

DEPARTMENT OF ENVIRONMENTAL CONSERVATION

AIR QUALITY CONTROL MINOR PERMIT

Permit No.: AQ0978MSS01

Date: Preliminary – October 19, 2006

The Alaska Department of Environmental Conservation (Department), under the authority of AS 46.14 and 18 AAC 50, issues Air Quality Control Minor Permit No. AQ0978MSS01 to the permittee listed below.

Permittee: Alaska Gold Company
P.O. Box 640
Nome, AK 99762-640

Owner/Operator: Same as permittee

Stationary Source: Rock Creek Mine

Location: Northing 7160356; Easting 473760; Zone 3

Physical Address: 6.2 miles north of Nome, Alaska on the Glacier Creek Road

Permit Contact: Doug Nicholson
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(907) 374-8862

This project is classified under 18 AAC 50.502 for air quality protection (18 AAC 50.502(b)(3) as a minor permit to construct, operate, or relocate a rock crusher with a rated capacity of at least five tons per hour). The permit satisfies the obligation of the permittee to obtain a minor permit under 18 AAC 50.

This permit authorizes the permittee to operate under the terms and conditions of this permit, and as described in the original permit application and subsequent application supplements listed in Section 7 except specified in this permit.

The permittee may operate under the terms and conditions of this permit upon issuance.

John F. Kuterbach
Manager, Air Permits Program

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Section 1 Emission Unit Inventory

1. **Authorization.** The permittee is authorized to install and operate the emission units listed in Table 1.

Table 1 – Minor Permit Emission Unit Inventory^[a]

| Unit No. ^[b] | Type | Make/Model ^[c] | Fuel | Rating/Size ^[d] | Estimated Installation (Year) |
|--------------------------------------|-------------------------|---------------------------|------|----------------------------|-------------------------------|
| <i>Crushing and Grinding Circuit</i> | | | | | |
| 1 | Truck Unloading | TBD | N/A | 500 tph | 2007 |
| 2 | Conveyer Transfer Point | TBD | N/A | 463 tph | 2007 |
| 3 | Conveyer Transfer Point | TBD | N/A | 163 tph | 2007 |
| 4 | Conveyer Transfer Point | TBD | N/A | 300 tph | 2007 |
| 5 | Primary Crushing | TBD | N/A | 300 tph | 2007 |
| 6 | Conveyer Transfer Point | TBD | N/A | 300 tph | 2007 |
| 7 | Conveyer Transfer Point | TBD | N/A | 463 tph | 2007 |
| 8 | Conveyer Transfer Point | TBD | N/A | 463 tph | 2007 |
| 9 | Screening | TBD | N/A | 463 tph | 2007 |
| 10 | Conveyer Transfer Point | TBD | N/A | 191 tph | 2007 |
| 11 | Conveyer Transfer Point | TBD | N/A | 272 tph | 2007 |
| 12 | Secondary Crushing | TBD | N/A | 272 tph | 2007 |
| 13 | Conveyer Transfer Point | TBD | N/A | 272 tph | 2007 |
| 14 | Conveyer Transfer Point | TBD | N/A | 191 tph | 2007 |
| 15 | Conveyer Transfer Point | TBD | N/A | 463 tph | 2007 |
| 16 | Conveyer Transfer Point | TBD | N/A | 903 tph | 2007 |
| 17 | Conveyer Transfer Point | TBD | N/A | 452 tph | 2007 |
| 18 | Conveyer Transfer Point | TBD | N/A | 452 tph | 2007 |
| 19 | Conveyer Transfer Point | TBD | N/A | 452 tph | 2007 |
| 20 | Conveyer Transfer Point | TBD | N/A | 452 tph | 2007 |
| 21 | Screening | TBD | N/A | 452 tph | 2007 |
| 22 | Screening | TBD | N/A | 452 tph | 2007 |
| 23 | Conveyer Transfer Point | TBD | N/A | 452 tph | 2007 |
| 24 | Conveyer Transfer Point | TBD | N/A | 232 tph | 2007 |
| 25 | Conveyer Transfer Point | TBD | N/A | 220 tph | 2007 |
| 26 | Conveyer Transfer Point | TBD | N/A | 220 tph | 2007 |
| 27 | Tertiary Crushing | TBD | N/A | 220 tph | 2007 |
| 28 | Tertiary Crushing | TBD | N/A | 220 tph | 2007 |
| 29 | Conveyer Transfer Point | TBD | N/A | 220 tph | 2007 |
| 30 | Conveyer Transfer Point | TBD | N/A | 220 tph | 2007 |
| 31 | Conveyer Transfer Point | TBD | N/A | 220 tph | 2007 |
| 32 | Conveyer Transfer Point | TBD | N/A | 220 tph | 2007 |

| Unit No.^[b] | Type | Make/Model^[c] | Fuel | Rating/Size^[d] | Estimated Installation (Year) |
|-------------------------------|------------------------------|---------------------------------|---------------------|----------------------------------|--------------------------------------|
| 33 | Conveyer Transfer Point | TBD | N/A | 232 tph | 2007 |
| 34 | Conveyer Transfer Point | TBD | N/A | 232 tph | 2007 |
| 35 | Conveyer Transfer Point | TBD | N/A | 463 tph | 2007 |
| 36 | Screening | TBD | N/A | 335 tph | 2007 |
| 37 | Screening | TBD | N/A | 335 tph | 2007 |
| 38 | Screening | TBD | N/A | 335 tph | 2007 |
| 39 | Conveyer Transfer Point | TBD | N/A | 335 tph | 2007 |
| 40 | Conveyer Transfer Point | TBD | N/A | 335 tph | 2007 |
| 41 | Conveyer Transfer Point | TBD | N/A | 335 tph | 2007 |
| <i>Process Building</i> | | | | | |
| 42 | Conveyer Transfer Point | TBD | N/A | 335 tph | 2007 |
| 43 | Space Heater | TBD | Diesel | 0.23 MMBtu/hr | 2007 |
| 44 | Space Heater | TBD | Diesel | 0.23 MMBtu/hr | 2007 |
| 45 | Space Heater | TBD | Diesel | 0.23 MMBtu/hr | 2007 |
| 46 | Space Heater | TBD | Diesel | 0.12 MMBtu/hr | 2007 |
| 47 | Boiler | TBD | Diesel | 3.0 MMBtu/hr | 2007 |
| 48 | Gold Furnace | TBD | Diesel | 0.9 MMBtu/hr | 2007 |
| 49 | Radiant Floor Heating Boiler | TBD | Diesel | 0.24 MMBtu/hr | 2007 |
| 50 | Radiant Floor Heating Boiler | TBD | Diesel | 0.24 MMBtu/hr | 2007 |
| <i>Mill Building</i> | | | | | |
| 51 | Space Heater | TBD | Diesel | 0.23 MMBtu/hr | 2007 |
| 52 | Space Heater | TBD | Diesel | 0.23 MMBtu/hr | 2007 |
| 53 | Space Heater | TBD | Diesel | 0.23 MMBtu/hr | 2007 |
| 54 | Space Heater | TBD | Diesel | 0.23 MMBtu/hr | 2007 |
| 55 | Space Heater | TBD | Diesel | 0.23 MMBtu/hr | 2007 |
| 56 | Space Heater | TBD | Diesel | 0.23 MMBtu/hr | 2007 |
| <i>Shop/Warehouse</i> | | | | | |
| 57 | Space Heater | TBD | Diesel | 0.23 MMBtu/hr | 2007 |
| 58 | Space Heater | TBD | Diesel | 0.13 MMBtu/hr | 2007 |
| 59 | Space Heater | TBD | Diesel | 0.31 MMBtu/hr | 2007 |
| 60 | Space Heater | TBD | Diesel | 0.31 MMBtu/hr | 2007 |
| 61 | Space Heater | TBD | Diesel | 0.31 MMBtu/hr | 2007 |
| 62 | Domestic Hot Water Heater | TBD | Diesel | 0.15 MMBtu/hr | 2007 |
| 63 | Domestic Hot Water Heater | TBD | Diesel | 0.15 MMBtu/hr | 2007 |
| 64 | Space Heater | TBD | Diesel/ Used Oil | 0.25 MMBtu/hr | 2007 |
| <i>CIL Building</i> | | | | | |

| Unit No. ^[b] | Type | Make/Model ^[c] | Fuel | Rating/Size ^[d] | Estimated Installation (Year) |
|--------------------------------|---------------------------------|---------------------------|--------|----------------------------|-------------------------------|
| 65 | Space Heater | TBD | Diesel | 0.23 MMBtu/hr | 2007 |
| 66 | Space Heater | TBD | Diesel | 0.23 MMBtu/hr | 2007 |
| 67 | Space Heater | TBD | Diesel | 0.23 MMBtu/hr | 2007 |
| 68 | Space Heater | TBD | Diesel | 0.23 MMBtu/hr | 2007 |
| 69 | Space Heater | TBD | Diesel | 0.23 MMBtu/hr | 2007 |
| 70 | Space Heater | TBD | Diesel | 0.23 MMBtu/hr | 2007 |
| 71 | Space Heater | TBD | Diesel | 0.23 MMBtu/hr | 2007 |
| 72 | Space Heater | TBD | Diesel | 0.23 MMBtu/hr | 2007 |
| 73 | Carbon Kiln Furnacex | TBD | Diesel | 0.9 MMBtu/hr | 2007 |
| 74 | Carbon Kiln Furnacex | TBD | Diesel | 0.9 MMBtu/hr | 2007 |
| <i>Laboratory Building</i> | | | | | |
| 75 | Space Heater | TBD | Diesel | 0.12 MMBtu/hr | 2007 |
| 76 | Space Heater | TBD | Diesel | 0.12 MMBtu/hr | 2007 |
| 77 | Space Heater | TBD | Diesel | 0.12 MMBtu/hr | 2007 |
| 78 | Analytical and Assaying Furnace | TBD | Diesel | 0.9 MMBtu/hr | 2007 |
| 79 | Domestic Hot Water Heater | TBD | Diesel | 0.15 MMBtu/hr | 2007 |
| <i>Administration Building</i> | | | | | |
| 80 | Space Heater | TBD | Diesel | 0.12 MMBtu/hr | 2007 |
| 81 | Space Heater | TBD | Diesel | 0.12 MMBtu/hr | 2007 |
| 82 | Space Heater | TBD | Diesel | 0.12 MMBtu/hr | 2007 |
| 83 | Space Heater | TBD | Diesel | 0.12 MMBtu/hr | 2007 |
| 84 | Space Heater | TBD | Diesel | 0.12 MMBtu/hr | 2007 |
| 85 | Space Heater | TBD | Diesel | 0.15 MMBtu/hr | 2007 |
| <i>Emergency Generators</i> | | | | | |
| 86 | Emergency Generator | Caterpillar 3406 Engine | Diesel | 320 kW | 2007 |
| 87 | Emergency Generator | Caterpillar 3406 Engine | Diesel | 320 kW | 2007 |

Table 1 Footnotes:

[a] The listed emission units have specific monitoring, recordkeeping, or reporting conditions in this minor permit. The description and rating are given for identification purposes only.

[b] Emission Units 2-11 controlled by Primary Crusher Baghouse, Emission Units 12-15 and 19-30 controlled by Secondary & Tertiary Crusher Baghouse, Emission Units 36-41 controlled by Fine Ore Dust Area Baghouse. Emission Units 16-18, 31-35 and 42 are enclosed drop points.

[c] TBD means To Be Determined.

[d] tph means tons per hour, MMBtu/hr mean Million British Thermal Units per hour.

- 1.1 The permittee shall control emissions from Emission Units 2 through 11 by use of a baghouse rated at 6000 cubic feet per mintue (ft³/min).

- 1.2 The permittee shall control emissions from Emission Units 12 through 15 and 19 through 30 by use of a baghouse rated at 18,000 ft³/min.
- 1.3 The permittee shall control emissions from Emission Units 36 through 41 by use of a baghouse rated at 4,000 ft³/min.

Section 2 Assessable Emissions

2. **Assessable Emissions.**
3. **Assessable Emissions.** 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 assessable emission fee rate is set out in 18 AAC 50.410(b). The Department will assess fees per ton of each air pollutant that the stationary source emits or has the potential to emit in quantities greater than 10 tons per year. The quantity for which fees will be assessed is the lesser of:
 - 3.1 the stationary source's assessable potential to emit of 79 tpy; or
 - 3.2 the stationary source's projected annual rate of emissions that will occur from July 1 to the following June 30, based upon actual annual emissions emitted during the most recent calendar year or another 12 month period approved in writing by the Department, when demonstrated by:
 - a. an enforceable test method described in 18 AAC 50.220;
 - b. material balance calculations;
 - c. emission factors from EPA's publication AP-42, Vol. I, adopted by reference in 18 AAC 50.035; or
 - d. other methods and calculations approved by the Department.
4. **Assessable Emission Estimates.** Emission fees will be assessed as follows:
 - 4.1 no later than March 31 of each year, the Permittee may submit an estimate of the stationary source's assessable emissions to ADEC, Air Permits Program, ATTN: Assessable Emissions Estimate, 410 Willoughby Ave., Juneau, AK 99801-1795; the submittal must include all of the assumptions and calculations used to estimate the assessable emissions in sufficient detail so the Department can verify the estimates; or
 - 4.2 If no estimate is received on or before March 31 of each year, emission fees for the next fiscal year will be based on the potential to emit set forth in condition 3.1.

Section 3 Source Specific Applicable Requirements

Industrial Processes and Fuel-Burning Equipment, Emission Units 1 through 87

5. **Visible Emissions.** The Permittee shall not cause or allow visible emissions, excluding condensed water vapor, emitted from Emission Units 1 through 87 as listed in Table 1 to reduce visibility through the exhaust effluent by any of the following:
- a. more than 20 percent for a total of more than three minutes in any one hour¹;
 - b. more than 20 percent averaged over any six consecutive minutes².
- 5.1 For Emission Units 86 through 87 (emergency generators), verify compliance using either condition 5.1a or 5.1b.
- a. Prior to unit installation, obtain a certified manufacturer guarantee that each emission unit will comply with the visible emission standard and attach a copy of the guarantee to the next operating report required under condition 27; or
 - b. Conduct a visible emission source test on each unit in accordance with condition 14.1 within 180 days of initial start-up. Attach a copy of the surveillance records to the next operating report required under condition 27.
- 5.2 For Emission Units 16 through 18, 31 through 35, and 42 (transfer points that are components of a covered conveyor system) verify compliance by conducting a visible emission source test on each unit in accordance with condition 14.1 within two days of initial start-up and at least every 60 days of operation. Attach a copy of the surveillance records to the operating report required under condition 27:
- 5.3 For the baghouses described in conditions 1.1 through 1.3:
- a. Monitor the pressure drop across each baghouse daily to ensure that it is within the limits recommended by the manufacturer.
 - b. Inspect each baghouse prior to initial start-up, whenever the pressure drop across the baghouse is not within the limits recommended by the manufacturer, and every 180 days of operation. Replace worn or damaged bags prior to restarting the baghouse or within 72 hours of discovery, whichever occurs earlier.

¹ For purposes of this permit, the “more than three minutes in any one hour” criterion in this condition will no longer be effective when the Air Quality Control (18 AAC 50) regulation package effective 05/03/02 is adopted by the U.S. EPA.

² The six-minute average standard is enforceable only by the state until 18 AAC 50.055(a)(1), dated 05/03/02, is approved by EPA and adopted into the SIP, at which time this standard becomes federally enforceable.

- c. Maintain maintenance logs detailing pressure drop across baghouse, baghouse inspections and bag replacements. Keep records for five years as set out by condition 25.
- 6. **Particulate Matter (PM).** The Permittee shall not cause or allow PM emitted from Emission Units 1 through 87 as listed in Table 1 to exceed 0.05 grains per cubic foot (gr./dscf) of exhaust gas corrected to standard conditions and averaged over three hours.
 - 6.1 For the baghouses described in conditions 1.1 through 1.3, conduct a PM source test on each baghouse in accordance with Section 4 and condition 14.2 within 60 days of initial start-up.
 - 6.2 For Emission Unit 64 blend the used oil in the ratio of 1 part used oil with at least 5.8 parts distillate oil.
 - a. Maintain records detailing the blending ratio. Keep records for five years as set out by condition 25.
- 7. **Sulfur Compound Emissions.** The Permittee shall not cause or allow sulfur compound emissions, expressed as SO₂, from Emission Units 47 through 87 as listed in Table 1 to exceed 500 ppm averaged over three hours.
 - 7.1 For Emission Units 47 through 87, use only fuel with a sulfur content less than 0.5 percent by weight.
 - a. For distillate fuel, obtain a statement or receipt from the fuel supplier certifying the maximum sulfur content of the fuel for each shipment of fuel delivered to the stationary source. If a certificate is not available from the supplier, analyze a representative sample of the fuel to determine the sulfur content using ASTM method D-129, D 4294, or an alternative method approved by the Department.
 - b. Include in the operating report required under condition 27, a list of the fuel sulfur contents for each shipment of distillate fuel received at the stationary source during the reporting period.

Ambient Air Quality Protection Requirements

- 8. **General Ambient Air Quality Provisions.** Comply with the following provisions to protect the PM-10 air quality standards:
 - 8.1 **Air Quality Boundary:** Establish and maintain the ambient boundaries used in the ambient air compliance demonstration, using the procedures described in condition 9.
 - 8.2 **Fugitive Dust Control Plan.** Follow the fugitive dust control plan described in condition 10.

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9. **Public Access Control Plan (Access Plan).** Establish and maintain the ambient air boundaries as follows:
- 9.1 Comply with the provisions contained in the August, 2006 Public Access Control Plan (See Attachment 2), or a subsequent written version approved by the Department that contains at least the following elements:
- a. A topographic map (or maps) that clearly shows the ambient air boundaries, road-ways and permit-related facilities/areas;
 - b. Ambient air boundaries that are consistent with the applicable land owner's authorization to preclude public access from the area within the boundaries;
 - c. Defined methods of establishing and maintaining the boundary, such as physical barriers, surveillance and the posting of strategically located warning signs (provide size, wording, and inspection/repair schedule);
 - d. The date of the Access Plan; and
 - e. The procedure for approaching members of the public who have crossed the ambient air boundary.
- 9.2 Post and maintain all warning signs described in the approved Access Plan as follows:
- a. In addition to requirements stated in the Access Plan for posting signs, post signs at approximately 200-yard intervals along the Glacier Creek Road on the mine (east and north) side of the road.
 - b. use a font, font size and contrast coloring that makes all lettering easy to read;
 - c. inspect and repair the signs according to the schedule described in the Access Plan; and
 - d. keep all signs free of nearby visible obstructions.
- 9.3 Maintain a hard-copy of the approved Access Plan for public access review at the Permittee's Rock Creek Mine Office and/or electronically on the world-wide-web.
- 9.4 Do not revise the ambient air boundary without Department approval. If requested by the Department, submit a revised ambient air impact analysis that demonstrates the permitted emission activities will not cause or contribute to ambient air violations when using the proposed boundary.
- 9.5 If the permittee detects indications of unauthorized persons within the ambient air boundary such as foot or vehicle tracks, the permittee shall take action to correct the situation.

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- 9.6 Keep a daily surveillance log sufficient to show compliance status with the ‘Ambient Air Boundary Surveillance’ described in the Access Plan. Keep records for five years as set out by condition 25.
- 9.7 Submit all proposed revisions to the ambient boundary and/or Access Plan to the Department’s Juneau and Fairbanks Office’s. Do not implement any change without written Department approval.
10. **Reasonable Precautions to Prevent Fugitive Dust.** The Permittee shall take reasonable precautions to prevent particulate matter from being emitted into the ambient air as follows:
- 10.1 Comply with the provisions contained in the July, 2006 Fugitive Dust Control Plan (See Attachment 1), or a subsequent written version approved by the Department.
- 10.2 Maintain a hard-copy of the approved Fugitive Dust Control Plan for public access review at the Permittee’s Rock Creek Mine Office and/or electronically on the world-wide-web.
- 10.3 Submit all proposed revisions to the Fugitive Dust Control Plan to the Department’s Juneau and Fairbanks Office’s. Do not implement any change without written Department approval.
- 10.4 Keep records of:
- a. complaints received by the Permittee and complaints received by the Department and conveyed to the Permittee; and
 - b. any additional precautions that are taken:
 - (i) to address complaints described in condition 10.4 or to address the results of Department inspections that found potential problems; and
 - (ii) to prevent future dust problems.
- 10.5 Report according to condition 30.
11. **Stationary Source-Specific Fugitive Dust Requirements.** In addition to the general requirements for controlling fugitive dust listed in condition 10, the Permittee shall comply with the following requirements specific to the Rock Creek Mine:
- 11.1 Perform a daily inspection of all unpaved roads, temporary ore stockpiles, overburden and rock storage areas, stack tailings facility, and gravel pits for fugitive dust. If dust is present, and the road, storage, or stockpile is unfrozen, apply water or suitable dust suppression chemicals as needed, or cover the stockpiles. Maintain a log of daily inspection and actions to keep dust down. Keep the records for five years as set out by condition 25;

Section 4 *General Source Testing and Monitoring Requirements*

12. **Requested Source Tests.** In addition to any source testing explicitly required by the permit, the Permittee shall conduct source testing as requested by the Department to determine compliance with applicable permit requirements.
13. **Operating Conditions.** Unless otherwise specified by an applicable requirement or test method, the Permittee shall conduct source testing as follows:
 - 13.1 at a point or points that characterize the actual discharge into the ambient air; and
 - 13.2 at the maximum rated burning or operating capacity of the source or another rate determined by the Department to characterize the actual discharge into the ambient air.
14. **Reference Test Methods.** The Permittee shall use the following references for test methods when conducting source testing for compliance with this permit:
 - 14.1 Source testing for the reduction in visibility through the exhaust effluent must be conducted in accordance with the procedures set out in 40 C.F.R. 60, Appendix A, Reference Method 9. The Permittee may use the form in Attachment 3 of this permit to record data.
 - 14.2 Source testing for emissions of total particulate matter, sulfur compounds, nitrogen compounds, carbon monoxide, lead, volatile organic compounds, fluorides, sulfuric acid mist, municipal waste combustor organics, metals and acid gases must be conducted in accordance with the methods and procedures specified in 40 C.F.R. 60, Appendix A.
 - 14.3 Source testing for emissions of PM-10 must be conducted in accordance with the procedures specified in 40 C.F.R. 51, Appendix M, Methods 201 or 201A and 202.
 - 14.4 Source testing for emissions of any contaminant may be determined using an alternative method approved by the Department in accordance with 40 C.F.R. 63 Appendix A, Method 301.
15. **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 source type, corrected to standard conditions (dry gas at 68° F and an absolute pressure of 760 millimeters of mercury).
16. **Test Exemption.** The Permittee is not required to comply with conditions 18, 19 and 20 when the exhaust is observed for visible emissions by Method 9 Plan (conditions 5.1b and 5.2).

17. **Test Deadline Extension.** The Permittee may request an extension to a source test deadline established by the Department. The Permittee may delay a source test beyond the original deadline only if the extension is approved in writing by the Department's appropriate division director or designee.
18. **Test Plans.** Except as provided in condition 16, 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 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 12 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 with Department approval.
19. **Test Notification.** Except as provided in condition 16, at least 10 days before conducting a source test, the Permittee shall give the Department written notice of the date and the time the source test will begin.
20. **Test Reports.** Except as provided in condition 16, within 60 days after completing a source test, the Permittee shall submit two copies of the results in the format set out in the *Source Test Report Outline*, adopted by reference in 18 AAC 50.030. The Permittee shall certify the results in the manner set out in condition 23. If requested in writing by the Department, the Permittee must provide preliminary results in a shorter period of time specified by the Department.
21. **Particulate Matter Calculations.** In source testing for compliance with the particulate matter standards in condition 6, the three-hour average is determined using the average of three one-hour test runs.

Section 5 *General Recordkeeping, Reporting and Compliance Certification Requirements*

22. **Information Requests.** The Permittee shall furnish to the Department, within a reasonable time, any information the Department requests in writing to determine whether cause exists to modify, revoke and reissue, or terminate the permit or to determine compliance with the permit. Upon request, the Permittee shall furnish to the Department copies of records required to be kept by the permit. The Department may require the Permittee to furnish copies of those records directly to the federal administrator.
23. **Certification.** The Permittee shall certify all reports, compliance certifications, or other documents submitted to the Department and required under the permit by including the signature of a responsible official for the permitted facility following the statement: "Based on information and belief formed after reasonable inquiry, I certify that the statements and information in and attached to this document are true, accurate, and complete." Excess emission reports must be certified either upon submittal or with an operating report required for the same reporting period. All other reports and other documents must be certified upon submittal.
24. **Submittals.** Unless otherwise directed by the Department or this permit, the Permittee shall send two copies of reports, compliance certifications, and other submittals required by this permit to ADEC, Air Permits Program, 610 University Ave., Fairbanks, AK 99709-3643, ATTN: Compliance Technician. The Permittee may, upon consultation with the Compliance Technician regarding software compatibility, provide electronic copies of data reports, emission source test reports, or other records under a cover letter certified in accordance with condition 23.
25. **Recordkeeping Requirements.** The Permittee shall keep all records required by this permit for at least five years after the date of collection, including:
- 25.1 copies of all reports and certifications submitted pursuant to this section of the permit; and
 - 25.2 records of all monitoring required by this permit, and information about the monitoring including:
 - a. calibration and maintenance records, original strip chart or computer-based recordings for continuous monitoring instrumentation;
 - b. sampling dates and times of sampling or measurements;
 - c. the operating conditions that existed at the time of sampling or measurement;
 - d. the date analyses were performed;

- e. the location where samples were taken;
- f. the company or entity that performed the sampling and analyses;
- g. the analytical techniques or methods used in the analyses; and
- h. the results of the analyses.

26. Excess Emissions and Permit Deviation Reports.

26.1 Except as provided in condition 30, the Permittee shall report all emissions or operations that exceed or deviate from the requirements of this permit as follows:

- a. in accordance with 18 AAC 50.240(c), as soon as possible after the event commenced or is discovered, report:
 - (i) emissions that present a potential threat to human health or safety; and
 - (ii) excess emissions that the Permittee believes to be unavoidable.
- b. in accordance with 18 AAC 50.235(a), within two working days after the event commenced or was discovered, report an unavoidable emergency, malfunction, or nonroutine repair that causes emissions in excess of a technology based emission standard;
- c. report all other excess emissions and permit deviations:
 - (i) within 30 days of the end of the month in which the emissions or deviation occurs, except as provided in conditions 26.1c(ii); and
 - (ii) if a continuous or recurring excess emissions is not corrected within 48 hours of discovery, within 72 hours of discovery unless the Department provides written permission to report under condition 26.1c(i).

26.2 The Permittee must report using either the Department's on-line form, or if the Permittee prefers, the form contained in Attachment 4 of this permit. The Permittee must provide all information called for by the form that is used.

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

27. Operating Reports. During the life of this permit, the Permittee shall submit to the Department one original and one copy of an operating report by August 1 for the period January 1 to June 30 of the current year and by February 1 for the period July 1 to December 31 of the previous year.

- 27.1 The operating report must include all information required to be in operating reports by other conditions of this permit.
- 27.2 If excess emissions or permit deviations that occurred during the reporting period are not reported under condition 27.1, either:
 - a. The Permittee shall identify
 - (i) the date of the deviation;
 - (ii) the equipment involved;
 - (iii) the permit condition affected;
 - (iv) a description of the excess emissions or permit deviation; and
 - (v) any corrective action or preventive measures taken and the date of such actions; or
 - b. When excess emissions or permit deviations have already been reported under condition 26 the Permittee may cite the date or dates of those reports.
- 28. 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:
 - 28.1 enter upon the premises where a source subject to the permit is located or where records required by the permit are kept;
 - 28.2 have access to and copy any records required by the permit;
 - 28.3 inspect any facility, equipment, practices, or operations regulated by or referenced in the permit; and
 - 28.4 sample or monitor substances or parameters to assure compliance with the permit or other applicable requirements.

Section 6 *Miscellaneous*

29. **Good Air Pollution Control Practice.** The Permittee shall do the following for all emission units listed in Table 1:
- 29.1 perform regular maintenance considering the manufacturer's or the operator's maintenance procedures;
 - 29.2 keep records of any maintenance that would have a significant effect on emissions; the records may be kept in electronic format; and
 - 29.3 keep a copy of either the manufacturer's or the operator's maintenance procedures.
30. **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.
- 30.1 If emissions present a potential threat to human health or safety, the Permittee shall report any such emissions according to condition 26.
 - 30.2 As soon as practicable after becoming aware of a complaint that is attributable to emissions from the facility, the Permittee shall investigate the complaint to identify emissions that the Permittee believes have caused or are causing a violation of condition 30.
 - 30.3 The Permittee shall initiate and complete corrective action necessary to eliminate any violation identified by a complaint or investigation as soon as practicable if:
 - a. after an investigation because of a complaint or other reason, the Permittee believes that emissions from the facility have caused or are causing a violation of condition 30; or
 - b. the Department notifies the Permittee that it has found a violation of condition 30.
 - 30.4 The Permittee shall keep records of the following:
 - 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 30; and
 - d. any corrective actions taken or planned for complaints attributable to emissions from the facility.

30.5 With each operating report under condition 27, the Permittee shall include a brief summary report which must include the following:

- a. the number of complaints received;
- b. the number of times the Permittee or the Department found corrective action necessary;
- c. the number of times action was taken on a complaint within 24 hours; and
- d. the status of corrective actions the Permittee or Department found necessary that were not taken within 24 hours.

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

Terms to Make Permit Enforceable

31. 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:

31.1 an enforcement action; or

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

32. 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.

33. 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.

34. Compliance with permit terms and conditions is considered to be compliance with those requirements that are

34.1 included and specifically identified in the permit; or

34.2 determined in writing in the permit to be inapplicable.

35. 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.

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

Section 7 *Permit Documentation*

August 3,, 2006 Minor Permit Application for the Rock Creek Mine.

August 30, 2006 Email from Al Trbovich to Alan Schuler with revised Public Access Control Plan.

September 21, 2006 Email from Charlotte MacCay to Alan Schuler with Surface Agreement.

October 3, 2006 Email from Theresa Barnard to Alan Schuler with revised modeling analysis.

Section 8 Attachments

Attachment 1 – Fugitive Dust Control Plan

Alaska Gold Corporation Rock Creek Mine - Fugitive Dust Control Plan

Overview

The Fugitive Dust Control Plan for the Rock Creek Mine is designed to control fugitive dust emissions from the Rock Creek Mine. Fugitive dust emissions sources covered by this fugitive dust control plan include:

1. Mine haul roads;
2. Mine crushing circuit conveyor drop points;
3. Primary, secondary, and tertiary crushers;
4. Organic soil stockpiles;
5. Waste rock and overburden piles
6. The Rock Creek Mine pit; and
7. Tailings ponds.

The Alaska Gold Corporation (AGC) will implement both active and passive controls to reduce fugitive dust emissions from the Rock Creek Mine. Active controls are activities that require continuous action by the Rock Creek Mine to successfully implement. Examples of active fugitive dust controls include watering of mine haul roads and installation of bag houses on crushers. Passive controls are controls that once implemented do not require continuous action by AGC for the control to continue to be effective. Examples of passive controls include seeding and vegetating stockpiles and installing covers on crushing circuit drops points. This plan will describe the implementation of both passive and active fugitive dust controls.

Active Fugitive Dust Controls

Two fugitive dust sources will require active fugitive dust controls. The fugitive dust sources that will require active fugitive dust controls are

1. Mine haul roads; and
2. Primary, secondary, and tertiary crushers.

Fugitive dust emissions from mine haul roads will be controlled primarily by watering the mine haul roads when daily minimum, ambient air temperatures are consistently above 32° Fahrenheit (F). To improve the effectiveness of mine haul road watering, hygroscopic dust suppressants (e.g., calcium and/or magnesium chloride) will be used when watering Rock Creek mine haul roads. Rock Creek Mine haul roads will not be watered when daily minimum ambient air temperatures is below 32° F to avoid creating icy conditions on mine haul roads which create a safety hazard.

The primary, secondary, and tertiary crushers at the Rock Creek Mine will have baghouses installed to control fugitive dust from crushing operations. Because crushers may not have ventilation systems to capture emissions, crushers without emission control devices are usually treated as fugitive emission sources. When emission control devices, such as baghouses are added to crushers, the crushers become point sources. AGC will follow baghouse vendor recommendations and specifications to ensure that the crusher baghouses are operating as designed.

Passive Fugitive Dust Controls

Five fugitive dust sources at the Rock Creek Mine will rely on passive fugitive dust controls to reduce fugitive dust emissions at the Rock Creek Mine. Fugitive dust sources that rely on passive fugitive dust controls to reduce fugitive dust controls at the Rock Creek Mine are:

1. Mine crushing circuit drop points;
2. Organic soil stockpiles;
3. Waste rock and overburden piles;
4. The Rock Creek Mine pit; and
5. Tailings ponds.

Fugitive dust emissions from mine crushing circuit drop points will be controlled by enclosing crushing circuit drop points. Once the enclosures are installed on the conveyor drop points, Rock Creek Mine will perform maintenance to the enclosures to reduce fugitive dust emissions from conveyor drop points. Rock Creek Mine will continuously minimize drop distances.

Fugitive dust emissions from organic soil stockpile will be controlled by tilling and seeding the organic soil stockpiles. The organic soil stockpiles will be vegetated to reduce the loss of organic soil to both water and wind erosion. Once the organic soil stockpiles have been

vegetated, activities to maintain vegetative cover such as watering or fertilizing will be undertaken as necessary.

Waste rock and overburden will only be excavated and not undergo any processing or crushing activities prior to being placed upon the storage piles. As a result, most of the material that is being placed upon the waste rock and overburden piles will be a large enough size that the waste rock and overburden storage piles will not usually generate fugitive dust. AGC will monitor the waste rock and overburden piles to verify that the waste rock and overburden piles do not become sources of fugitive dust.

Most of the Rock Creek Mine Pit will be below the water table. Though AGC will dewater the pit by groundwater pumping and surface water diversion, the pit floor and walls will still be damp so no fugitive dust emissions from the pit are expected.

Tailings from the Rock Creek mill will be constantly pumped as slurry onto the tailings ponds. This action will keep the surface of the tailings pond wet or frozen and prevent fugitive dust emissions from the surface of the tailings pond. The tailings dam surface will be rip-rapped to prevent the tailings dam from being eroded. Rip-rap is large enough that fugitive dust will not be generated from the Rock Creek tailings dam. AGC will occasionally monitor the Rock Creek Mine tailing pond to verify that the tailings pond is not a source of fugitive dust.

Summary

Fugitive dust control at the Rock Creek Mine will utilize both active and passive methods to control fugitive dust emissions from operations at the Rock Creek Mine. Active methods of fugitive dust control will require ongoing actions to be effective for fugitive dust control. Passive methods of fugitive dust control will not require ongoing actions but periodic observations to verify that a passive fugitive control dust control method is still effective. Regardless as to whether an active or passive method is chosen to control fugitive dust emissions from a potential fugitive dust source, regular evaluations will be conducted by ACG to determine if a selected fugitive dust control method continues to be effective.

Attachment 2 – Public Access Control Plan

Alaska Gold Corporation Rock Creek Mine - Public Access Control Plan

Purpose

This Public Access Control Plan for the Rock Creek Mine is designed to protect the general public from health and safety hazards that could occur as a result of heavy industrial work during mining and mineral processing operations. The Alaska Gold Corporation (AGC) has established these reasonable restrictions on general public access to ensure adequate protection of public health and welfare.

AGC is committed to fully and adequately protecting the health and safety of its work force by remaining within the standards for air exposure of the Occupational Safety and Health Administration (OSHA) and, where the general public has access, the National and Alaska Ambient Air Quality Standards (AAQS). A primary purpose of this plan is to delineate the area to be protected and controlled for occupational health and safety from the area that is subject to unrestricted, general public access where the AAQS are applicable. Additionally, by limiting access to the Rock Creek Mine to only AGC authorized personnel, AGC will reduce the chance that a member of the general public will be injured or otherwise impacted by AGC operations.

This plan will ensure that reasonable measures are in place to accomplish reasonable restrictions on public access.

General Information

AGC is planning to construct the Rock Creek gold mine approximately 6 miles north of Nome, Alaska. The Rock Creek Mine (including the pit, tailings pond, waste rock piles, and mill) will be approximately 1.4 miles wide by 1.9 miles long. With the exception of the Glacier Creek Road, AGC controls most of the land that is adjacent to the Rock Creek Mine. AGC has established an ambient air boundary on land that is under AGC's ownership or control to protect health and safety of the general public. The Rock Creek Mine ambient air boundary is illustrated in Figure 1. AGC will restrict access to land within ambient air boundary to AGC authorized personnel for health and safety and property control reasons. The ambient air boundary will be marked at appropriate locations with signs and reflective boundary markers that will delineate the ambient air boundary. This methodology is consistent with ambient air boundary determinations that have been made for facilities on the North Slope and at the Red Dog Mine.

The Glacier Creek Road will pass adjacent to the ambient air boundary of the Rock Creek Mine. Because the Glacier Creek Road is a public road, the Glacier Creek Road is ambient air. Where the Glacier Creek Road passes along the Rock Creek Mine ambient air boundary, signs

will be placed on the boundary between the Glacier Creek Road and the Rock Creek Mine that denotes that land adjacent to the Glacier Creek Road is private property and that the general public is not allowed to go past the sign. Ambient air quality receptors were modeled on the Glacier Creek Road and the modeled concentrations on the Glacier Creek Road are below the AAQS.

Public Access Control Measures

The general public will not be allowed to enter the area within the Rock Creek Mine ambient air boundary without first obtaining permission from AGC or their designated representatives. Several measures will be implemented to reasonably ensure that unauthorized personnel do not enter the Rock Creek Mine ambient air boundary. These measures include:

1. Signs;
2. Ambient air boundary markers;
3. Education and training; and
4. Boundary surveillance and exclusion.

Signs

To notify unauthorized personnel that entry is not allowed into the Rock Creek Mine ambient air boundary, signs will be posted at strategic locations, as follows:

- At approximately 400-yard intervals along the Glacier Creek Road on the mine (east and north) side of the road;
- At designated points of ingress and egress from the Rock Creek Mine; and
- At approximately 800-yard intervals along the sections of the ambient air boundary that are not adjacent to the Glacier Creek Road.

The sign specifications are:

- Each sign will have dimensions of 4 feet by 6 feet.
- Each sign will be inspected regularly and will be repaired or replaced, as necessary.
- Each sign will be free of visible obstructions.
- Each sign will read:

Alaska Gold Corporation
DANGER
UNAUTHORIZED PERSONNEL KEEP OUT
If access is requested,
contact the Rock Creek Mine Operator
Phone (907) xxx-xxxx

Education and Training

To work in or access Rock Creek Mine, all personnel must have completed or be escorted by someone with appropriate health and safety training that meets the requirements of both the Mine Safety and Health Administration and the Rock Creek Mine. Additionally, during their local orientation training, AGC workers and AGC contractors who will be working at the Rock Creek Mine will be made aware of this public access control plan. All personnel will be instructed that if unauthorized personnel are observed within the Rock Creek ambient air boundary, the employee should notify the mine manager or his designee that an unauthorized person or persons are within the ambient air boundary. The mine manager or his designee will request that the unauthorized visitor leave the property and will escort the unauthorized visitor from the property. If the unauthorized visitor refuses to leave, law enforcement authorities (e.g., The Alaska State Troopers) will be summoned to remove the unauthorized visitor.

Ambient Air Boundary Surveillance

Unless prohibited by adverse weather conditions or similar safety related circumstances, the Rock Creek Mine boundary adjacent to the Glacier Creek Road will be checked at least twice per day. The ambient air boundary not adjacent to the Glacier Creek Road will be checked weekly. During these inspections of the ambient air boundary the inspector will check the following items:

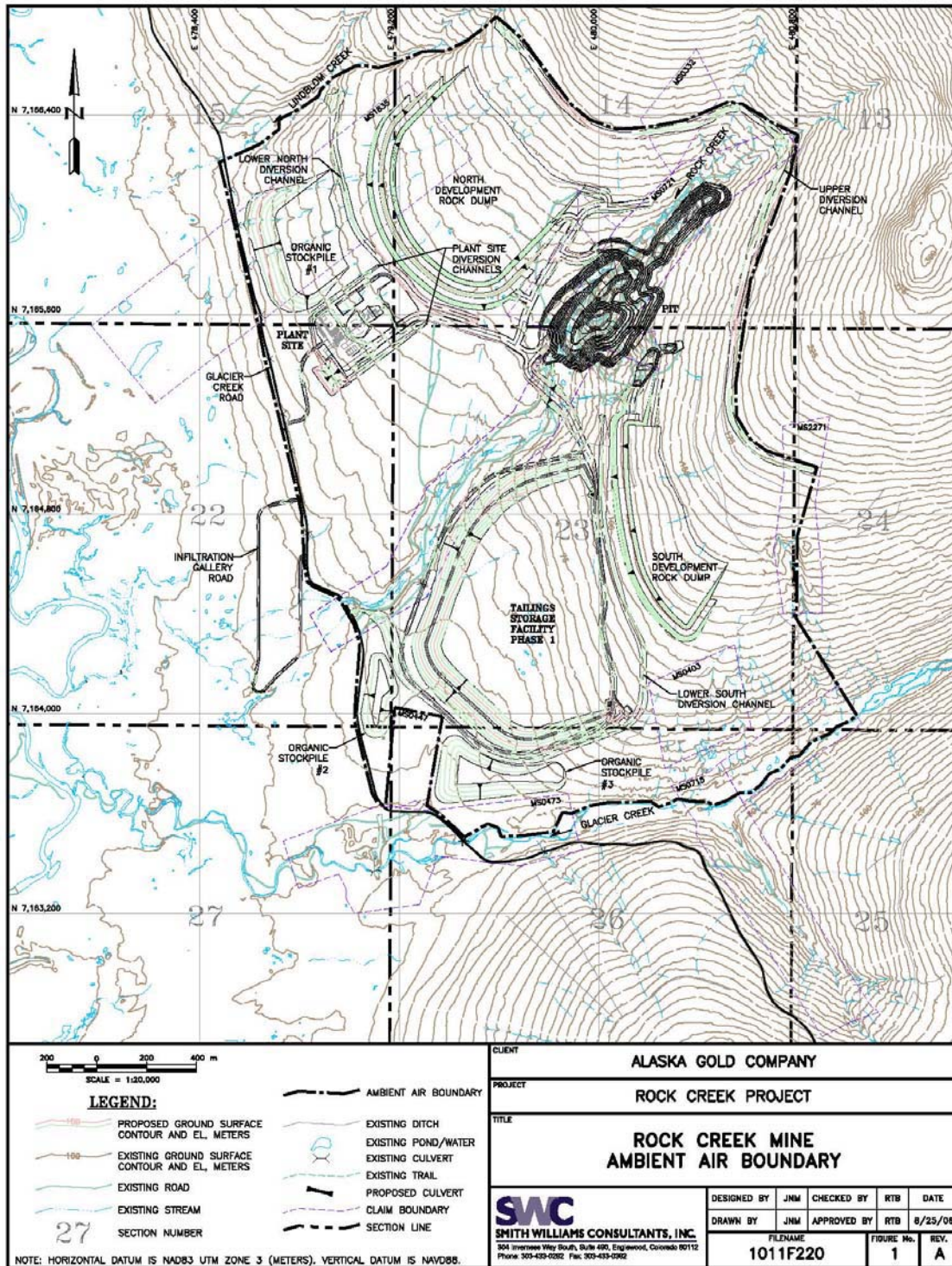
1. The presence or indications of the presence of unauthorized personnel within the Rock Creek Mine ambient air boundary; and
2. Ambient air boundary warning signs are standing and clear of obstructions such as snow. If possible, the inspector will fix sign problems upon discovery.

In addition to the boundary inspections, all Rock Creek Mine personnel will be responsible for maintaining the Rock Creek Mine ambient air boundary integrity. If AGC personnel or AGC contractors notice either unauthorized persons within the ambient air boundary or conditions that compromise the integrity of the ambient air boundary, the personnel are required to either correct the situation or notify the mine manager.

Ambient Boundary Violations

In the event that an unauthorized person enters the Rock Creek Mine ambient air boundary that person will be notified by the mine manager or his designee that the person is not allowed within the perimeter of the Rock Creek Mine ambient air boundary without approval from AGC. The person will be asked to leave and will be escorted from the property.

Figure 1. Rock Creek Mine Ambient Air Boundary.



Attachment 3 - Visible Emissions Form

Visible Emissions Field Data Sheet

Certified Observer: _____

Company &
Stationary Source: _____

Location: _____

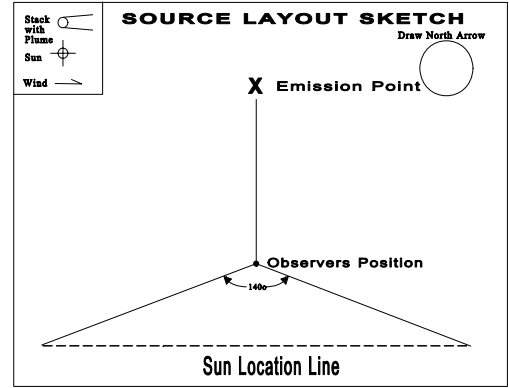
Test No.: _____ Date: _____

Source: _____

Production Rate/Operating Rate: _____

Unit Operating Hours: _____

Hrs. of observation: _____



| | Clock Time | Initial | | | Final |
|---------------------------------------------------|------------|---------|--|--|-------|
| Observer location | | | | | |
| Distance to discharge | | | | | |
| Direction from discharge | | | | | |
| Height of observer point | | | | | |
| Background description | | | | | |
| Weather conditions | | | | | |
| Wind Direction | | | | | |
| Wind speed | | | | | |
| Ambient Temperature | | | | | |
| Relative humidity | | | | | |
| Sky conditions: (clear, overcast, % clouds, etc.) | | | | | |
| Plume description: | | | | | |
| Color | | | | | |
| Distance visible | | | | | |
| Water droplet plume? (Attached or detached?) | | | | | |
| Other information | | | | | |

Attachment 4 - ADEC Notification Form¹

Excess Emissions and Permit Deviation Reporting
State of Alaska Department of Environmental Conservation
Division of Air Quality

Stationary Source Name

Air Quality Permit Number

Company Name

When did you discover the Excess Emissions/Permit Deviation?

Date: / / Time: :

When did the event/deviation?

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

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

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

Reason for notification: (please check only 1 box and go to the corresponding section)

Excess Emissions Complete Section 1 and Certify

Deviation from permit conditions complete Section 2 and certify

Deviation from COBC, CO, or Settlement Agreement Complete Section 2 and certify

Section 1. Excess Emissions

(a) Was the exceedance Intermittent or Continuous

(b) Cause of Event (Check one that applies):

Start Up/Shut Down

Natural Cause (weather/earthquake/flood)

Control Equipment Failure

Scheduled Maintenance/Equipment Adjustments

Bad fuel/coal/gas

Upset Condition

Other

(c) Description

Describe briefly what happened and the cause. Include the parameters/operating conditions exceeded, limits, monitoring data and exceedance.

(d) Emission unit(s) Involved:

Identify the emission 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.

¹ Revised as of December 6, 2004

| <u>EU ID</u> | <u>Emission Unit Name</u> | <u>Permit Condition Exceeded/Limit/Potential Exceedance</u> |
|--------------|---------------------------|-------------------------------------------------------------|
| | | |

(e) Type of Incident (please check only one):

- Opacity % Venting (gas/scf) Control Equipment Down
 Fugitive Emissions Emission Limit Exceeded Record Keeping Failure
 Marine Vessel Opacity Failure to monitor/report Flaring
 Other:

(f) Unavoidable Emissions:

- Do you intend to assert that these excess emissions were unavoidable? YES NO
 Do you intend to assert the affirmative defense of 18 AAC 50.235? YES NO

Certify Report (go to end of form)

Section 2. Permit Deviations

(a) Permit Deviation Type (check one only) (check boxes correspond with sections in permit)

- Emission Unit Specific
 General Source Test/Monitoring Requirements
 Recordkeeping/Reporting/Compliance Certification
 Standard Conditions Not Included in Permit
 Generally Applicable Requirements
 Reporting/Monitoring for Diesel Engines
 Insignificant Emission Unit
 Stationary Source-Wide
 Other Section: (title of section and section # of your permit)

(b) Emission unit(s) Involved:

Identify the emission unit involved in the event, using the same identification number and name as in the permit. List the corresponding Permit condition and the deviation.

| <u>EU ID</u> | <u>Emission Unit Name</u> | <u>Permit Condition /Potential Deviation</u> |
|--------------|---------------------------|----------------------------------------------|
| | | |

(c) Description of Potential Deviation: Describe briefly what happened and the cause. Include the parameters/operating conditions and the potential deviation.

(d) Corrective Actions: Describe actions taken to correct the deviation or potential deviation and to prevent future recurrence.

Certification:

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

Printed Name: _____ Title _____ Date _____

Signature: _____ Phone number _____

To Submit this report:

Fax this form to: 907-451-2187

Or

Email to: airreports@dec.state.ak.us

if emailed, the report must be certified.

Or

Mail to: ADEC
 Air Permits Program
 610 University Avenue
 Fairbanks, AK 99709-3643

Or

Phone notifications: 907-451-5173.

Phone notifications require written follow up report within the deadline listed in condition 26.

Or

Online submission of this report can be made at the following website (*Website is not yet available*). *If submitted online, the report must be certified.*

Signature: _____

Date _____

