPA Tier 4 Final              | 4.38 g/kW-hr         |
| NOx  | Good Combustion Practices and Certified to EPA Tier 4 Final              | 0.60 g/kW-hr         |
| PM, PM <sub>10</sub> , and PM <sub>2.5</sub> | Clean Fuel, Good Combustion Practices, and Certified to EPA Tier 4 Final | 0.03 g/kW-hr         |
| VOC  | Good Combustion Practices and Certified to EPA Tier 4 Final              | 0.29 g/kW-hr         |
| GHG  | Good Combustion Practices  | 2,691 tpy (combined) |

25.1 To show compliance with the emission limits for EU IDs 13 and 14 in Table 3, the Permittee shall:

- a. Verify initial compliance with the CO, NOx, PM, PM<sub>10</sub>, PM<sub>2.5</sub>, and VOC emission limits for EU IDs 13 and 14; established in Table 3 by either:
  - (i) Submitting to the Department in the first operating report required by Condition 43 after each of EU IDs 13 and 14 become fully operational a certified manufacturer’s guaranteed emissions date demonstrating that each small diesel engine will comply with the CO, NOx, PM, PM<sub>10</sub>, PM<sub>2.5</sub>, and VOC emission limits established in Table 3; or
  - (ii) Conducting a source test for CO, NOx, PM, PM<sub>10</sub>, PM<sub>2.5</sub>, and VOC within 180 days of each of EU IDs 13 and 14 becoming fully operational, in accordance with Section 10.
- b. Perform regular maintenance following the manufacturer’s or the operator’s maintenance procedures.
- c. Keep records of any maintenance that would have a significant effect on emissions. The records may be kept in electronic format.
- d. Keep a copy of either the manufacturer’s or the operator’s maintenance procedures.

**Boilers, Heaters, and Burners**

**26. Boilers, Heaters, and Burners BACT Emission Limits:** Limit the emissions from EU IDs 15 through 26 as specified in Table 4:

**Table 4: EU IDs 15 through 26 – BACT Limits**

| Pollutant                                    | BACT Control   | Fuel Type   | BACT Emission Limits in lb/MMBtu for EU IDs |         |                     |           |        |
|--|--|-------------|---|---------|---------------------|-----------|--------|
|  |  |             | 15 – 17                                     | 18      | 19 - 21, 24, and 25 | 22 and 26 | 23     |
| CO   | Good Combustion Practices  | ULSD        | 0.16  | 0.24    | 0.038               | 0.038     | -      |
|  |  | Natural Gas | 0.074                                       | 0.111   | 0.082               | -         | 0.039  |
| NOx  | Good Combustion Practices (EU IDs 15 – 26) & Flue Gas Recirculation (EU IDs 15 – 18) | ULSD        | 0.131                                       | 0.223   | 0.154               | 0.154     | -      |
|  |  | Natural Gas | 0.048                                       | 0.061   | 0.098               | -         | 0.092  |
| PM, PM <sub>10</sub> , and PM <sub>2.5</sub> | Clean Fuel and Good Combustion Practices   | ULSD        | 0.0254                                      | 0.0254  | 0.0254              | 0.0254    | -      |
|  |  | Natural Gas | 0.0075                                      | 0.0075  | 0.0075              | -         | 0.0075 |
| VOC  | Good Combustion Practices  | ULSD        | 0.00154                                     | 0.00154 | 0.00154             | 0.0026    | -      |
|  |  | Natural Gas | 0.0054                                      | 0.0054  | 0.0054              | -         | 0.0054 |
| GHG  | Good Combustion Practices  | ULSD        | 176,775 tpy (EU IDs 15 – 26 combined)       |         |                     |           |        |
|  |  | Natural Gas |   |         |                     |           |        |

26.1 To show compliance with the emission limits for EU IDs 15 through 26 as specified in Table 4, the Permittee shall:

- a. For EU IDs 15 through 18, install, operate, and maintain flue gas recirculation according to the manufacture’s specifications at all times the units are operating.
- b. Verify initial compliance with the CO, NOx, PM, PM<sub>10</sub>, PM<sub>2.5</sub>, and VOC emission limits by either:
  - (i) Submitting to the Department in the first operating report required by Condition 43 after each of EU IDs 15 through 26 become fully operational a certified manufacturer’s guaranteed emissions data demonstrating that each boiler, burner, and heater will comply with the applicable CO, NOx, PM, PM<sub>10</sub>, PM<sub>2.5</sub>, and VOC emission limits established in Table 4; or
  - (ii) Conducting a source test for CO, NOx, PM, PM<sub>10</sub>, PM<sub>2.5</sub>, and VOC within 180 days of each of EU IDs 15 through 26 becoming fully operational, in accordance with Section 10; or

- (iii) For any emissions unit with rated capacity less than 1.0 MMBtu/hr, obtain certification of the emissions unit’s rating and the fuel type. Submit the certification to the Department in the first operating report required by Condition 43 after each such emissions unit becomes fully operational.
- c. Perform regular maintenance following the manufacturer’s or the operator’s maintenance procedures.
- d. Keep records of any maintenance that would have a significant effect on emissions. The records may be kept in electronic format.
- e. Keep a copy of either the manufacturer’s or the operator’s maintenance procedures.

**Incinerators**

**27. Incinerators BACT Emission Limits:** Limit the emissions from EU IDs 27 and 28 as specified in Table 5:

**Table 5: EU IDs 27 and 28 – BACT Limits**

| Pollutant                                    | BACT Control              | BACT Emission Limits for EU IDs              |                                 |
|--|---------------------------|--|---------------------------------|
|  |                           | 27   | 28                              |
| CO   | Good Combustion Practices | 17 ppmvd at 7% O <sub>2</sub>                | 52 ppmvd at 7% O <sub>2</sub>   |
| NO <sub>x</sub>                              | Good Combustion Practices | 23 ppmvd at 7% O <sub>2</sub>                | 210 ppmvd at 7% O <sub>2</sub>  |
| PM, PM <sub>10</sub> , and PM <sub>2.5</sub> | Good Combustion Practices | 18 mg/dscm at 7% O <sub>2</sub>              | 60 mg/dscm at 7% O <sub>2</sub> |
| VOC  | Good Combustion Practices | 3.0 lb/ton                                   | 1.7 lb/ton                      |
| GHG  | Good Combustion Practices | 4,023.3 tpy (combined with EU IDs 27 and 28) |                                 |

27.1 To show compliance with the emission limits for EU IDs 27 and 28 in Table 5, the Permittee shall:

- a. Conduct a source test on each of EU IDs 27 and 28 within 180 days of the EU becoming fully operational, in accordance with Section 10, to demonstrate initial compliance with the CO, NO<sub>x</sub>, PM, PM<sub>10</sub>, PM<sub>2.5</sub>, and VOC emission limits in Table 5.
- b. Perform regular maintenance following the manufacturer’s or the operator’s maintenance procedures.
- c. Keep records of any maintenance that would have a significant effect on emissions. The records may be kept in electronic format.
- d. Keep a copy of either the manufacturer’s or the operator’s maintenance procedures.

**Emergency Equipment**

**28. Black Start, Emergency, and Fire Pump Diesel Engine BACT Emission Limits:** Limit the emissions from EU IDs 29 through 37 as specified in Table 6:

**Table 6: EU IDs 29 through 37 – BACT Limits**

| Pollutant                                    | BACT Control   | BACT Emission Limit in g/kW-hr for EU IDs |                    |
|--|--|---|--------------------|
|  |  | 29 – 34                                   | 35 – 37            |
| CO   | Good Combustion Practices and Certified to Meet NSPS Subpart IIII            | 4.38                                      | 4.38               |
| NOx + VOC                                    | Good Combustion Practices and Certified to Meet NSPS Subpart IIII            | 8.0                                       | 5.0                |
| PM, PM <sub>10</sub> , and PM <sub>2.5</sub> | Clean Fuel, Good Combustion Practices, & Certified to Meet NSPS Subpart IIII | 0.25                                      | 0.25               |
| GHG  | Good Combustion Practices  | 2,791 tpy (combined)                      | 216 tpy (combined) |

28.1 To show compliance with the emission limits for EU IDs 29 through 37 in Table 6, the Permittee shall:

- a. Verify initial compliance with the CO, NOx +VOC, PM, PM<sub>10</sub>, and PM<sub>2.5</sub> emission limits for EU IDs 29 through 37; established in Table 6 by either:
  - (i) Submitting to the Department in the first operating report required by Condition 43 after each of EU IDs 29 through 37 become fully operational a certified manufacturer’s guaranteed emissions data demonstrating that each black start, emergency, and fire pump engine will comply with the CO, NOx +VOC, PM, PM<sub>10</sub>, and PM<sub>2.5</sub> emission limits established in Table 6; or
  - (ii) Conducting a source test for CO, NOx, PM, PM<sub>10</sub>, PM<sub>2.5</sub>, and VOC within 180 days of each of EU IDs 29 through 37 becoming fully operational, in accordance with Section 10.
- b. Perform regular maintenance following the manufacturer’s or the operator’s maintenance procedures.
- c. Keep records of any maintenance that would have a significant effect on emissions. The records may be kept in electronic format.
- d. Keep a copy of either the manufacturer’s or the operator’s maintenance procedures.

**Processing Operations**

**29. Processing Activities Fugitives BACT Emission Limits:** Limit the emissions from EU IDs 38 through 76, 85 through 87, 91 through 94, 97, 100, 101, 104 through 107, and 109 through 112, as specified in Table 7:



**Table 7: Processing Activities Fugitives (PM, PM<sub>10</sub>, and PM<sub>2.5</sub>) BACT Limits**

| EU ID                                   | Process Description                  | BACT Control/EU ID   | BACT Emission Limits  |
|---|--------------------------------------|--|-----------------------|
| 38, 44, 45, 54, and 58                  | Ore Crushing and Transfers           | Enclosures   | 0.00048 lb/ton        |
| 39, 41 – 43, 46, 48, 50, 52, 55, and 56 | Ore Crushing and Transfers           | Dust Collectors (EU IDs 40, 47, 49, 51, 53, and 57)        | 0.01 gr/dscf          |
| 59, 61, 65, 67, 69, 71, 73, and 75      | Mill Reagents Handling               | Dust Collector (EU IDs 60, 62, 66, 68, 70, 72, 74, and 76) | 0.02 gr/scf           |
| 63                                      | Mill Reagents Handling               | Wet Scrubber (EU ID 64)                                    | 0.02 gr/scf           |
| 85 – 87                                 | Pressure Oxidation Hot Cure          | Good Operating Practices                                   | 0.04 lb/hr (combined) |
| 91 – 94                                 | Electrowinning Cells                 | Good Operating Practices                                   | 0.19 lb/hr (combined) |
| 97                                      | Mercury Retort                       | Good Operating Practices                                   | 0.03 lb/hr            |
| 100                                     | Induction Smelting Furnace           | Dust Collector (EU ID 101)                                 | 0.005 gr/dscf         |
| 104 and 109                             | Laboratories                         | Dust Collectors (EU IDs 105 and 110)                       | 0.009 gr/scf          |
| 106                                     | Laboratories                         | Dust Collector (EU ID 107)                                 | 0.004 gr/scf          |
| 111                                     | Reagent Handling for Water Treatment | Dust Collector (EU ID 112)                                 | 0.02 gr/scf           |

29.1 To show compliance with the emission limits established in Table 7, the Permittee shall:

- a. For EU IDs 38 through 76, comply with the Best Practical Methods (BPMs) for Ore Crushing in Section 2.4 of the Fugitive Dust Control Plan (FDCP) contained in Section 16.
- b. Install, operate, and maintain according to manufacturer’s recommendations the following BACT controls at all times the corresponding EU is operating:
  - (i) Dust collectors (EU IDs 40, 47, 49, 51, 53, 57, 60, 62, 66, 68, 70, 72, 74, 76, 101, 105, 107, 110, and 112) for EU IDs 39, 41 – 43, 46, 48, 50, 52, 55, 56, 59, 61, 65, 67, 69, 71, 73, 75, 100, 104, 106, 109 and 111; and
  - (ii) Wet Scrubber (EU ID 64) for EU ID 63.
- c. Verify initial compliance with the PM, PM<sub>10</sub>, and PM<sub>2.5</sub> emission limits established in Table 7 by either<sup>6</sup>:

<sup>6</sup> Note that source testing (performance tests) to demonstrate compliance with emission limits in 40 C.F.R. Subpart LL need to be completed on each applicable emissions unit and conducted within 60 days after achieving the maximum production rate at which the EUs will be operated, but not later than 180 days after initial startup of the EU under 40 C.F.R. 60.8(a).

- (i) Submitting to the Department in the first operating report required by Condition 43 after each of the EUs listed in Table 7 become fully operational a certified manufacturer's guaranteed emissions data demonstrating that each of EU IDs 85 through 87, 91 through 94, and 97, and each of the installed dust collectors and wet scrubber will comply with the corresponding emission limits in Table 7; or
  - (ii) Conducting a source test for PM, PM<sub>10</sub>, and PM<sub>2.5</sub> within 180 days of each of EU IDs 39, 41 – 43, 46, 48, 50, 52, 55, 56, 59, 61, 63, 65, 67, 69, 71, 73, 75, 91 through 94, 97, 100, 104, 106, 109, and 111 becoming fully operational, in accordance with Section 10.
- d. For EU IDs 85 through 87, 91 through 94, and 97, the Permittee shall comply with the following:
- (i) Perform regular maintenance following the manufacturer's or the operator's maintenance procedures.
  - (ii) Keep records of any maintenance that would have a significant effect on emissions. The records may be kept in electronic format.
  - (iii) Keep a copy of either the manufacturer's or the operator's maintenance procedures.

**29.2 Monitoring for Dust Collectors.** For EU IDs 40, 47, 49, 51, 53, 57, 60, 62, 66, 68, 70, 72, 74, 76, 101, 105, 107, 110, and 112, the Permittee shall:

- a. Maintain the pressure differential across the bags in the dust collectors as determined during source testing or according to manufacturer's specifications. Observe and record the pressure differential readings once per week.
  - (i) If the pressure differential across the dust collector increases to within 95% of the upper limit established by the manufacturer, within 24 hours take steps to clean the bags of excess trapped dust.
  - (ii) If the pressure differential across the dust collector drops to less than 5% of the allowed range above the lower limit established by the manufacturer, within 24 hours perform an inspection of the bags and dust collector assembly to ascertain the integrity of the system.
  - (iii) If any bags are found with holes or tears or deterioration which renders them ineffectual, the bags shall be isolated or replaced within 24 hours.
  - (iv) If after cleaning the bags of excess dust or replacing torn or deteriorated bags, the pressure differential recommended by the manufacturer cannot be maintained, conduct a source test on the affected EU listed in Table 7 for PM, PM<sub>10</sub>, and PM<sub>2.5</sub> according to the requirements set out in Section 10 within 120 days of cleaning or replacing torn or deteriorated bags to confirm that the emission limits established in Table 7 are being maintained.

- b. Once per week, at the time the dust collector differential pressure readings are taken, perform a visual inspection of the exhaust outlet of the dust collectors.
  - (i) If no dust is seen during the weekly visual inspections, continue with the weekly inspections.
  - (ii) If dust is seen during the weekly visual inspection, within 24 hours perform an inspection of the bags and dust collector assembly to ascertain the integrity of the system. Make repairs as necessary.
  - (iii) If after making repairs, dust is still visible in the exhaust from the unit, conduct a source test on the affected EU listed in Table 7 for PM, PM<sub>10</sub>, and PM<sub>2.5</sub> according to the requirements set out in Section 10 within 120 days of making repairs to confirm whether the emission limits established in Table 7 are being maintained.

**29.3 Monitoring for Wet Scrubber.** For EU ID 64, the Permittee shall:

- a. Perform weekly inspections of the scrubber to ensure proper operation;
- b. Monitor the pressure differential across the scrubber and the scrubber water flow rate and maintain these operating conditions within limits recommended by the manufacturer or according to the most recent source test; and
- c. If the pressure differential recommended by the manufacturer or determined during the most recent source test cannot be maintained, conduct a source test on EU ID 63 for PM, PM<sub>10</sub>, and PM<sub>2.5</sub> according to the requirements set out in Section 10 within 120 days to confirm that the emission limits established in Table 7 are being maintained.

**29.4 Recordkeeping for Dust Collectors and Wet Scrubbers.** For EU IDs 40, 47, 49, 51, 53, 57, 60, 62, 64, 66, 68, 70, 72, 74, 76, 101, 105, 107, 110, and 112, the Permittee shall:

- a. Maintain maintenance logs detailing the following:
  - (i) the pressure drop across the dust collector, dust collector inspections, and bag replacements; and
  - (ii) the pressure drop across the scrubber, the scrubber water flow rate, the scrubber inspections, and any scrubber components replaced.
- b. Keep records of the results of any source testing conducted under Conditions 29.1c(ii), 29.2a(iv), and 29.2b(iii).
- c. Keep records for five years.

**29.5 Reporting for Dust Collectors and Wet Scrubbers.** For EU IDs 40, 47, 49, 51, 53, 57, 60, 62, 64, 66, 68, 70, 72, 74, 76, 101, 105, 107, 110, and 112,, the Permittee shall report as follows:

- a. Report the following in the operating report required by Condition 43:

- (i) the emission rates determined by the source tests required by Conditions 29.1c(ii), 29.2a(iv), 29.2b(iii), and 29.3c.
  - (ii) all differential pressure and operating hour meter readings when any of the dust collectors, EU IDs 40, 47, 49, 51, 53, 57, 60, 62, 64, 66, 68, 70, 72, 74, 76, 101, 105, 107, 110, and 112, are operating outside the ranges identified in Conditions 29.2a(i) and 29.2a(ii).
  - (iii) all differential pressure readings across the wet scrubber, EU ID 64, that are outside the ranges identified in Condition 29.3b.
- b. Report as described in Condition 42 if any of the emission rates determined by the source tests required by Conditions 29.1c(ii), 29.2a(iv), 29.2b(iii), and 29.3c, exceed the limits in Table 7, or if any of Conditions 29.1a through 29.5 are not met.

**30. Autoclave BACT Emission Limits:** Limit the emissions from EU IDs 77 and 81 as specified in Table 8:

**Table 8: EU IDs 77 and 81 – BACT Limits**

| Pollutant                                    | BACT Control/EU ID                  | BACT Emission Limit   |
|--|-------------------------------------|-----------------------|
| CO   | Good Operating Practices            | 88 lb/hr              |
| PM, PM <sub>10</sub> , and PM <sub>2.5</sub> | Venturi Scrubber (EU IDs 79 and 83) | 0.22 lb/hr            |
| VOC  | Carbon Adsorber (EU IDs 80 and 84)  | 0.04 lb/hr            |
| GHG  | Good Operating Practices            | 37,659 tpy (combined) |

**30.1** To show compliance with the CO, PM, PM<sub>10</sub>, PM<sub>2.5</sub>, and VOC emission limits for EU IDs 77 and 81 in Table 8, the Permittee shall:

- a. Verify initial compliance with the emission limits for EU IDs 77 and 81 established in Table 8 by either:
  - (i) Submitting to the Department in the first operating report required by Condition 43 after each of EU IDs 77 and 81 become fully operational a certified manufacturer’s guaranteed emissions data demonstrating that
    - (A) each installed autoclave will comply with the CO emission limit;
    - (B) each installed venturi scrubber will comply with the PM, PM<sub>10</sub>, and PM<sub>10</sub> emission limits; and
    - (C) each carbon adsorption system will comply with the VOC emission limits; or
  - (ii) Conducting a source test for CO, PM, PM<sub>10</sub>, and PM<sub>2.5</sub>, and VOC within 180 days of each of EU IDs 77 and 81 becoming fully operational, in accordance with Section 10.

- b. Perform regular maintenance considering the manufacturer’s or the operator’s maintenance procedures;
  - c. Keep records of any maintenance that would have a significant effect on emissions. The records may be kept in electronic format; and
  - d. Keep a copy of either the manufacturer’s or the operator’s maintenance procedures.
- 30.2 To show compliance with the GHG emission limits for EU IDs 77 and 81 in Table 8, the Permittee shall comply with Conditions 30.1b through 30.1d.
- 30.3 Report as described in Condition 42 if any of the requirements of Conditions 30.1 through 30.2 are not met.

**31. Carbon Regeneration Kiln BACT Emission Limits:** Limit the emissions from EU ID 88 as specified in Table 9:

**Table 9: EU ID 88 – BACT Limits**

| Pollutant                                    | BACT Control/EU ID            | BACT Emission Limit |
|--|-------------------------------|---------------------|
| CO   | Good Operating Practices      | 0.88 lb/hr          |
| NOx  | Good Operating Practices      | 0.02 lb/hr          |
| PM, PM <sub>10</sub> , and PM <sub>2.5</sub> | Wet Off-Gas Cooler (EU ID 89) | 0.44 lb/hr          |
| VOC  | Good Operating Practices      | 0.44 lb/hr          |

- 31.1 To show compliance with the emission limits for EU ID 88 in Table 9, the Permittee shall comply as follows:
- a. Install, operate, and maintain a wet off-gas cooler (EU ID 89), according to the manufacturer’s specifications, at all times the process is in operation.
  - b. Verify initial compliance with the CO, NOx, PM, PM<sub>10</sub>, PM<sub>2.5</sub>, and VOC emission limits for EU ID 88; established in Table 9 by either:
    - (i) Obtaining a certified manufacturer’s guarantee that the carbon regeneration kiln will comply with the CO, NOx, PM, PM<sub>10</sub>, PM<sub>2.5</sub>, and VOC emission limits established in Table 9. Submit the emissions data to the Department in the first operating report required by Condition 43 after EU ID 88 become fully operational; or
    - (ii) Conducting a source test for CO, NOx, PM, PM<sub>10</sub>, PM<sub>2.5</sub>, and VOC within 180 days of EU ID 88 becoming fully operational, in accordance with Section 10.
  - c. Perform regular maintenance following the manufacturer’s or the operator’s maintenance procedures.
  - d. Keep records of any maintenance that would have a significant effect on emissions. The records may be kept in electronic format.

- e. Keep a copy of either the manufacturer’s or the operator’s maintenance procedures.

**Mining Activities, Roads, and Wind Erosion**

**32. Drilling and Blasting BACT Emission Limits:** Limit the emissions from EU IDs 113 and 114 as specified in Table 10:

**Table 10: EU IDs 113 and 114 – BACT Limits**

| Pollutant                                    | BACT Control   | BACT Emission Limit  |
|--|--|----------------------|
| CO   | Good Combustion Practices  | 1,921 tpy            |
| NOx  | Good Combustion Practices  | 52 tpy               |
| PM, PM <sub>10</sub> , and PM <sub>2.5</sub> | Best Practical Methods (BPMs) /<br>Fugitive Dust Control Plan (FDCP) | 272.4 tpy (combined) |
| GHG  | Good Combustion Practices  | 11,780 tpy           |

32.1 To show compliance with the CO, NOx, fugitive PM, and GHG emission limits for EU IDs 113 and 114 in Table 10, the Permittee shall:

- a. comply with the BPMs for Drilling and Blasting specified in Section 2.1 of the FDCP contained in Section 16;
- b. comply with the limits in Conditions 17 and 22.2.

32.2 **Recordkeeping and Reporting.** The Permittee shall record and report as required under Conditions 17, 22.2, and 33.2.

**33. Material Loading/Unloading, Wind Erosion, and Roads Fugitive Dusts BACT Emission Limits:** Limit the fugitive dusts emissions from EU IDs 115 through 120 and 158 through 162 as specified in Table 11:

**Table 11: EU IDs 115 – 120 and 158 – 162 – BACT Limit**

| EU IDs             | PM, PM <sub>10</sub> , and PM <sub>2.5</sub><br>BACT Control      | PM, PM <sub>10</sub> , and PM <sub>2.5</sub><br>BACT Emission Limits |
|--------------------|---|--|
| 115 – 120          | Best Practical Methods (BPM)/Fugitive<br>Dust Control Plan (FDCP) | 530 tpy (combined)   |
| 158 – 160, and 162 | Water and Chemical Suppressant Spray                              | 3,445 tpy (combined)   |
| 161                | Best Practical Methods (BPM)/Fugitive<br>Dust Control Plan (FDCP) | 31.6 tpy   |

33.1 To show compliance with the fugitive PM emission limits for EU IDs 115 through 120 and 158 through 162 in Table 11, the Permittee shall comply as follows:

- a. Comply with the BPMs for Material Loading and Unloading, Haul Roads and Access Roads, and Reducing Wind Erosion specified in Sections 2.2, 2.3, and 2.6, respectively, of the FDCP contained in Section 16.

- b. For the material loading and unloading activities, EU IDs 115 through 120, perform an inspection at least once per calendar quarter that the mine is in operation of EU IDs 115 through 120. If excessive dust is present, apply water spray on the affected area; or otherwise take action to reduce fugitive dust.
- c. For the fugitives from wind erosion, EU ID 161, perform an inspection at least once per calendar quarter that the mine is in operation of the tailings storage facility, waste rock dump, run-of-mine ore and overburden stockpiles, and the haul and access roads. If excessive dust is present, apply water spray on the affected area; or otherwise take action to reduce fugitive dust
- d. For the haul and access roads, EU IDs 158 through 160 and 162, control fugitive PM emissions as follows:
  - (i) At least once each calendar year, as soon as road and weather conditions allow, but in no case later than June 15, apply water and chemical dust suppressants to the road surface in sufficient quantities to control fugitive dust. Measure the effectiveness of dust control application as outlined in Condition 33.1d(ii).
  - (ii) At least once per calendar quarter<sup>7</sup> that the mine is in operation, when the road surface does not exhibit visible surface moisture, determine and record the duration of PM emissions resulting from road traffic, as follows:
    - (A) in accordance with the procedures specified in 40 C.F.R. 60, Appendix A, Reference Method 22;
      - (1) record the vehicle type for each reading (haul truck or not);
      - (2) initiate observations as the time when the observed vehicle passes the observer; and
      - (3) continue observations for a minimum of six minutes.
    - (B) if the duration of PM emissions is greater than two minutes, then apply additional water and chemical dust suppressants to the road surface to reduce particulate matter emissions as soon as practicable. After the application of additional water and chemical dust suppressants, determine and record the duration of vehicle PM emissions as described in Condition 33.1d(ii).

**33.2 Recordkeeping and Reporting.** The Permittee shall record and report the following fugitive dust related information:

---

<sup>7</sup> Calendar Quarter is defined as follows: 1<sup>st</sup> Calendar Quarter is January 1<sup>st</sup> through March 31<sup>st</sup>; 2<sup>nd</sup> Calendar Quarter is April 1<sup>st</sup> through June 30<sup>th</sup>; 3<sup>rd</sup> Calendar Quarter is July 1<sup>st</sup> through September 30<sup>th</sup>; 4<sup>th</sup> Calendar Quarter is October 1<sup>st</sup> through December 31<sup>st</sup>.

- a. Keep records describing all inspections and precautions taken to prevent PM from becoming airborne in accordance with Conditions 33.1b through 33.1d using the Fugitive Dust Inspection Log in Section 17. Keep records at the mine site for five years.
- b. Report per Condition 42 whenever a visual survey performed in accordance with Conditions 33.1b through 33.1d reveals that PM emissions are leaving the property.

**Tanks**

**34. Acidulation and Neutralization Tanks BACT Emission Limit:** Limit the emissions from EU IDs 124 and 125 as specified in Table 12:

**Table 12: EU IDs 124 and 125 – BACT Limit**

| Pollutant | BACT Control             | BACT Emission Limit                    |
|-----------|--------------------------|--|
| GHG       | Good Operating Practices | 273,175 tpy CO <sub>2</sub> (combined) |

- 34.1 To show compliance with the emissions limit for EU IDs 124 and 125 in Table 12, the Permittee shall comply as follows:
- a. Perform regular maintenance considering the manufacturer’s or the operator’s maintenance procedures.
  - b. Keep records of any maintenance that would have a significant effect on emissions. The records may be kept in electronic format.
  - c. Keep a copy of either the manufacturer’s or the operator’s maintenance procedures.

**35. Fuel Tanks BACT Emission Limits:** Limit the emissions from EU IDs 126 through 142, 150 through 152, and 156 as specified in Table 13:

**Table 13: EU IDs 126-142, 150-152, and 156 – BACT Limit**

| Pollutant | BACT Control   | BACT Emission Limits |
|-----------|----------------|----------------------|
| VOC       | Submerged Fill | 1.7 tpy (combined)   |

- 35.1 To show compliance with the VOC emission limit set out in Table 13, the Permittee shall install, operate, and maintain tanks with submerged fill design for EU IDs 126 through 142, 150 through 152, and 156.
- 35.2 Compliance with the VOC limit in Table 13 shall be demonstrated by supplying the Department with as built schematics and photographs of EU IDs 126 through 142, 150 through 152, and 156, demonstrating compliance with Condition 35.1 in the first operating report required under Condition 43 after each EU has been installed.



---

## **Section 6. Owner Requested Limits to Avoid Prevention of Significant Deterioration (PSD) Review Under 18 AAC 50.306**

### **SO<sub>2</sub> PSD Avoidance Limit**

**36.** The Permittee shall limit the total combined SO<sub>2</sub> emissions from the EUs listed in Table 1 (excluding nonroad engines (NREs)) to no more than 23.2 tons per consecutive 12-month period.

36.1 Limit the sulfur content of the liquid fuel consumed in the EUs listed in Table 1 (excluding NREs) to no greater than 0.0015 weight percent (wt%) (also known as Ultra Low Sulfur Diesel or ULSD).

a. Monitor, record and report as follows:

(i) For each shipment of liquid fuel:

(A) keep receipts (or vendor contracts) that specify fuel grade and amount; or

(B) test the fuel for sulfur content using an appropriate method listed in 18 AAC 50.035(b)-(c) or 40 C.F.R. 60.17 incorporated by reference in 18 AAC 50.040(a)(1).

(ii) Reporting.

(A) Include in the operating report required by Condition 43 the records required by Condition 36.1a(i).

(B) If the fuel sulfur content exceeds the limit in Condition 36.1, report as excess emissions and permit deviations under Condition 42.

## **Section 7. Owner Requested Limit to Avoid HAPs Major Source Classification Under 18 AAC 50.316**

### **HAPs Major Avoidance Limits**

37. The Permittee shall limit the total formaldehyde from EU IDs 1 through 12 to no more than 9.7 tons per 12-month rolling period. To show compliance with the formaldehyde limit the Permittee shall:
- 37.1 Install, operate, and maintain, according to the manufacturer's recommendation, an oxidation catalyst control for EU IDs 1 through 12 for removing formaldehyde to less than or equal to 0.184 lb/hr per engine .
- a. The Permittee shall submit to the Department vendor verification of the 0.184 lb/hr per engine formaldehyde emission rate at least 60 days before initial startup of any of EU IDs 1 through 12.
  - b. The Permittee shall conduct an initial formaldehyde source test on any three of EU IDs 1 through 12, within 365 days of any of EU IDs 1 through 12 becoming fully operational on natural gas as outlined in Conditions 37.1b(i) through 37.1b(vi).
    - (i) Conduct each source test while firing natural gas.
    - (ii) Conduct each source test downstream of each oxidation catalyst.
    - (iii) Use the applicable test method set out in 40 C.F.R. 60, Appendix A. The Permittee shall source test downstream of the oxidation catalyst.
    - (iv) Each source test shall consist of at least three 1-hour or longer valid test runs. Emission results shall be reported as the arithmetic average of all valid test runs and shall be in terms of pounds per hour.
    - (v) During each test run, the inlet temperature and pressure drop across each of the oxidation catalyst units shall be measured.
    - (vi) The Permittee shall report the results of the source test(s) to the Department within 60 calendar days after completing the test(s).
  - c. Conduct a source test for formaldehyde on a replacement engine that is not an identical make/model for the engine being replaced for any of EU IDs 1 through 12 according to Conditions 37.1b(i) through 37.1b(vi) and within 120 days of initial startup of a replacement engine.
  - d. Conduct a source test for formaldehyde on a replacement oxidation catalyst unit that is not an identical make/model for the oxidation catalyst being replaced for any of EU IDs 1 through 12 according to Conditions 37.1b(i) through 37.1b(vi) and within 120 days of the oxidation catalyst unit replacement.

- e. In the source test report required by Condition 37.1b(vi), compare the annual formaldehyde emissions assuming continuous operation of EU IDs 1 through 12 to the maximum 9.7 tons per year specified in Condition 37. If the annual formaldehyde emissions are greater than 9.7 tons per year, report as excess emissions and permit deviations under Condition 42.
- 37.2 Monitor the oxidation catalyst operating parameters in accordance with Conditions 24.3d(i) and 24.3d(iii).

## **Section 8. Record Keeping, Reporting, and Certification Requirements**

- 38. Recordkeeping Requirements.** The Permittee shall keep all records required by this permit for at least five years after the date of collection, including:
- 38.1 copies of all reports and certifications submitted pursuant to this section of the permit; and
  - 38.2 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; and
    - e. the results of the analyses; and
    - f. the operating conditions that existed at the time of sampling or measurement
- 39. 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.
- 39.1 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.

- 
- 40. 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.
- 40.1 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/>.
- 41. 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.
- 42. Excess Emissions and Permit Deviation Reports.** The Permittee shall report excess emissions and permit deviations as follows:
- 42.1 **Excess Emissions Reporting.** Except as provided in Condition 45, 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 42.1d.
  - d. Report all other excess emissions not described in Conditions 42.1a, 42.1b, and 42.1c 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 43 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.
-

- 42.2 **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 43 for permit deviations that occurred during the period covered by the report, whichever is sooner.
- 42.3 **Notification Form.** When reporting either excess emissions or permit deviations, the Permittee shall report using either the Department’s online form, which 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, or, if the Permittee prefers, the form contained in Section 14 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/>.
43. **Operating Reports.** During the life of this permit<sup>8</sup>, the Permittee shall submit to the Department an operating report in accordance with Conditions 39 and 40 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.
- 43.1 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.
- 43.2 When excess emissions or permit deviations that occurred during the reporting period are not included with the operating report under Condition 43.1, 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 preventative measures taken and the date(s) of such actions; or
- 43.3 when excess emissions or permit deviation reports have already been reported under Condition 42 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

---

<sup>8</sup> *Life of this permit* is defined as the permit effective dates, including any periods of reporting obligations that extend beyond the permit effective dates. For example, if a permit expires prior to the end of a calendar year, there is still a reporting obligation to provide operating reports for the periods when the permit was in effect.

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

**44. Title V Major Source Application Submittal Date.** For a stationary source that directly emits, or has the potential to emit, 100 tpy or more of any air pollutant subject to regulation, the Permittee shall file a complete application to obtain the part 70 Title V Operating Permit within 12 months after commencing operation or exceeding the 100 tpy threshold.

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

**45.1 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 45.
- 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 45; or
  - (ii) the Department notifies the Permittee that it has found a violation of Condition 45.

**45.2 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 45; and
- d. any corrective actions taken or planned for complaints attributable to emissions from the stationary source.

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

- a. With each stationary source operating report under Condition 43, 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 health or safety, the Permittee shall report any such emissions according to Condition 42.
- 46. Emission Inventory Reporting.** The Permittee shall submit to the Department reports of actual emissions for the previous calendar year, by emissions unit, of CO, NH<sub>3</sub>, NO<sub>x</sub>, PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>2</sub>, VOC and lead (Pb) and lead compounds, as follows:
  - 46.1 Every-year inventory.** Each year by April 30, if the stationary source's potential to emit for the previous calendar year equals or exceeds:
    - a. 250 TPY of NH<sub>3</sub>, PM<sub>10</sub>, PM<sub>2.5</sub> or VOC; or
    - b. 2,500 TPY of CO, NO<sub>x</sub>, or SO<sub>2</sub>.
  - 46.2 Triennial inventory.** Every third year by April 30, if the stationary source's potential to emit (except actual emissions for Pb) for the previous calendar year equals or exceeds:
    - a. For stationary sources located in Attainment and Unclassifiable Areas:
      - (i) 0.5 TPY of actual Pb; or
      - (ii) 1,000 TPY of CO; or
      - (iii) 100 TPY of SO<sub>2</sub>, NH<sub>3</sub>, PM<sub>10</sub>, PM<sub>2.5</sub>, NO<sub>x</sub> or VOC.
    - b. For stationary sources located in Nonattainment Areas:
      - (i) 0.5 TPY of actual Pb; or
      - (ii) 1,000 TPY of CO or, when located in a CO nonattainment area, 100 TPY of CO; or
      - (iii) 100 TPY of SO<sub>2</sub>, NH<sub>3</sub>, PM<sub>10</sub>, PM<sub>2.5</sub>, NO<sub>x</sub>, or VOC; or as specified in Conditions 46.2b(iv) through 46.2b(viii);
      - (iv) 70 TPY of SO<sub>2</sub>, NH<sub>3</sub>, PM<sub>2.5</sub>, NO<sub>x</sub>, or VOC in PM<sub>2.5</sub> serious nonattainment areas; or
      - (v) 70 TPY of PM<sub>10</sub> in PM<sub>10</sub> serious nonattainment areas; or
      - (vi) 50 TPY of NO<sub>x</sub> or VOC in O<sub>3</sub> serious nonattainment areas; or



- (vii) 25 TPY of NO<sub>x</sub> or VOC in O<sub>3</sub> severe nonattainment areas; or
- (viii) 10 TPY of NO<sub>x</sub> or VOC in O<sub>3</sub> extreme nonattainment areas.
- 46.3 For reporting under Condition 46.2, the Permittee shall report the annual emissions and the required data elements under Condition 46.4 every third year for the previous calendar year as scheduled by the EPA.<sup>9</sup>
- 46.4 For each emissions unit and the stationary source, include in the report the required data elements<sup>10</sup> 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>.
- 46.5 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/>.

---

<sup>9</sup> 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 2017, 2020, 2023, 2026 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 2023 is due April 30, 2024, triennial emission inventory report for 2026 is due April 30, 2027, etc.).

<sup>10</sup> 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 9. Standard Permit Conditions**

47. 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
- 47.1 an enforcement action; or
  - 47.2 permit termination, revocation and reissuance, or modification in accordance with AS 46.14.280.
48. 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.
49. 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.
50. 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.
51. The permit does not convey any property rights of any sort, nor any exclusive privilege.
52. 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
- 52.1 enter upon the premises where an emissions unit subject to the permit is located or where records required by the permit are kept;
  - 52.2 have access to and copy any records required by the permit;
  - 52.3 inspect any stationary source, equipment, practices, or operations regulated by or referenced in the permit; and
  - 52.4 sample or monitor substances or parameters to assure compliance with the permit or other applicable requirements.

---

## **Section 10. General Source Test Requirements**

- 53. 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.
- 54. Operation Conditions:** Unless otherwise specified by an applicable requirement or test method, the Permittee shall conduct source testing
- 54.1 at a point or points that characterize the actual discharge into the ambient air; and
  - 54.2 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.
- 55. Reference Test Methods:** The Permittee shall use the following test methods when conducting source testing for compliance with this permit:
- 55.1 Source testing for compliance with requirements adopted by reference in 18 AAC 50.040(a) must be conducted in accordance with the methods and procedures specified in 40 C.F.R. 60.
  - 55.2 Source testing for compliance with requirements adopted by reference in 18 AAC 50.040(b) must be conducted in accordance with the methods and procedures specified in 40 CFR 61.
  - 55.3 Source testing for compliance with requirements adopted by reference in 18 AAC 50.040(c) must be conducted in accordance with the source test methods and procedures specified in 40 C.F.R. 63.
  - 55.4 Source testing for the reduction in visibility through the exhaust effluent must be conducted in accordance with the procedures set out in Reference Method 9. The Permittee may use the form in Section 12 to record data.
  - 55.5 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.
  - 55.6 Source testing for emissions of PM<sub>10</sub> and PM<sub>2.5</sub> must be conducted in accordance with the procedures specified in 40 C.F.R. 51, Appendix M, Methods 201 or 201A and 202.
  - 55.7 Source testing for emissions of any pollutant may be determined using an alternative method approved by the Department in accordance with 40 C.F.R. 63 Appendix A, Method 301.
- 56. 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).

57. **Test Exemption.** The Permittee is not required to comply with Conditions 59, 60, and 61 (Test Plans, Test Notification and Test Reports) when exhaust is observed for visible emissions using Method 9.
58. **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.
59. **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 53 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.
60. **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.
61. **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 39. If requested in writing by the Department, the Permittee must provide preliminary results in a shorter period of time specified by the Department.

**Section 11.      *Permit Documentation***

| <u>Date</u>         | <u>Description</u>   |
|---------------------|--|
| October 29, 2021    | Construction Permit application received.                          |
| January 19, 2022    | Potential to emit application Addendum received.                   |
| March 9, 2022       | Response to ADEC’s February 18, 2022 information request received. |
| March 24, 2022      | Response to ADEC’s February 23, 2022 information request received. |
| May 6, 2022         | Response to ADEC’s April 15, 2022 information request received.    |
| September 29, 2022  | Response to Preliminary Permit Review received.                    |
| October 4 & 5, 2022 | Response to Preliminary TAR Review received.                       |

## **Section 12. 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.

\_\_\_\_\_

## Section 13. Visible Emissions Form

### VISIBLE EMISSION OBSERVATION FORM

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

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

| ALASKA DEPARTMENT OF ENVIRONMENTAL CONSERVATION<br>AIR PERMITS PROGRAM - VISIBLE EMISSIONS OBSERVATION FORM         |       |                             |         |  |          |                         | Page No. |
|---|-------|-----------------------------|---------|--|----------|-------------------------|----------|
| Stationary Source Name  |       | Type of Emission Unit       |         | Observation Date   |          | Start Time              | End Time |
| Emission Unit Location  |       |                             |         | Sec  | 0        | 15                      | 30       |
| City  |       | State                       |         | Zip  |          |                         | Comments |
| Phone # (Key Contact)   |       | Stationary Source ID Number |         | Min  |          |                         |          |
| Process Equipment   |       | Operating Mode              |         | 1  |          |                         |          |
| Control Equipment   |       | Operating Mode              |         | 2  |          |                         |          |
| Describe Emission Point/Location  |       |                             |         | 3  |          |                         |          |
| Height above ground level   |       | Height relative to observer |         | Clinometer Reading   |          |                         |          |
| Distance From Observer  |       | Direction From Observer     |         | 4  |          |                         |          |
| Start   |       | End                         |         | 5  |          |                         |          |
| Describe Emissions & Color  |       |                             |         | 6  |          |                         |          |
| Start   |       | End                         |         | 7  |          |                         |          |
| Visible Water Vapor Present? If yes, determine approximate distance from the stack exit to where the plume was read |       |                             |         | 8  |          |                         |          |
| No  |       | Yes                         |         | 9  |          |                         |          |
| Point in Plume at Which Opacity Was Determined  |       |                             |         | 10   |          |                         |          |
| Describe Plume Background   |       | Background Color            |         | 11   |          |                         |          |
| Start   |       | Start                       |         | 12   |          |                         |          |
| End   |       | End                         |         | 13   |          |                         |          |
| Sky Conditions:   |       |                             |         | 14   |          |                         |          |
| Start   |       | End                         |         | 15   |          |                         |          |
| Wind Speed  |       | Wind Direction From         |         | 16   |          |                         |          |
| Start   |       | Start                       |         | 17   |          |                         |          |
| End   |       | End                         |         | 18   |          |                         |          |
| Ambient Temperature   |       | Wet Bulb Temp               |         | RH percent   |          |                         |          |
| SOURCE LAYOUT SKETCH: 1 Stack or Point Being Read 2 Wind Direction From   |       |                             |         | 19   |          |                         |          |
| 3 Observer Location   |       | 4 Sun Location              |         | 20   |          |                         |          |
| 5 North Arrow   |       | 6 Other Stacks              |         | 21   |          |                         |          |
|   |       |                             |         | 22   |          |                         |          |
|   |       |                             |         | 23   |          |                         |          |
|   |       |                             |         | 24   |          |                         |          |
|   |       |                             |         | 25   |          |                         |          |
|   |       |                             |         | 26   |          |                         |          |
|   |       |                             |         | 27   |          |                         |          |
|   |       |                             |         | 28   |          |                         |          |
|   |       |                             |         | 29   |          |                         |          |
|   |       |                             |         | 30   |          |                         |          |
| Range of Opacity  |       |                             |         | Minimum  |          | Maximum                 |          |
| I have received a copy of these opacity observations  |       |                             |         | Print Observer's Name  |          |                         |          |
| Print Name:   |       |                             |         | Observer's Signature   |          | Date                    |          |
| Signature:  |       |                             |         |  |          | Observer's Affiliation: |          |
| Title   |       | Date                        |         | Certifying Organization  |          | Date                    |          |
|   |       |                             |         | Certified By:  |          |                         |          |
|   |       |                             |         | <b>Data Reduction:</b>   |          |                         |          |
| Duration of Observation Period (minutes):   |       |                             |         | Duration Required by Permit (minutes):                                       |          |                         |          |
| Number of Observations:   |       |                             |         | Highest Six-Minute Average Opacity (%):                                      |          |                         |          |
| Number of Observations exceeding 20%:   |       |                             |         | Highest 18-Consecutive-Minute Average Opacity (%)(engines and turbines only) |          |                         |          |
| In compliance with six-minute opacity limit? (Yes or No)  |       |                             |         |  |          |                         |          |
| <b>Average Opacity Summary:</b>   |       |                             |         |  |          |                         |          |
| Set Number  | Time  |                             | Opacity |  | Comments |                         |          |
|   | Start | End                         | Sum     | Average  |          |                         |          |
|   |       |                             |         |  |          |                         |          |
|   |       |                             |         |  |          |                         |          |



**Section 14. ADEC Notification Form<sup>11</sup>**

**Donlin Gold Project**

**AQ0934CPT02**

**Stationary Source Name**

**Air Quality Permit Number.**

**Donlin Gold 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<sup>12</sup>, CO<sup>13</sup>, or Settlement Agreement - Complete Section 2 and Certify

<sup>11</sup> Revised as of July 22, 2020.

<sup>12</sup> Compliance Order By Consent

<sup>13</sup> 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.):

- |  |  |
|--|--|
| <input type="checkbox"/> Start Up/Shut Down        | <input type="checkbox"/> Natural Cause (weather/earthquake/flood)    |
| <input type="checkbox"/> Control Equipment Failure | <input type="checkbox"/> Scheduled Maintenance/Equipment Adjustments |
| <input type="checkbox"/> Bad fuel/coal/gas         | <input type="checkbox"/> Upset Condition                             |
| <input type="checkbox"/> 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 \_\_\_\_\_%

Venting \_\_\_\_\_(gas/scf)

Control Equipment Down

Fugitive Emissions

Emission Limit Exceeded

Marine Vessel Opacity

Flaring

Other: \_\_\_\_\_

(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 (go to end of form)**

## 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 \_\_\_\_\_

**Section 15.      *Public Access Control Plan***

# **Core Operating Area Public Access Control Plan**

## **Donlin Gold Project**

September 2022

(Revision 5)



4720 Business Park Blvd. Suite G-25  
Anchorage, Alaska 99503

## TABLE OF CONTENTS

|       |   |     |
|-------|---|-----|
| 1.0   | INTRODUCTION.....                           | 1-1 |
| 2.0   | DONLIN GOLD MINE AREA.....                  | 2-1 |
| 2.1   | Past and Present Land Use.....              | 2-1 |
| 2.2   | Donlin Gold Facilities.....                 | 2-1 |
| 3.0   | POTENTIAL ACCESS.....                       | 3-1 |
| 3.1   | Recognized Easements.....                   | 3-1 |
| 3.2   | Overland Travel.....                        | 3-1 |
| 3.3   | Air.....                                    | 3-1 |
| 3.4   | Roadways.....                               | 3-1 |
| 3.5   | Waterways.....                              | 3-1 |
| 4.0   | ACCESS CONTROL AUTHORITY AND MEASURES.....  | 4-1 |
| 4.1   | Legal Authority for Restricting Access..... | 4-1 |
| 4.2   | Measures to Exclude Access.....             | 4-1 |
| 4.2.1 | Fencing.....                                | 4-1 |
| 4.2.2 | Signage.....                                | 4-1 |
| 4.2.3 | Natural Barriers.....                       | 4-1 |
| 4.2.4 | Surveillance.....                           | 4-2 |
| 4.2.5 | External Communications.....                | 4-3 |
| 5.0   | ACCESS CONTROL IMPLEMENTATION.....          | 5-1 |
| 5.1   | Rerouting of Easements.....                 | 5-1 |
| 5.2   | Overland Travel.....                        | 5-1 |
| 5.3   | Roadways.....                               | 5-5 |
| 6.0   | REFERENCES.....                             | 6-1 |

## APPENDICES

### Appendix A – Figures

- Figure 1 – Donlin Gold Facility Locations and Land Ownership
- Figure 2 – COA and Public Easements
- Figure 3 – COA Air Photo and Access Control Areas

### Appendix B – Example Warning Signs

### Appendix C – Surveillance Monitoring Form

## TABLES

|  |     |
|--|-----|
| Table 1 – Public Easements Affected by the Project.....    | 5-2 |
| Table 2 – Access Control Measures on the COA Boundary..... | 5-3 |



## Acronyms

|             |   |
|-------------|---|
| AAAQS       | Alaska Ambient Air Quality Standards    |
| ADF&G       | Alaska Department of Fish and Game      |
| ANCSA       | Alaska Native Claims Settlement Act     |
| BLM         | Bureau of Land Management               |
| Calista     | Calista Corporation                     |
| COA         | Core Operating Area                     |
| Donlin Gold | Donlin Gold LLC                         |
| EIN         | Easement Identification Number          |
| FAS         | Federal-Aid Secondary                   |
| MSHA        | Mine Safety Health Administration       |
| PSD         | Prevention of Significant Deterioration |
| ROW(s)      | Right-of-Way/Rights-of-Way              |
| RS          | Revised Statute                         |
| RST         | Revised Statute Trail                   |
| TKC         | The Kuskokwim Corporation               |

## **UNITS OF MEASURE**

|    |              |
|----|--------------|
| ft | foot/feet    |
| km | kilometer(s) |
| m  | meter(s)     |
| mi | mile(s)      |

## 1.0 INTRODUCTION

Donlin Gold LLC (Donlin Gold) is proposing the development of an open pit, hardrock gold mine, 277 miles (mi) (446 kilometers [km]) west of Anchorage, 145 mi (233 km) northeast of Bethel, and 10 mi (16 km) north of the village of Crooked Creek, Alaska.

The proposed mine would be an active industrial site where hazardous activities would occur such as explosives handling, blasting, drilling, and heavy equipment operation. To mitigate hazards from these activities most areas at the mine will require strict safety protocols and controlled access. Donlin Gold has established a Core Operating Area (COA) boundary to identify the area where public access would be excluded. Donlin Gold has legal authority under lease/surface use agreements with the owners of the lands in this area to restrict the public from access to these facilities.

This Public Access Control Plan describes measures to be employed at the boundaries of the Project site facilities to protect the general public from possible health and safety hazards from mining and related support activities and maintaining required security at transportation facilities. This plan also describes the means to delineate the area within the COA in which air quality is protected by occupational health and safety regulations from the area outside this boundary that is open to public access and in which Alaska Ambient Air Quality Standards (AAAQS) and Prevention of Significant Deterioration (PSD) increments are applicable.

The plan covers the following relevant regulatory requirements:

1. The Alaska Department of Environmental Conservation - Division of Air Quality, requires that an ambient air boundary be established and a public access control plan be implemented in order to protect members of the public.
2. The Mine Safety Health Administration (MSHA) has authority for the mine site under 30 Code of Federal Regulation Chapter I. MSHA regulations describe training requirements for all personnel at the mine site and escort requirements for visitors.

The intent and scope of the plan are consistent with private and public land management policies and practices of the entities holding surface or subsurface land ownership upon which the project intends to operate. These include:

- Alaska Native Claims Settlement Act (ANCSA) lands, including lands owned by:
  - The Kuskokwim Corporation (TKC) (surface use agreement, surface land ownership)
  - Calista Corporation (Calista) (land lease agreement, partial surface and subsurface land ownership)
- Lyman Resources in Alaska, Inc. (land lease agreement)

In addition, public access would be controlled at the Jungjuk Port and Airstrip. Public access control plans for these areas will be under separate cover.

## 2.0 DONLIN GOLD MINE AREA

The past and present land use in the mine area and the proposed Donlin Gold facilities are described below.

### 2.1 Past and Present Land Use

Subsistence and commercial land use has taken place within the COA. A permanent settlement was established in 1909 as a way station at what is now the Village of Crooked Creek. The settlement was the southern end of a portage trail extended from the Kuskokwim up Crooked Creek to the Iditarod mining district (Alaska Department of Fish and Game [ADF&G] 2012). In 1922 the Alaska Road Commission cut a trail from the Kuskokwim River at Crooked Creek to the Flat mining area, following Crooked Creek to its headwaters. This trail, designated Route 32D, remained active in supplying the Flat area until approximately 1956 (ADF&G 2012). The community of Flat is now accessed only by air, and the segment of Route 32D in the area of the COA is now part of the Federal-Aid Secondary (FAS) 231 easement. FAS 231 is the most direct route from the Village of Crooked Creek to the mine area, and follows the Crooked Creek valley. The most recent known commercial use of FAS 231 is for transportation of equipment and supplies to the Lyman placer mining operation, which was on lands now leased by Donlin Gold, and for conveyance of heavy equipment to the Donlin Gold exploration camp. FAS 231 is not used as a transportation route for the community of Flat or any other community north of the COA. There are no current seasonal or year-around settlements within, or accessed through, the COA.

Subsistence hunting, fishing and gathering has taken place within the COA, as indicated by a survey of harvest use areas from 1964 to 1986 (Brelsford et al 1987). However in recent years these activities have taken place south of the COA in the areas adjacent to the Crooked Creek and Bev Creek valleys, as indicated by an ADF&G survey of areas used for resource harvesting in 2009 (ADF&G 2012).

### 2.2 Donlin Gold Facilities

The proposed mine operations include the open pit, tailings storage facility, waste rock facility, mill, personnel camp, and associated support facilities, and roadways connecting the port, mine site, camp and airport facilities. The location of the mine facilities, ownership of the mine site lands, extent of Donlin Gold's land lease, and the COE boundary are shown on Figure 1.

The proposed mine would be an active industrial site where hazardous activities would occur such as explosives handling, blasting, drilling, and heavy equipment operation. To mitigate hazards from these activities most areas at the mine will require strict safety protocols and controlled access as established by the COA. The COA also serves as the ambient air boundary and is located entirely on private lands leased to Donlin Gold.

### **3.0 POTENTIAL ACCESS**

Donlin Gold is in the process of securing complete control over public access to the Core Operating Area. Once this process is complete, public access within the COA will be under the full legal control of Donlin Gold LLC and any person within the COA will be a trespasser unless authorized by Donlin Gold. The discussion below describes the general avenues for members of the public to gain access to the COA. Section 4 describes the measures that Donlin Gold will employ to restrict access, and Section 5 describes implementation of these measures around the COA perimeter.

#### **3.1 Recognized Easements**

There are currently 13 publicly recognized access easements and/or rights-of-way (ROWs) (together referred to in this Public Access Control Plan as “public easements” or “easements”) that intersect or exist within the COA, as shown on Figure 2. Some of these easements have trails associated with them.

#### **3.2 Overland Travel**

Overland travel to mine facilities outside of the recognized easements is difficult, but possible. Overland access would likely begin at points where existing trails meet mine facilities such as access roads. Air photography of the COA showing overland conditions is included on Figure 3.

#### **3.3 Air**

Donlin Gold will have an airstrip facility associated with the mine operation, located as shown on Figure 1, but it is outside of the COA and will be closed to the public. Several smaller former airstrips exist within the COA, and these former airstrips will be reclaimed in a manner that will make them unusable for fixed wing aircraft.

#### **3.4 Roadways**

Donlin Gold will establish roadways for mine facility access and cargo transportation, as described in Section 2.2. Access to the COA will be limited to persons approved by Donlin Gold. No other roadways will exist within the project footprint.

#### **3.5 Waterways**

Creeks in the COA are not navigable waters (Bureau of Land Management [BLM] 2005), and consequently are not recognized routes for public access routes. Moreover, there is no history of public use of the creeks in the COA vicinity.

## **4.0 ACCESS CONTROL AUTHORITY AND MEASURES**

### **4.1 Legal Authority for Restricting Access**

Land ownership in the project area is shown on Figure 1. Lands within the COA are private lands predominantly owned by Calista and TKC through conveyances under ANCSA. A small parcel of surface land within the COA is owned by Lyman Resources in Alaska, Inc. et al. (“Lymans”). Donlin Gold has lease agreements with Calista and the Lymans and a surface use agreement with TKC that provide Donlin Gold with legal control and authority to exclude the general public from the lands within the COA on lands owned by these entities for regulatory, safety, or other Project operational needs. As further described in Section 5.1 and Table 1, Donlin Gold in cooperation with the private landowners is in the process of eliminating and re-routing some existing public easements within the COA that are not needed in their current alignments for access to public lands.

In addition, TKC, who owns surface rights to lands along Crooked Creek to the south of the COA, has the authority to restrict all public access to their lands. TKC allows public access only by permit (TKC 2015).

### **4.2 Measures to Exclude Access**

#### **4.2.1 Fencing**

Fencing is one of the measures that will be used at selected locations. For locations where fencing is used, chain link fence will extend along the property boundary for a minimum of 100-feet (ft) (30.3 m) in each direction from the edge of a roadway, trail or easement that crosses a controlled boundary.

#### **4.2.2 Signage**

Signage is another measure that will be used to control access. Warning signs will be posted on the fenced controlled boundaries of all roadways, trails, easements, and other identified access points to the COA where necessary to provide barriers or impediments to access. The immediate area around each sign will be cleared of vegetation to provide unrestricted public visibility. Additional strategically located signs will also be posted along facility boundaries, with special attention to potential overland routes or observed newly established trails. Each sign will be inspected semi-annually and will be repaired or replaced, as necessary. The sign specifications and text are included in Appendix B.

#### **4.2.3 Natural Barriers**

Streams and creeks, wetlands, steep slopes, and areas of thick vegetation and undergrowth around the proposed COA will, in certain instances, serve as natural barriers or impediments to access. These features make cross country travel in many areas very difficult, especially in the summer months when the ground is thawed, streams are flowing and the vegetation is in full bloom.

#### 4.2.4 Surveillance

Mine security will routinely patrol the mine facilities and roadways. Mine security will also periodically observe the perimeter of the COA in areas where patrols are necessary to control access, as summarized in Table 2. Monitoring of areas that can be observed from mine roadways with binoculars will be conducted daily. Overflights with rotary and fixed wing aircraft would be combined with other site tasks including environmental monitoring and personnel transport. Periodic patrols off of roadways would generally be in response to observed or reported activity in the core operating area.

If signs of trespass are found, security will follow up as appropriate to determine if trespassers were currently in the core operating area, including notifying other Donlin Gold employees in the area to be aware there may be trespassers present and conducting additional patrols in these areas. The situation of each incident would be assessed to determine if additional measures were necessary, which may include, but would not be limited to, additional public outreach and signage.

In addition to patrols by dedicated security personnel, all on-site personnel will be briefed on the necessity of restricting public access to areas within the COA. Personnel will be asked to watch for suspected trespass as they conduct their regular duties, and will be trained in procedures to respond to suspected trespassers. Any suspected trespass by unauthorized individual(s) will also be immediately reported to security and mine management.

If a mine employee, including Security, observes a suspected unauthorized individual(s) within restricted project areas, appropriate measures will be taken by the employee to address potential health and safety concerns. If it is safe to approach the individual(s), mine employees will be instructed to use the following protocol when dealing with unauthorized entry.

- Approach the person (or persons), and request that they leave the restricted area immediately.
- In the case of the COA, if the unauthorized individual(s) refuse to leave the area after the above request, the individual(s) will be informed that they are in a restricted area and that applicable laws require Donlin Gold to restrict entry to the posted area to authorized personnel only. The unauthorized person or persons will again be asked to leave the restricted area.
- If the unauthorized individual(s) still refuse to leave, the individual(s) will be informed that Donlin Gold will not be liable or responsible for any harm they may encounter by being in a restricted entry area.
- In the event the Donlin Gold employee (other than Security) believes the individual(s) health and safety may be at risk by being within the restricted area, or that the person is a risk to safety or security in the area, the employee will call security. Security will then take charge of the trespass incident and may call law enforcement authorities to have the individual(s) removed from the area. The mine personnel will also request the name or names of the unauthorized individual(s) at that time. Calista and/or TKC will be notified if the individual is believed to be a shareholder or trespassing on their respective lands.

- The mine employee will log the encounter with the unauthorized individual(s) on a surveillance monitoring form (Appendix C).

#### **4.2.5 External Communications**

Donlin Gold will, at least annually, conduct outreach with TKC and Calista to inform and update shareholders on access restrictions for the COA. Donlin Gold will also provide briefings to the Alaska Department of Natural Resources and the BLM to inform them of these restrictions to allow these agencies to convey this information in their resources to the public.



## 5.0 ACCESS CONTROL IMPLEMENTATION

The measures to control access by easements and trails and overland travel are described below.

### 5.1 Rerouting of Easements

The rights to public access provided by easements would conflict with Donlin Gold's need to protect the public from the potential hazards of developing and operating a mine and associated facilities. Additionally, in many cases the proposed land improvements would either block or overlay the footprint of an easement. Consequently, Donlin Gold has submitted a Public Easement Plan (Donlin Gold 2022) describing the affected public easements and the proposed plan to both protect public safety and ensure that public access to lands outside the COA is supported by alternate means. The Public Easement Plan details the basis of each easement and the rerouting of the easements around the COA. The easements, the characteristics of the easement (presence of absence of evidence of current or past use), and measures proposed to prevent public access by means of these easements and re-direct the public to rerouted easements, are summarized in Table 1.

The COA has traditionally been accessed from the south from communities on the Kuskokwim River. Access is concentrated around the existing winter trail (FAS 231) connecting the village of Crooked Creek to Iditarod. The land that FAS 231 passes through immediately to the south of the COA is owned by TKC, and a permit is required from TKC for access to TKC lands from persons who are not TKC shareholders or immediate family members (TKC 2015).

### 5.2 Overland Travel

Overland travel to the COA will be excluded by a number of measures. Former easements and existing trails will be fenced as described in Section 4.2.1 and signed as described in Section 4.2.2. In many areas travel is restricted by natural features including topographic relief, vegetative cover, and terrain. In other areas, including but not limited to ridgetop areas without vegetation and creek valleys, other measures such as signage and visual surveillance from land or air will be implemented. Finally, if new or previously unrecognized trails are identified, additional fencing may be required.

The conditions along the perimeter are described by segment in Table 2. The locations of the segments, air photography, and topography are shown on Figure 4.

**Table 1 – Public Easements Affected by the Project**

| Re-directed Easement            | Description   | Access Control Measures  |
|---------------------------------|---|--|
| FAS 231                         | Winter trail connecting Village of Crooked Creek with Iditarod. Trail is used seasonally and is the primary land access to the area.  | Re-routed easement/trail will be marked with signs. Chain link fence will be erected across the former easement and any associated trail outside of the easement at the north and south COA boundary and signs will be posted. Patrols, primarily during winter, will monitor for public access. |
| Revised Statute Trail (RST) 545 | Former trail from Return Creek to Crooked Creek, public use is not known and the trail is not visible in the area it is mapped.   | Chain link fence will be erected across the former easement at the COA boundary and signs will be posted.  |
| RST 546                         | Tractor trail from the junction of Crooked Creek and Grouse Creek to Return Creek. Trail is present but does not appear to have been used in recent years.                        | Re-routed easement will be marked with signs. Chain link fence will be erected across the trail/former easement and any associated trail outside of the easement at the COA boundary and signs will be posted.   |
| RST 547                         | Easement from the junction of Dome Creek, Donlin Creek, and the Willow Creek – Flat Creek Trail, and extending to the junction of Omega Gulch and the Flat – Crooked Creek Trail. | This easement is entirely within the COA and does not cross the boundary. The easement will be extinguished. No additional access control measures are required for this easement.   |
| RST 548                         | Dome Creek – Anaconda – Bell Creek Trail. There is no known purpose for, or recent public use of, this trail.   | Chain link fence will be erected across the former easement at the COA boundary and signs will be posted.  |
| RST 549                         | Snow Gulch – Anaconda Creek Trail. There is no known recent public use of this trail.   | This easement is entirely within the COA and does not cross the boundary. The easement will be extinguished. No additional access control measures are required for this easement.   |
| RST 550                         | Crooked Creek Cabin – American Creek Trail. There is no evidence of current use of this trail.  | This easement is entirely within the COA and does not cross the boundary. The easement will be extinguished. No additional access control measures are required for this easement.   |
| RST 1475                        | Willow Creek-Flat Creek Trail. A trail is visible but based on aerial inspection does not appear to have been used in recent years.   | Re-routed easement will be marked with signs. Chain link fence will be erected across the former easement and any associated trail outside of the easement at the COA boundary and signs will be posted.   |

**Table 1 – Public Easements Affected by the Project (continued)**

| Re-directed Easement                           | Description   | Access Control Measures  |
|--|---|--|
| Easement Identification Number (EIN)<br>8 C3 L | Easement to allow access to federal public lands from FAS 231 through ANCSA lands. Trail is present but does not appear to have been used in recent years. This easement overlaps the segment of RST 546 (above) on ANSCA lands and the point at which it crosses the COA boundary. | Re-routed easement will be marked with signs. Chain link fence will be erected across the trail/former easement and any associated trail outside of the easement at the COA boundary and signs will be posted. |
| EIN 9 D1 L                                     | Easement to allow access to federal public lands from FAS 231 through ANCSA lands. This easement follows various segments of RST 1475, RST 547, and RST 548. Trail is not visible in air photo at the point it crosses the COA (co-located with RST 548 at this location).          | Re-routed easement will be marked with signs. Chain link fence will be erected across the former easement at the COA boundary and signs will be posted.  |
| EIN 10 D1                                      | Easement for an existing access trail from FAS 231 eastward to public land. A trail is visible.   | Chain link fence will be erected across the trail/former easement and any associated trail outside of the easement at the COA boundary and signs will be posted.   |
| EIN 11 D1                                      | Easement to provide public access through ANCSA land, co-located with RST 76.   | Re-routed easement will be marked with signs. Chain link fence will be erected across the former easement crossings of the COA boundary and signs will be posted.  |
| EIN 15 D1                                      | Easement for a proposed access trail from FAS 231 to former federal (now state) public lands to the west. No trail visible.   | Chain link fence will be erected across the former easement at the COA boundary and signs will be posted.  |

**Table 2 – Access Control Measures on the COA Boundary**

| Segment | Physical Description  | Access Control  |
|---------|---|---|
| 1       | Area of ridgetops and narrow valleys on southeastern perimeter of the COA. No known easements or trails are located in this area.                                   | Terrain, vegetation, and posted signs are the primary physical barriers or impediments to access. Verification will be done by periodic patrols, overflights and routine monitoring with binoculars for areas relatively close to mine facilities and roadways.                                     |
| 2       | Area of generally east-to-west valleys, potential routes to Crooked Creek drainage. Former Dome Creek – Anaconda – Bell Creek trail (RST 548) crosses this segment. | Potential travel in this area is in valleys and on hilltops with sparse vegetation. Chain link fencing of historical easement RST 548 (see Table 1) and posted signs will be the primary physical barriers or impediments to access. Verification will be done by periodic patrols and overflights. |
| 3       | Area of ridgetops on northeast perimeter of the COA. No known easements or trails are located in this area.   | Posted signs, terrain and vegetation will be the primary physical barriers or impediments to access. Verification will be done by periodic patrols and overflights.   |
| 4       | Donlin Creek valley area, formerly crossed by the Willow Creek – Flat Creek trail (RST 1475).   | Potential travel would be in valleys and on hilltops with sparse vegetation. Posted signs and fencing of easement RST 1475 location will be the primary physical barriers or impediments to access. Verification will be done by periodic patrols and overflights.                                  |
| 5       | Area of ridgetops on northwest perimeter of the COA. No known easements or trails are located in this area.   | Posted signs, terrain and vegetation are the primary physical barriers or impediments to access. Verification will be done by periodic patrols and overflights.   |
| 6       | Flat Creek valley area, formerly crossed by the Crooked Creek – Iditarod winter trail (FAS 231).  | Potential travel would be on the former winter road. Posted signs and chain link fencing across the former FAS 231 easement will be the physical barriers or impediments to access. Verification will be done by periodic patrols and overflights.  |
| 7       | Area of ridgetops on northwest perimeter of the COA. No known easements or trails are located in this area.   | Terrain and vegetation are the primary physical barriers or impediments to access. Verification will be done by periodic patrols and overflights.   |

**Table 2 – Access Control Measures on the COA Boundary (continued)**

| Segment | Physical Description  | Access Control   |
|---------|---|--|
| 8       | Grouse Creek valley area, formerly the location of a tractor trail from Crooked Creek to Return Creek (RST 546).  | Potential travel would be on the former tractor trail. Posted signs and chain link fencing of the RST 546 easement location will be the primary physical barriers or impediments to access. Verification will be done by periodic patrols, overflights, and routine monitoring with binoculars for areas relatively close to mine facilities and roadways. |
| 9       | Area of ridgetops on southwestern perimeter of the COA. No known easements or trails are located in this area.  | Posted signs, terrain, and vegetation are the primary physical barriers or impediments to access. Verification will be done by periodic patrols, overflights, and routine monitoring with binoculars for areas relatively close to mine facilities and roadways.   |
| 10      | Crooked Creek/Eagle Creek valley area, formerly crossed by the Crooked Creek – Iditarod winter trail (FAS 231) and an easement to public lands to the west (EIN 15 D1). | Potential travel would be on the former winter road. Fencing of across the former easements and verification will be done by periodic patrols, overflights, and routine monitoring with binoculars for areas relatively close to mine facilities and roadways.   |

### 5.3 Roadways

The roadways are not open to public use, except at crossing point(s) where required to maintain public easement connectivity. The section of the roadway from the intersection of the spur road south to the port would be used seasonally during the barging season, but would be unmaintained during winter months. A gate and fencing will be installed at the point the port road crosses the COA boundary.

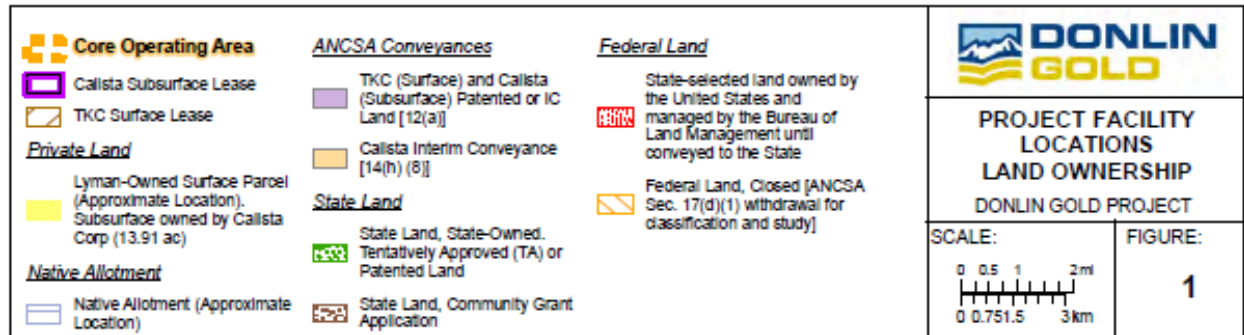
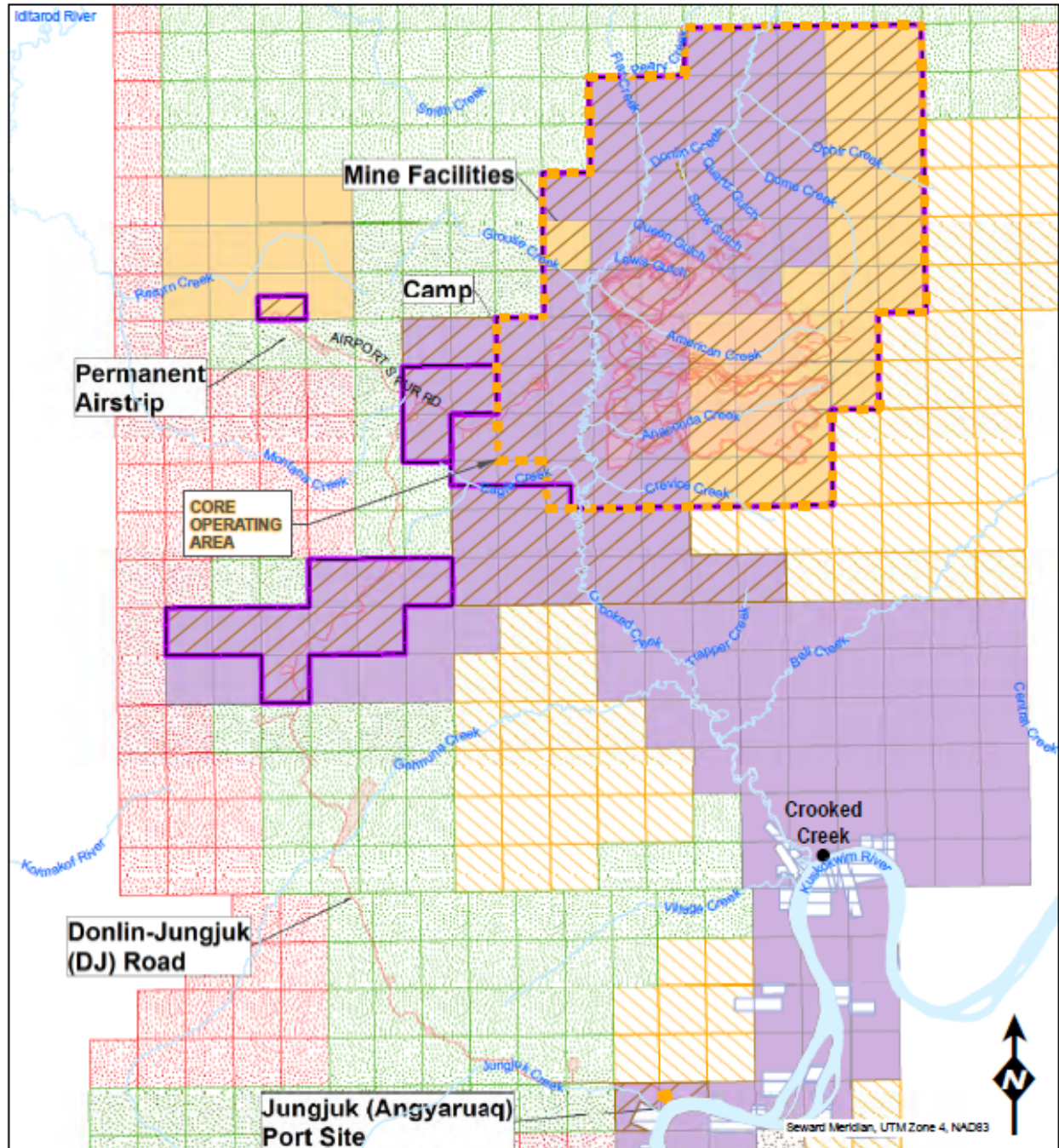
Access to the roadways will be controlled by signage and patrols. In addition, employees or contractors using the roads will be instructed to report unauthorized persons on roadways to security. An example roadway warning sign is included in Appendix B.

## 6.0 REFERENCES

- ADF&G. 2012. Technical Paper No. 365, Subsistence Harvests in 8 Communities in the Central Kuskokwim River Drainage, 2009. Division of Subsistence, Anchorage. January.
- BLM. 2005. Memorandum from Chief Navigability Section (927) to Chief, Branch of Survey Planning and Preparation (927), Subject: Navigable Waters in the Georgetown (2672) and Lime Village (2667) Survey Windows, (Calista Region, CAA-1). April 16.
- Brelsford, Taylor, R. Peterson and T.L. Haynes. 1987. An Overview of Resource Use Patterns in Three Central Kuskokwim Communities: Aniak, Crooked Creek, and Red Devil. Technical Paper No. 141. ADF&G, Division of Subsistence, Fairbanks, AK. May.
- Donlin Gold LLC. 2022. Public Easement Plan, Revision 09. January.
- TKC. 2015. Permitting for Non-Shareholders. <http://www.kuskokwim.com/permitting/for-non-shareholders/>. Accessed August 21, 2015.

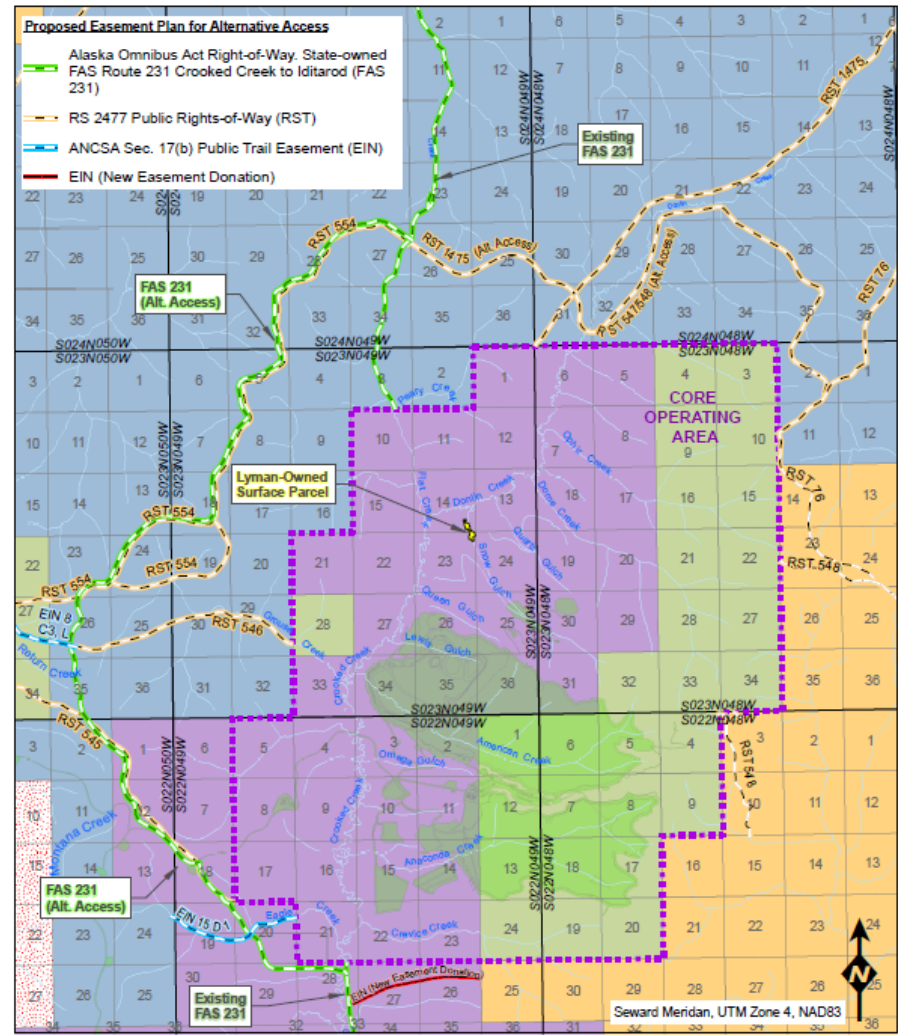
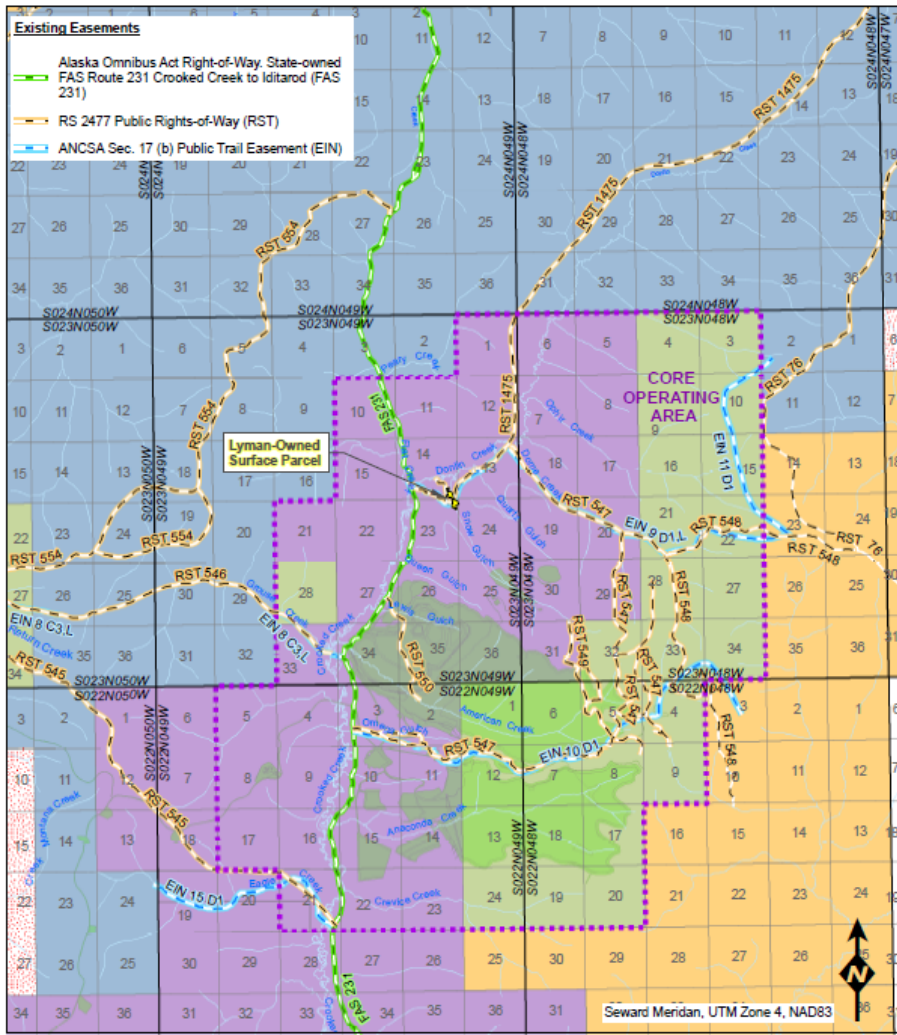
## **Appendix A**

### **Figures**



DG-PE0501.mxd, 06/10/15, R01





|                            |   |  |                            |
|----------------------------|---|--|----------------------------|
| <b>Donlin Gold Project</b> |   | <b>Land Status Details (2015)</b>                                    |                            |
| Core Operating Area        | Lyman-Owned private parcel approximate location (13.9 ac); surface leased from Lyman to Donlin Gold, LLC. Subsurface owned by Calista | General Grant State Selected. Owned by the US and managed by the BLM | Federal Land (BLM Managed) |
| Proposed Facilities        | Calista Corp. Patented Lands [14 (h)(8)]  | State Land. Tentatively Approved or Patented                         |                            |
|                            | The Kuskokwim Corp (surface) and The Calista Corp (subsurface). Patented Lands  |  |                            |

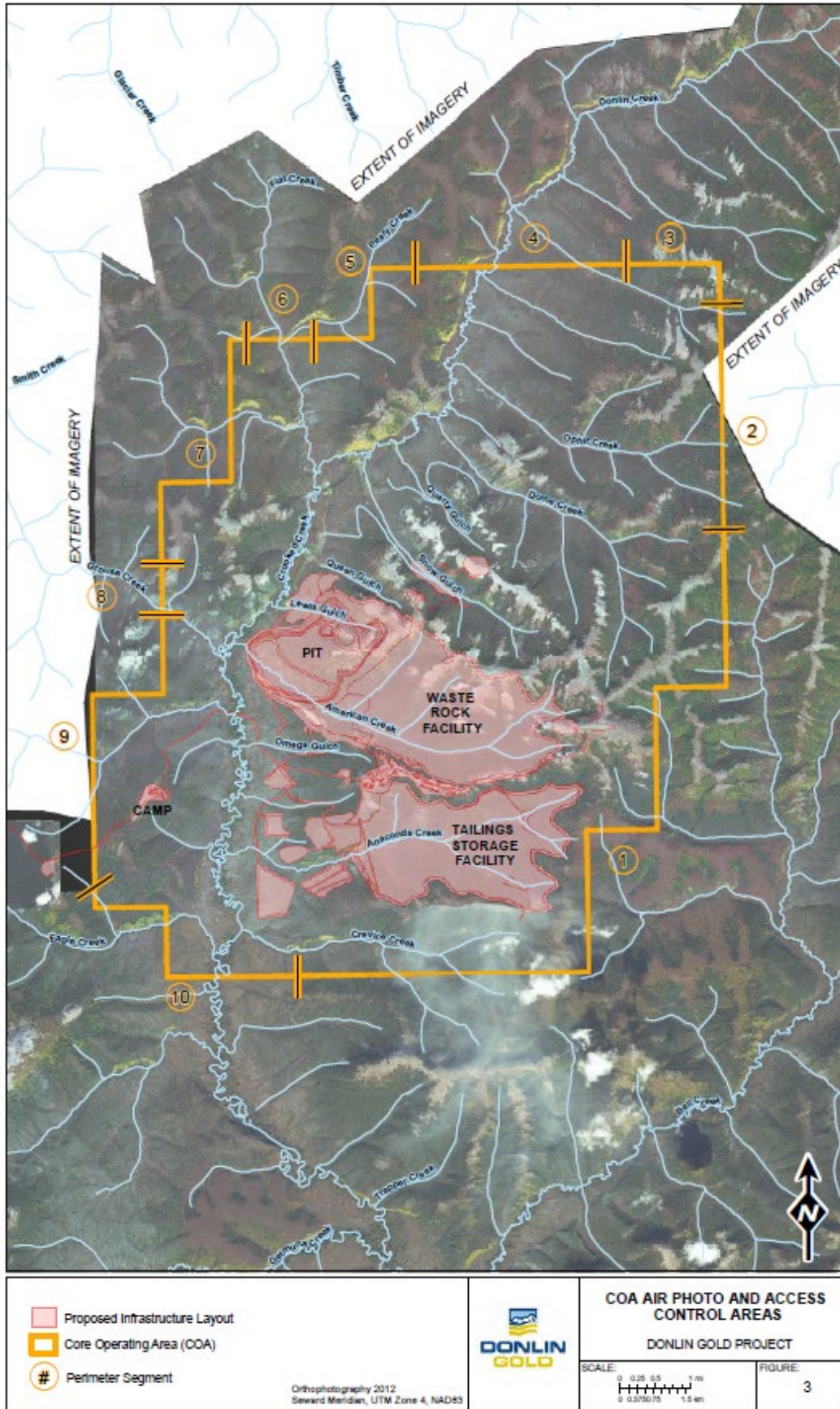
**COA PUBLIC EASEMENTS**

DONLIN GOLD PROJECT

SCALE:

FIGURE: **2**

based on DOI: ENV-0238.mxd, 10/11/16, R20



## **Appendix B**

### **Example Warning Signs**

The warning sign specifications will be as follows:

- Each sign will be 2 ft by 4 ft and will be mounted on posts
- The base of each sign will be a minimum of 3 ft and a maximum of 6 ft above the surrounding ground surface

The warning signs for the different operational areas will read as follows:

*Core Operating Area Warning Sign*



*Roadway Warning Sign*



## **Appendix C**

### **Surveillance Monitoring Form**

**Surveillance Monitoring Form**

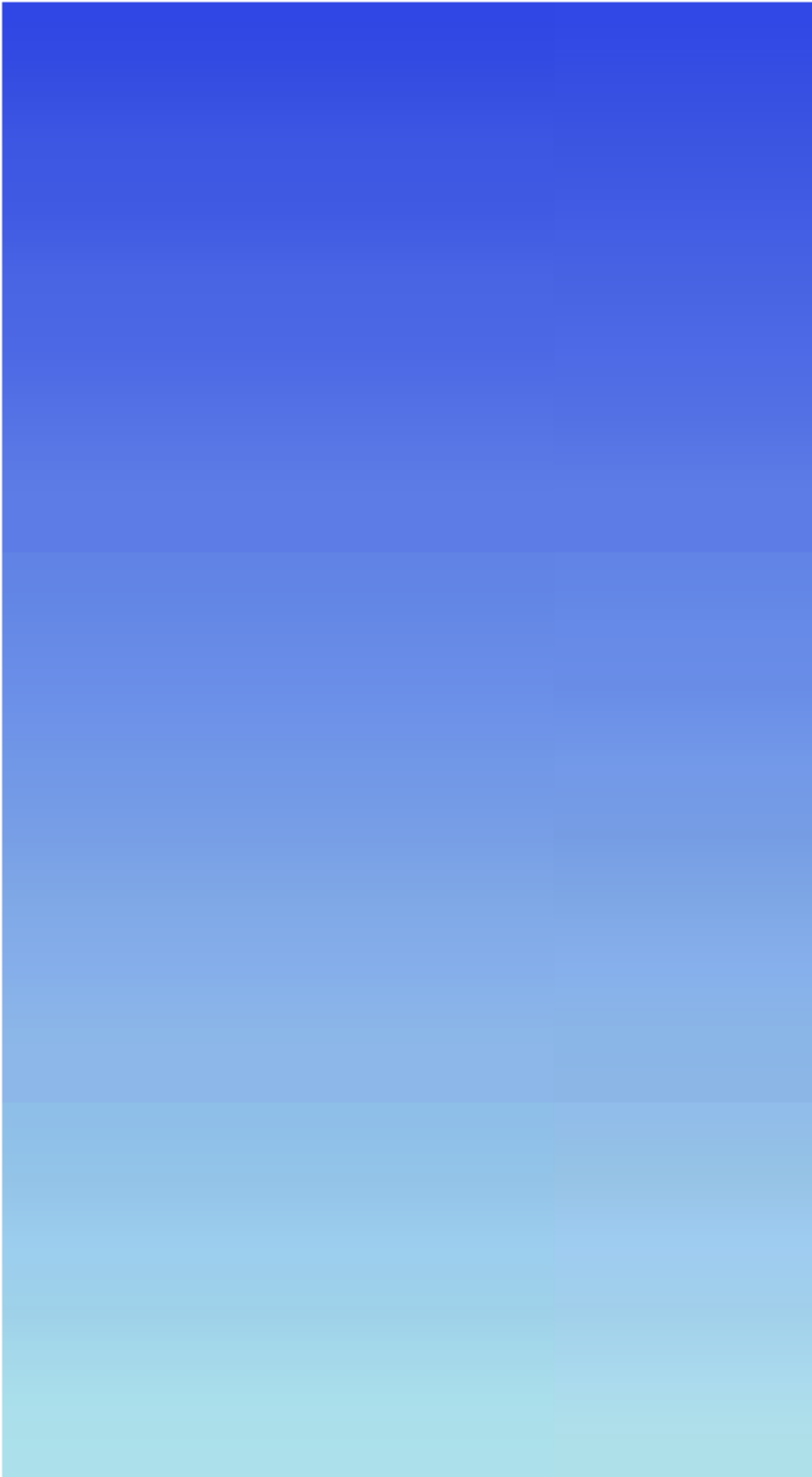
| Date and Time | Surveillance Conducted by | Surveillance Comments |
|---------------|---------------------------|-----------------------|
|               |                           |                       |
|               |                           |                       |
|               |                           |                       |
|               |                           |                       |

**Instructions:**

Information to be gathered, to the extent possible, includes:

- 1) Day and time;
- 2) The name of the individual(s) (if known or otherwise provided);
- 3) The method of entry into the property (e.g. by foot, snow machine, etc.);
- 4) Duration of unauthorized presence within the restricted area; and
- 5) Other pertinent information as appropriate.

**Section 16.      *Fugitive Dust Control Plan***



AIR SCIENCES INC.

DENVER • PORTLAND

**Fugitive Dust  
Control Plan**

**Donlin Gold  
Project, Alaska**

PREPARED FOR:  
DONLIN GOLD LLC

PROJECT NO. 281-15-2  
OCTOBER 2015  
(RESUBMITTED  
OCTOBER 27, 2021)



---

## TABLE OF CONTENTS

---

|   |   |
|---|---|
| 1.0 Introduction .....                        | 3 |
| 1.1 Objective and Best Practical Methods..... | 3 |
| 2.0 Fugitive Dust Control Plan.....           | 4 |
| 2.1 Drilling and Blasting.....                | 4 |
| 2.2 Material Loading and Unloading.....       | 5 |
| 2.3 Haul Roads and Access Roads .....         | 5 |
| 2.4 Ore Crushing.....                         | 6 |
| 2.5 Construction and Maintenance.....         | 6 |
| 2.6 Reducing Wind Erosion.....                | 7 |
| 3.0 Training and Assessments .....            | 8 |
| 3.1 Personnel Training.....                   | 8 |
| 3.2 Performance Assessments .....             | 8 |

## 1.0 INTRODUCTION

---

Donlin Gold LLC (Donlin Gold) is proposing to construct and operate the Donlin Gold mine: a hard rock, open-pit, gold mine (Project). The Project is located in southwest Alaska, approximately 280 miles west of Anchorage. Donlin Gold is an Alaskan operated company that is owned by Barrick Gold U.S. Inc., a subsidiary of Barrick Gold Corporation, and NovaGold Resources Alaska Inc., a subsidiary of NovaGold Resources, Inc.

The Project has the potential to generate fugitive dust emissions. This document provides a Fugitive Dust Control Plan (FDCP) for minimizing fugitive dust emissions.

### 1.1 Objective and Best Practical Methods

The objective of the FDCP is to ensure that fugitive dust generated from the Project will be controlled to minimize its potential to adversely affect local air quality. Best practical methods (BPMs) will be used to limit controllable fugitive dust emissions. The BPMs utilized at any time will depend on site conditions and will not compromise the safe operation of the mine.

The Project also incorporates design features that minimize dust emissions from ore processing activities (i.e., ore crushing, ore conveying, and stockpiling of crushed ore) through a combination of emissions capture and control, and enclosures.

Donlin Gold's goal is to keep the fugitive dust emissions resulting from the Project's activities within air quality compliance standards through the diligent use of BPMs for fugitive dust control, personnel training, and performance assessments.

---

## 2.0 FUGITIVE DUST CONTROL PLAN

---

The Project's activities and areas contributing to fugitive dust will include drilling and blasting, material loading and unloading, haul roads, access roads (airstrip, camp, and Jungjuk Port), ore crushing, construction and maintenance, and wind erosion from exposed areas such as tailings, waste rock storage, and ore and overburden stockpiles. As practicable, measures will be taken to control fugitive dust during the course of the Project, and surface disturbances will be limited to those areas that are reasonably necessary.

Employees, contractors, and visitors on the Project's site will be informed of their responsibility to control and report fugitive dust, as discussed in Section 3.0, Training and Compliance. Donlin Gold's area supervisors, construction managers, or appointed equivalents will be authorized to temporarily cease operations in an event of adverse wind or other meteorological conditions that cause excessive dust. All Donlin Gold's employees and contractors are empowered to report dusty conditions.

The following sections of this FDCP identify the BPMs that will be used as needed and when practical to minimize fugitive dust emissions from the Project's activities.

### 2.1 Drilling and Blasting

The BPMs for controlling fugitive dust from drilling and blasting in the pits are as follows:

1. Allow natural conditions such as wet weather (rain and snow) or inherent material moisture content to maintain dust control until the use of conventional dust control methods is necessary.
2. Avoid drilling and blasting during adverse wind or other meteorological conditions that cause excessive dust.
3. When practical, utilize drilling and blasting techniques that minimize dust generation, such as the following:
  - a. Good-quality blast hole stemming to confine blast energy
  - b. Wet and/or shrouded drilling

## 2.2 Material Loading and Unloading

Material loading and unloading activities generate dust emissions from the handling of materials (e.g., loading of haul trucks via a shovel, truck dumping, etc.). The BMPs for controlling these emissions are as follows:

1. Allow natural conditions such as wet weather (rain and snow) or inherent material moisture content to maintain dust control until the use of conventional dust control methods is necessary.
2. Avoid material handling activities during adverse wind or other meteorological conditions that cause excessive dust.
3. Use water trucks to apply water in working areas.

## 2.3 Haul Roads and Access Roads

Haul trucks and light vehicles traveling on unpaved roads (haul roads and access roads) can generate fugitive dust emissions. The BMPs for controlling these emissions are as follows:

1. Allow natural conditions such as wet weather (rain and snow) or inherent material moisture content to maintain dust control until the use of conventional dust control methods is necessary.
2. Use large-capacity haul trucks (400-ton) to minimize haul road travel, where practical.
3. Limit the speed of the haul trucks and light vehicles.
4. Apply water and chemical dust suppressants on road surfaces.
5. During winter, use graders to blade snow over road surfaces where this may be done safely.

As described above, Donlin Gold will employ a combination of water (or snow, as applicable) and chemical dust suppressant application to control dust from unpaved roads. The application frequency will depend on the natural moisture condition of the road surfaces due to ice, rain, or snow; maintaining safe driving conditions; and visible observations of dust levels from the road surfaces.

## 2.4 Ore Crushing

The Project's ore crushing circuit includes run-of-mine ore gyratory crushing, coarse ore transfers, and recycle pebble crushing. Particulate emissions are generated by the crushing and handling of the ore.

Mined ore is loaded through a dump pocket (with a rock breaker) to the gyratory crusher (GC). The GC discharges through a surge pocket and apron feeder to a conveyor system. Ore is carried by conveyor to the coarse ore stockpile. The coarse ore stockpile is reclaimed by four apron feeders and transferred to the semi-autogenous grinding (SAG) mill feed conveyor. The SAG mill is a wet process and does not generate particulate emissions.

Material discharged from the SAG mill is washed and screened, and the oversized material is sent to the pebble crushers. After crushing, the ore is discharged to the pebble discharge conveyor, which transfers to the SAG mill feed conveyor.

The crushing and handling of ore will generate dust emissions. Each emission point in these circuits will be controlled by a dust collector or enclosure as described below:

1. An enclosure will be installed at the dump pocket. The enclosure will have openings to allow haul trucks to enter and dump ore into the dump pocket from two sides.
2. Dust emissions from gyratory crushing (including ore transfers out of the crusher) will be captured and controlled by a dust collection system.
3. Enclosures will be installed at the transfers to and from the coarse ore stockpile feed conveyor.
4. Dust emissions from the coarse ore stockpile reclaim apron feeders will be captured and controlled by dust collection systems.
5. An enclosure will be installed at the SAG mill feed conveyor discharge.
6. Dust emissions from the pebble crushers (including ore transfers in and out of the crushers) will be captured and controlled by a dust collection system.
7. An enclosure will be installed at the transfer from the pebble discharge conveyor.

## 2.5 Construction and Maintenance

Construction and maintenance activities such as road grading, bulldozing, and earth moving can generate dust emissions. The BPMs for controlling these emissions are as follows:

1. Allow natural conditions such as wet weather (rain and snow) or inherent material moisture content to maintain dust control until the use of conventional dust control methods is necessary.
2. Avoid construction and maintenance activities during adverse wind or other meteorological conditions that cause excessive dust.
3. Use water trucks to apply water in working areas.
4. Apply water and chemical dust suppressants to haul roads and access roads as discussed in Section 2.3, Haul Roads and Access Roads, to control dust from these surfaces during grading.

## 2.6 Reducing Wind Erosion

Wind erosion can generate dust emissions from exposed and active mining areas such as the tailings impoundment beach, waste rock dump, run-of-mine ore and overburden stockpiles, and the haul and access roads. The BPMs for controlling these emissions are as follows:

1. Allow natural conditions such as wet weather (rain and snow) or inherent material moisture content to maintain dust control until the use of conventional dust control methods is necessary.
2. Use a phased approach to surface disturbance rather than disturbing the entire area all at once, and, concurrent with operations, reclaim disturbed areas once they are no longer required for active mining or other operations.
3. Use dozers to maintain the waste facility surfaces.
4. Use water trucks to apply water in working areas.
5. Promote encrustation of exposed areas by applying chemical dust suppressants.
6. Apply water and chemical dust suppressants to haul roads and access roads as discussed in Section 2.3 to control windblown dust from these surfaces.
7. Install a cover over the coarse ore stockpile.

## **3.0 TRAINING AND ASSESSMENTS**

---

### **3.1 Personnel Training**

Donlin Gold will provide its employees, contractors, and visitors with the necessary training to meet the objective set forth in this FDCP. Dust control and dusty condition reporting training will be provided to all employees and contractors. Site visitors will receive instructions on reporting dusty conditions during visitor orientation.

### **3.2 Performance Assessments**

The FDCP will be reviewed periodically to evaluate if the BPMs employed are sufficient to meet the plan's objective. These performance assessments will be accomplished through routine inspections by Donlin Gold's environmental staff and by follow-up on observations reported by Donlin Gold's staff, contractors, and visitors. Donlin Gold's staff will observe each of the fugitive dust sources listed herein and determine whether the appropriate dust control is being achieved. Changes will be made to the FDCP as appropriate based on the findings of the performance assessments.

## Section 17. Fugitive Dust Inspection Log

| Inspection |      | Inspector Name | Inspection Criteria               | Okay | Not Okay | Findings | Actions | Completion Date |
|------------|------|----------------|-----------------------------------|------|----------|----------|---------|-----------------|
| Date       | Hour |                |                                   |      |          |          |         |                 |
|            |      |                | Mine Area                         |      |          |          |         |                 |
|            |      |                | Topsoil/Overburden Stockpile Area |      |          |          |         |                 |
|            |      |                | Ore Stockpile Area                |      |          |          |         |                 |
|            |      |                | Mill Area                         |      |          |          |         |                 |
|            |      |                | Conveyor System                   |      |          |          |         |                 |
|            |      |                | Truck Dump                        |      |          |          |         |                 |
|            |      |                | Truck and Support Vehicle Traffic |      |          |          |         |                 |

| Inspection |      | Inspector Name | Inspection Criteria               | Okay | Not Okay | Findings | Actions | Completion Date |
|------------|------|----------------|-----------------------------------|------|----------|----------|---------|-----------------|
| Date       | Hour |                |                                   |      |          |          |         |                 |
|            |      |                | Mine Area                         |      |          |          |         |                 |
|            |      |                | Topsoil/Overburden Stockpile Area |      |          |          |         |                 |
|            |      |                | Ore Stockpile Area                |      |          |          |         |                 |
|            |      |                | Mill Area                         |      |          |          |         |                 |
|            |      |                | Conveyor System                   |      |          |          |         |                 |
|            |      |                | Truck Dump                        |      |          |          |         |                 |
|            |      |                | Truck and Support Vehicle Traffic |      |          |          |         |                 |

How to fill out this Fugitive Dust Inspection Log:

Steps:

- 1 Fill out the inspection “date”, “hour”, and “inspector name” columns
- 2 Inspect each location listed under the “inspection criteria” column
- 3 If excessive dust is not present, check “okay” column and fill out completion date
- 4 If excessive dust is present, check “not okay” column and write dust present in “findings” column then list mitigative action taken under “actions” column

After mitigative action is taken, repeat Steps 1 through 4 and fill out “completion date” column (list additional comments as necessary)