

STATE OF ALASKA

TONY KNOWLES, GOVERNOR

DEPT. OF ENVIRONMENTAL CONSERVATION
DIVISION OF AIR AND WATER QUALITY

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December 19, 2000

Mr. William Jeffress
Fairbanks Gold Mining, Inc.
Kinross Gold U.S.A., Inc.
P.O. Box 73726
Fairbanks, AK 99707-3726

Subject: Solid Waste Disposal Permit 0031-BA008
Fort Knox Mine Tailing Disposal

Dear Mr. Jeffress:

The Alaska Department of Environmental Conservation has completed its evaluation of your request for modification for your Waste Disposal Permit for the disposal of treated tailings from a vat leach gold recovery facility to an impoundment located within Sections 9, 10, 14, 15, 16, 21, 22, 23, T.2N., R. 2E., Fairbanks Meridian, and is issuing the enclosed permit in accordance with AS 46 and 18 AAC 15.

Please review the conditions and stipulations in this permit and ensure that they are all understood. This permit is effective December 19, 2000 and expires December 19, 2005.

This permit supercedes 9931-BA011, which was issued on September 29, 1999. The only substantive change is the addition of provisions in section 1.2.2 to allow compatible ore from satellite pits to be trucked into the Fort Knox Mine for processing.

Any person who disagrees with this decision may appeal the decision by requesting an adjudicatory hearing, using the procedures contained in 18 AAC 15.200-310. Hearing requests must be delivered to the Commissioner of the Department of Environmental Conservation, 410 Willoughby Avenue, Suite 105, Juneau, Alaska 99801-1795, within 30 days of the effective date of the permit. If a hearing is not requested within 30 days, the right to appeal is waived and the decision becomes final.

Sincerely,



William D. McGee
Program Manager
State Water Discharge Permits

Clean Air, Clean Water

Enclosure

cc: Al Ott, Department of Fish and Game
Steve McGroarty, Department of Natural Resources
Cindi Godsey, Environmental Protection Agency
Keith Mueller, United States Fish and Wildlife
Larry Reeder, United States Army Corps of Engineers
Bob Loeffler, Department of Natural Resources
Dick LeFebvre, Department of Natural Resources
Dave Chambers, Center for Science and Public Participation
Doug Yates, Fairbanks
Nancy Sonafrank, ADEC/Fairbanks
Mara Bacsujlaky, Neighborhood Mine Watch
Amy Crook, Center for Public Participation

**ALASKA DEPARTMENT OF ENVIRONMENTAL CONSERVATION
NORTHERN REGIONAL OFFICE
610 UNIVERSITY AVENUE
FAIRBANKS, AK 99709-3643**

Permit 0031-BA008

Date of Issuance: December 19, 2000

This Solid Waste Disposal Permit is issued to Fairbanks Gold Mining, Inc., P.O. Box 73726, Fairbanks, AK 99707-3726, for the disposal of solid waste materials as defined in Appendix A, Section 1.2, from a vat leach gold recovery facility at the Fort Knox Mine, Sections 9, 10, 14, 15, 16, 21, 22, 23, T.2N., R.2E., Fairbanks Meridian. This permit is subject to the conditions and stipulations contained in Appendices A through D, which are incorporated herein by reference.

This permit is issued under the provisions of Alaska Statute 46.03, and the Alaska Administrative Code, as amended or revised, and other applicable state laws and regulations.

This permit is effective December 19, 2000 and expires December 19, 2005. It may be terminated or modified in accordance with AS 46.03.120.



William D. McGee
Program Manager
State Water Discharge Permits

APPENDIX A

1 SPECIFIC PERMIT CONDITIONS

1.1 Introduction

- 1.1.1 This permit covers disposal into the Fort Knox tailings impoundment and as relevant to the permitted discharge, the tailings disposal facility including the mill operation, mill tailing discharge, tailings, tailings impoundment structure, seepage control structure, seepage collection basin, interceptor wells, groundwater observation wells below the tailing impoundment, and surface water monitoring of the developed wetlands and at the water supply reservoir. This permit also covers ADEC monitoring requirements for the mine pit and development rock (overburden and waste rock) for characterization of acid rock drainage, hazardous chemical storage and containment, and reclamation activities of the tailing impoundment.
- 1.1.2 In addition to the stipulations in this permit, the permittee shall adhere to the conditions of 18 AAC 60 Solid Waste Management Regulations as applicable, 18 AAC 70 Alaska Water Quality Standards, and 18 AAC 72.500 – 600 Non-Domestic Wastewater. The permittee shall also adhere to conditions of the Fort Knox Project Reclamation Plan and the Fort Knox Project Monitoring Plan as approved by ADEC. The tailings impoundment is considered to be part of the treatment works as well as a disposal site, and the water quality standards need not be met in the tailings impoundment.
- 1.1.3 During the period beginning on the effective date of this permit and lasting through the expiration date, the permittee is authorized to dispose of solid waste as specified in this permit into the tailings impoundment at the Fort Knox Project.

1.2 Limitations

- 1.2.1 The waste materials covered under this section are limited to up to 50,000 tons per day as a weekly average of processed and neutralized ore, meeting the conditions in this permit, deposited in the tailings impoundment.
- 1.2.2 Ore from satellite pits may be processed at Fort Knox provided that the following procedures are followed and the Department determines that there will be insignificant impact on mine closure, reclamation, or water quality.
- 1.2.2.1 Compare the chemistry of new ore to the chemistry of Ft. Knox ore and add any additional constituents found in the new ore to Analytical Profile II in the Fort Knox Mine Monitoring Plan. Where required under this permit, use this revised Profile II for all monitoring.
- 1.2.2.2 Determine the ore ratios (Tons of ore being processed at Ft. Knox to tons Satellite Pit ore) and perform Meteoric Water Mobility Procedure on mixed ore samples prior to beneficiation. Analyze rinse water and leachate using Profile II.

- 1.2.2.3 Perform acid base accounting on mixed ore (ratios) prior to beneficiation. If net neutralization potential (NP) to acid generating potential (AP) is less than 3:1, a humidity cell test (kinetic) of adequate duration will be required. Leachate analysis will use Profile II.
 - 1.2.2.4 Perform acid base accounting on mixed ore (ratios) after beneficiation. If NP to AP ratio is less than 3:1, a humidity cell test (kinetic) of adequate duration will be required. Leachate analysis will use Profile II.
 - 1.2.2.5 Characterize the processed tailing solids (post cyanide detoxification) using Profile II. Compare to the original Fort Knox solids.
 - 1.2.2.6 Characterize the processed tailing liquor (post cyanide detoxification) using Profile II. Compare to the original Fort Knox liquor.
 - 1.2.2.7 Perform Meteoric Water Mobility Procedure on processed tailing solids (after cyanide detoxification) using Profile II. Compare to original Fort Knox data.
 - 1.2.2.8 Define all changes to the beneficiation or treatment processes which may affect monitoring, closure, tailings, water quality, or any other permit condition.
 - 1.2.2.9 Submit each of the above to the department for review and approval before processing ore from each new satellite pit.
- 1.2.3 Examples of items not allowed for disposal by this permit unless approved in writing by the Permits Section Chief include, but are not limited to:
- 1.2.3.1 The disposal of treated or untreated process water in quantities or concentrations that would exceed cyanide and pH limitations in sections 1.2.3 and 1.2.4.
 - 1.2.3.2 Chemical containers.
 - 1.2.3.3 Discarded, unused chemicals not associated with the beneficiation process. Discarded, unused chemicals that are associated with the beneficiation process may be discarded into the tailing impoundment as long as they are in concentrations that would not violate the limits of sections 1.2.4 and 1.2.5.
 - 1.2.3.4 Contaminated soils, spill boom, liners used for the containment of spilled materials, chemicals used in the cleanup of spills or other spill clean up wastes other than chemicals used in the beneficiation process.
 - 1.2.3.5 Laboratory wastes other than wash waters, neutralized acids and neutralized bases. Disposal/recycling of refinery slag, fire assay crucibles and cupels through the grinding and leaching circuit is permitted.

1.2.3.6 Sewage.

- 1.2.4 Prior to entering the impoundment, the tailing waste slurry shall be neutralized to contain a monthly average of 10 milligram per liter (mg/l) or less of cyanide as measured by the Weak Acid Dissociable (WAD) method. The maximum concentration of the WAD cyanide in the slurry discharge shall be 25 mg/l. These discharge limits will be changed in accordance with section 1.6.
- 1.2.5 The pH of the slurry entering the tailing impoundment shall be between 6.0 and 11.0 pH units. The pH of the tailings decant from the tailings impoundment, after mixing of the slurry discharge, shall be between 6.0 and 11.0 pH units between February 15 and May 15, and between 6.0 and 9.5 pH units from May 16 and February 14.
- 1.2.6 Washwater from the vehicle maintenance shop may go into the tailings impoundment. Oily water must go through an oil/water separator and the treated water may not have a sheen prior to entering the impoundment. Dry methods of cleanup shall be used for initial cleanup of oil spills. The disposal of glycol and solvents into the tailings impoundment is prohibited.
- 1.2.7 Activities at the site which will cause a greater amount of waste material to be treated and disposed of, above that contemplated in this section of the permit, are prohibited without the prior amendment of this permit or the acquisition of a new permit.
- 1.2.8 The water in the observation wells below the tailing impoundment must meet the State Water Quality Standards (18 AAC 70) at all times. If these standards are exceeded, the corrective action outlined in section 1.8 becomes effective.
- 1.2.9 The Department may set or modify permit conditions based on monitoring results or changes in facility processes, after consultation with the permittee, in accordance with permit amendment or modification.

1.3 Site Maintenance

- 1.3.1 Information on engineering changes to the mill, new waste treatment processes, changes to interceptor and observation well system, and addition of new point sources that discharge into the tailings impoundment must be submitted to the Department and approval must be obtained prior to any discharge.
- 1.3.2 The permittee must provide and maintain secondary containment for all process piping, chemical mix tanks, and leaching facilities containing hazardous or toxic materials. Secondary containment is considered to be 110% of the largest tank within one containment. The permittee must design and install secondary containment structures in a manner that ensures that solid waste or leachate will not escape from the structures. Facilities to prevent such discharges shall be maintained in good working condition at all times by the permittee.
- 1.3.3 Secondary containment of all hazardous substances as defined at AS 46.03.826 (5) must be impermeable to those stored hazardous materials.

- 1.3.4 The permittee must design all new process piping, chemical mix tanks, and leaching facilities to allow for routine inspections for leaks. Process piping outside of the mill building must not be buried unless secondary containment is used that provides the ability to inspect for leaks. This stipulation does not apply to the tailings and water return lines.
- 1.3.5 The permittee shall develop the site in accordance with the plans submitted by the applicant as required by this permit and approved by the Department, and approved amendments to those plans. Pollution prevention concepts shall be incorporated into operations plans for the project.

1.4 Site Operation

- 1.4.1 The permittee shall establish, update and maintain proof of financial responsibility in accordance with section 1.11 of this permit.
- 1.4.2 The freeboard of the tailings impoundment must be maintained to prevent overflow as approved by the Department of Natural Resources.
- 1.4.3 The permittee shall control particulates that may occur from wind-blown tailings by wetting or other effective measures.
- 1.4.4 The permittee must notify the Department in writing at least 15 days before the introduction of a new chemical into the process or waste treatment streams. Material Safety Data Sheets of new chemicals will be forwarded to the Department and maintained on site.
- 1.4.5 The permittee must submit plans to the Department and receive approval of any changes that will significantly modify the quality or quantity of a discharge, significantly modify the operation of a waste treatment component, or significantly modify the disposal facility, at least 60 days before construction of the modification.
- 1.4.6 The permittee must notify the Department in writing at least 15 days before the introduction of process solutions into an existing process or waste treatment component which has been significantly modified.
- 1.4.7 The permittee must submit to the department within 90 days after completing construction of a new process component or of a significant modification to an existing process component:
 - 1.4.7.1 As built drawings of the process component(s) which show any changes of those aspects which would effect performance of that process component as required in 18 AAC 72.600.
 - 1.4.7.2 A summary of the quality control activities that were carried out during construction.
 - 1.4.7.3 The final operating plans that reflect modifications made during construction.

- 1.4.8 The permittee shall maintain fuel handling and storage facilities in a manner which will prevent the discharge of hazardous substances. A Spill Prevention Control and Countermeasure Plan (SPCC Plan) shall be in effect according to provisions of [40 CFR 112] for facilities storing 660 gallons of fuel in a single container above ground, 1320 gallons in the aggregate above ground, or 42,000 gallons below ground.
- 1.4.9 The permittee shall notify ADEC of a discharge of any hazardous substance at the facility in conformance with 18 AAC 75, Article 3. Reportable spills include unplanned discharges of process chemicals to the tailing impoundment which would violate limitations in this permit.
- 1.4.10 Using best efforts, the permittee shall develop spill response plans for the transportation of hazardous substances, other than petroleum products, by the permittee from Fairbanks to the facility and shall require other transporters of these substances under contract with the permittee to make such spill plans available to the permittee and/or ADEC. Upon request from the Department, the permittee shall provide copies of such plans.

1.5 Monitoring

- 1.5.1 The permittee shall maintain and update a monitoring plan to include the following:
- 1.5.1.1 Weekly visual monitoring of the facility for signs of damage or potential damage from settlement, ponding, leakage, erosion or operations at the site. Visual monitoring shall be documented.
 - 1.5.1.2 Surface water and groundwater analyses at frequencies which will ensure that sample results are statistically valid.
 - 1.5.1.3 A fluid management monitoring plan including a water accounting of process water discharged to the impoundment, process water recycled to the mill, and water entering the interceptor well system.
 - 1.5.1.4 A monitoring plan, as developed by FGMI and the Department of Fish and Game, which will accurately reflect any potential environmental harm from the tailing impoundment to the water reservoir or Fish Creek drainage.
- 1.5.2 Groundwater, surface water, and process water sampling locations and frequency shall be in conformance with the most recently approved Fort Knox Project Monitoring Plan as approved by ADEC. The sampling locations shall provide for the following monitoring: the process stream slurry prior to it being discharged to the tailing impoundment, the interceptor water into the tailing impoundment, the groundwater observation wells below the interceptor system, the surface water at the upper end of the developed wetlands and prior to entering the fresh water reservoir, and the fresh water reservoir.
- 1.5.3 Samples taken as required by section 1.5.2 shall be analyzed in conformance with the monitoring plan submitted August 20, 1993 by Fairbanks Gold Mining, Inc. as approved or modified by amendment to this permit.

- 1.5.4 Characterization of overburden, waste rock, and ore for acid rock drainage potential will be performed on representative samples in conformance with the monitoring plan submitted August 20, 1993 by Fairbanks Gold Mining, Inc. as approved or modified by amendment to this permit.
- 1.5.5 A biological visual survey program shall be conducted in conformance with the monitoring plan prepared August 20, 1993 by Fairbanks Gold Mining, Inc. as approved or modified by amendment to the permit, and as approved by the Department of Fish and Game.
- 1.5.6 The permittee shall maintain a log of waste discharges into the tailing impoundment for all wastes other than those that have gone through the process sampling point. The log shall include the date of discharge, estimated volume of waste and a description of the waste. A summary shall be included in the quarterly reports required in section 1.7.
- 1.5.7 Maintenance of inspection and sampling logs, and procedures for processing, consolidating and reporting inspection and sampling data shall be in conformance with the monitoring plan submitted August 20, 1993 by Fairbanks Gold Mining, Inc. as approved or modified by amendment to this permit.
- 1.5.8 Groundwater monitoring and corrective action shall be in accordance with 18 AAC 60 Solid Waste Management Regulations, and the monitoring plan submitted August 20, 1993 by Fairbanks Gold Mining, Inc. as approved or modified by amendment to this permit. Surface water monitoring and corrective action shall be in accordance with 18 AAC 60 Solid Waste Management Regulations, and the monitoring plan submitted August 20, 1993 by Fairbanks Gold Mining, Inc. as approved or modified by amendment to this permit.
- 1.5.9 The monitoring plan submitted August 20, 1993 and developed under this section will be incorporated into the overall monitoring plan for the facility. The plan approved by the Department is considered an integral part of and is incorporated into this permit. Approved changes to project monitoring will be included as modifications to the monitoring plan and do not require reissuance of the permit.
- 1.5.10 The Department may modify monitoring requirements, by permit amendment, in consultation with the permittee, in response to trends showing changes in the concentration of parameters being monitored.
- 1.5.11 The permittee shall establish and follow monitoring procedures as follows:
 - 1.5.11.1 Adhere to conditions in The Fort Knox Baseline Water Monitoring QA/QC and Field Procedures Manual issued June, 1992 and updated August, 1993. The manual will reflect the current sampling program for the project. Any significant changes in procedures of the manual shall be submitted to the department for approval.
 - 1.5.11.2 Ensure samples are analyzed by a laboratory that follows EPA-approved procedures, quality control requirements, reporting and documentation procedures. A quality assurance plan, containing quality control procedures and criteria, analytical methods, detection limits and reporting requirements

pertinent to the permit holder's samples shall be submitted to the Department for approval. This information can be incorporated into the project environmental monitoring plan, but must be updated annually and whenever changes in methods or laboratories occur.

- 1.5.11.3 Analyze collected samples using methods set out in EPA-600/4-79-020 Methods for Chemical Analysis of Water and Wastes; EPA-600/4-82-057 Methods for Organic Chemical Analysis of Municipal and Industrial Wastewater; Standard Methods for the Examination of Water and Wastewater (edition in effect at the time of sampling); or other methods approved by the Department. Each result must be accompanied by a reference, such as the method number, to the method that was used to perform the analysis.
 - 1.5.11.4 Conduct inspections of the tailing disposal facility in conformance with the Operation and Maintenance Manual approved by Department of Natural Resources, Division of Water, Dam Safety.
 - 1.5.11.5 Conduct an inspection and monitoring program as approved by the Department, that will insure that the interceptor wells are performing such that zero discharge from the tailing impoundment is being met on an ongoing basis during operation of the facility.
- 1.5.12 If the permittee monitors any influent, effluent, receiving water, air or solid waste characteristic in addition to those identified in this permit, or more frequently than required, the results of such monitoring shall be available for inspection by the Commissioner or his representative at the project site, or other location proposed by the permittee and agreed upon by the Department. The permittee shall provide copies of the results to the Department upon request.
- 1.6 Modified Limitations and Monitoring**
- 1.6.1 If the WAD cyanide concentration in the interceptor water from the interceptor wells exceeds 1 mg/l, during routine quarterly sampling a check sample will be taken to confirm the results. If the check sample is also above 1 mg/l, then weekly sampling will begin for WAD cyanide in the interceptor water and will continue until the average of the previous 6 samples is less than 1 mg/l, at which time the frequency shall revert back to monthly.
 - 1.6.2 If the average concentration of the WAD cyanide in the previous 6 samples of the interceptor water exceeds 2 mg/l, the tailing waste slurry WAD cyanide limits in section 1.2.3 are changed to a monthly average of 2 mg/l, and a maximum of 10 mg/l.
 - 1.6.3 If the average concentration of the WAD cyanide in the previous 6 months of the interceptor water is less than 1 mg/l, the tailing waste slurry WAD cyanide limits in section 1.2.3 revert back to a monthly average of 10 mg/l, and a maximum of 25 mg/l.

1.7 Reporting

- 1.7.1 For each year of sample collection and analysis, submit to the Department quarterly monitoring reports, for a total of four quarterly reports each year, and one annual monitoring report, summarizing the inspection and monitoring results set out in section 1.5. The final quarterly report may be included in the annual report provided that quarterly data is displayed clearly. All quarterly reports will be due on the 15th day of the month following the quarter. Copies of the laboratory reports should be submitted with the quarterly reports for the first year of data collection and analysis, or for the first year after a change of laboratory is made. An annual meeting with the Department will be held in conjunction with the Department of Natural Resources in which the annual report will be presented to the agencies. The annual report shall be available to the Department two weeks prior to the annual meeting.
- 1.7.2 Quarterly and annual reports required in section 1.7.1, shall include information necessary to determine data validity and to determine data variations and trends, and any exceedence of standards or criteria (see par 1.5.1.2). All records and information which validate the Quality Assurance Plan, resulting from the monitoring activities required by this permit, including but not limited to all records of analyses performed, and calibration and maintenance of instrumentation, and recordings from continuous monitoring instrumentation, shall be retained in Alaska for observation by the Department for three years. Upon request from the Department, the permittee shall submit certified copies of such records. The Department may at its discretion perform field and laboratory audits of monitoring activities.
- 1.7.3 The permittee shall maintain an updated plan of operations as required by ADNR showing site use and development plans, and shall submit an updated copy or amendment to the Department showing current status with the annual report required in section 1.7.1.

1.8 Corrective Actions

- 1.8.1 The permittee shall comply with 18 AAC 60 if the visual monitoring program discovers damage or potential damage to the facility that can lead to water quality violations.
- 1.8.2 The permittee shall comply with 18 AAC 60 if a change in water quality in any of the surface water or groundwater sampling locations is detected.
- 1.8.3 If a violation of water quality standards is detected in surface water or groundwater, or if an exceedence of the limits set out in sections 1.2 or 1.6 is detected, the permittee shall:
- 1.8.3.1 Verbally notify the Department within one working day.
 - 1.8.3.2 Determine the extent of the exceedence.
 - 1.8.3.3 In consultation with the Department and documented in writing, implement a plan to determine the cause and/or source of the exceedence.

- 1.8.3.4 Submit to the Department, within 10 working days, a plan for corrective actions to prevent adverse environmental impacts and further exceedences of applicable water quality standards or permit limits.
- 1.8.3.5 Implement the corrective action plan as approved by the Department.

1.9 Temporary Closure

- 1.9.1 A temporary closure shall be defined as a closure of the beneficiation process for greater than two weeks, and less than three years. The length of time of a temporary closure lasting longer than three years may be extended by written authorization from ADEC. The permittee shall submit a conceptual temporary closure plan to the ADEC prior to commencement of initial beneficiation operations at the site.
- 1.9.2 The permittee shall submit a specific temporary closure plan to ADEC no later than ten days after a temporary closure has been initiated. However, the permittee is encouraged to submit the specific plan immediately upon availability, and prior to commencement of the temporary closure if possible. The specific plan shall include the following:
 - 1.9.2.1 The procedures, methods, and schedule to be implemented for the disposal or storage of process water.
 - 1.9.2.2 The control of surface and groundwater drainage to and from the facility and the surrounding area.
 - 1.9.2.3 The secure storage of chemicals during the period of closure.
- 1.9.3 ADEC shall have 15 days to review and approve or suggest modifications to the temporary closure plan.
- 1.9.4 Once a temporary closure plan has been approved, full implementation of the approved specific plan is required. The plan can be amended by submitting a revised plan to ADEC for approval.
- 1.9.5 During temporary closure of the site, the permittee shall:
 - 1.9.5.1 Continue pollution control activities associated with the tailing impoundment including but not limited to the interceptor system, dust control, maintenance of the drainage diversion structures, and maintenance of the tailing impoundment including appropriate freeboard as specified by this permit or the temporary closure plan.
 - 1.9.5.2 Continue monitoring and reporting activities of all active portions of the site including the tailing impoundment and the interceptor system as specified by this permit or the temporary closure plan.

1.9.5.3 Complete reclamation and corrective action requirements as appropriate under the Reclamation Plan in light of the nature of the closure.

1.10 Permanent Closure

1.6.1 Updated reclamation and monitoring plans must be submitted for approval within 90 days of the decision that permanent cessation of the mill process will occur. These updates must address current conditions at the facility.

1.10.2 Permanent closure of the site must be implemented and completed in accordance with the conditions in this permit and with the reclamation plan approved by the ADEC and ADNR.

1.10.3 Permanent closure of the facility will be complete when the following three criteria are met:

- 1) Drainage channels over the tailing impoundment are constructed and stable,
- 2) The spillway of the tailing dam is constructed and stable, and
- 3) The water quality standards are being met in the tailing dam over flow, the water in the interceptor well system and the water in the observation wells below the tailing impoundment.

Permanent closure must occur prior to the cessation of pending activities required for the most recent temporary closure.

1.10.4 The permittee shall maintain the facility, correcting any erosion or settlement of the tailing that may impair water quality or otherwise threaten the environment, up until the time that this permit, or any successor permit, is transferred to another entity or terminated by the Department.

1.10.5 Post-closure monitoring of surface water and leachate of the tailing impoundment shall occur according to the following schedule:

Monitoring Years After Closure	Monitoring Frequency	Parameters To Be Analyzed For
During the first two continuous years of meeting the water quality standards.	Quarterly / Yearly	pH, conductivity, bicarbonate and total alkalinity (as CaCO ₃), and WAD cyanide / Profile I or Profile II parameters listed in the monitoring plan.
From after meeting the water quality standards for two years, through the following eight years.	Yearly	Profile I or Profile II parameters listed in the monitoring plan.
After ten continuous years of meeting the water quality standards, to year 30 following closure.	Once every five years	Profile I or Profile II parameters listed in the monitoring plan.

This schedule and the parameters monitored may be modified by amendment to this permit based on the monitoring results received.

1.10.6 Post-closure maintenance and monitoring of the tailing disposal structure shall continue for 30 years from closure, unless extended or reduced by ADEC.

1.11 Proof of Financial Responsibility

- 1.11.1 The permittee shall provide the ADEC with proof of financial responsibility for closure of the facility and post-closure monitoring. The proof of financial responsibility shall cover costs incurred for closure of the facility, will cover the activities set out in Appendix C, and shall be in the amount shown in Appendix C. The boundaries of the area covered by the financial responsibility required in this section is the area above the tailing impoundment observation wells, between the diversion ditches that go around the tailing impoundment, and which is below the mill site as shown on the map attached as appendix D.
- 1.11.2 The Department will review, and modify if appropriate, the financial responsibility during the renewal, modification, or amendment of this permit.
- 1.11.3 The proof of financial responsibility may be in the form of a trust fund, surety bond, letter of credit, insurance, or any other mechanism approved by the Department.
- 1.11.4 Approved proof of financial responsibility must remain available through the post-closure period, up to 30 years, and may not be released until ADEC certifies in writing that closure of the facility and the required post-closure monitoring have been successfully concluded, or that another entity will assume responsibility for permit compliance and/or post-closure monitoring.
- 1.11.5 It shall be the responsibility of the permittee to provide acceptable proof of financial responsibility. ADEC will accept or reject said Offer of Proof as expeditiously as possible, but in no event later than 30 days after its receipt.
- 1.11.6 If the permittee is unable to provide proof of financial responsibility which is acceptable to ADEC and is approved by ADEC in writing within the time periods stated above, this permit will expire automatically at that time, notwithstanding any other approvals to the contrary, unless ADEC's failure to act is responsible for the delay in accepting or rejecting this proof.
- 1.11.7 If the permittee fails to comply with the terms and conditions of this permit, as written, renewed, modified or amended; and if the Department concludes that such failure may prevent, inhibit or delay satisfactory closure or post-closure monitoring of the disposal facility; then the Department may exercise its rights under the approved mechanism for financial responsibility, to access the funds and use them for appropriate closure and post-closure activities.

1.12 Facility Audit

1.12.1 Prior to the renewal of this permit, a facility environmental audit shall be conducted. The audit shall include an evaluation of:

- 1.12.1.1 the condition of chemical containment structures,
- 1.12.1.2 compliance with permit conditions,
- 1.12.1.3 laboratories and sample analysis procedures.

1.12.2 The facility audit shall be a component of or combined with the audit required by the ADNRMillsite Permits, ADL #414960 and #414961.

1.13 Pollution Prevention Strategy

1.13.1 During the life of the project the permittee is encouraged to implement pollution prevention practices at the facility. To implement pollution prevention, it is recommended that the permittee evaluate all physical and maintenance phases of the operation, including all process and waste treatment components, mechanical maintenance facilities, chemical storage and facility maintenance by doing:

- 1.13.1.1 an assessment of toxic chemicals used, and/or hazardous wastes generated. This should include data on the types, amount, and hazardous constituents of toxic substances and hazardous waste streams,
- 1.13.1.2 a review of potential reduction options for toxic chemical use and hazardous waste generation,
- 1.13.1.3 an evaluation considering costs associated with the use of toxic chemicals and the generation of hazardous wastes including:
 - the cost of purchasing chemicals
 - the cost of disposal
 - the cost of storage
 - the cost of waste treatment
 - the cost of environmental compliance and liability
 - the use of the Alaska Materials Exchange to obtain raw chemicals,
- 1.13.1.4 an analysis of reduction options including equipment/technology modifications, process/procedure modifications, product reformulation/redesign, raw material substitution, improvements in housekeeping, maintenance, training, and inventory control, education, and conservation (energy, water, etc.), that identifies which options are technically and economically feasible, and
- 1.13.1.5 numeric or performance reduction goals for chemicals used and/or waste generated.

APPENDIX B

2 GENERAL PERMIT CONDITIONS

- 2.1 ACCESS AND INSPECTION. The permittee shall allow the Commissioner or his/her representative access to the permitted facilities at reasonable times to conduct scheduled or unscheduled inspections or tests to determine compliance with this permit, state laws, and regulations.
- 2.2 INFORMATION ACCESS. Except where protected from disclosure by applicable State or Federal law, all records and reports submitted in accordance with the terms of this permit shall be available for public inspection at the State of Alaska Department of Environmental Conservation, Northern Regional Office, Fairbanks, Alaska.
- 2.3 CIVIL AND CRIMINAL LIABILITY. Nothing in this permit shall relieve the permittee from any potential civil or criminal liability for noncompliance with the permit or with applicable law.
- 2.4 AVAILABILITY. The permittee shall post or maintain a copy of this permit available to the public at the facility.
- 2.5 ADVERSE IMPACT. The permittee shall take all necessary means to minimize any adverse impacts to the receiving waters or lands resulting from noncompliance with any limitation specified in this permit, including any additional monitoring needed to determine the nature and impact of the noncomplying activity. The permittee shall cleanup and restore all areas adversely impacted by the noncompliance.
- 2.6 CULTURAL OR PALEONTOLOGICAL RESOURCES. Should cultural or paleontological resources be discovered as a result of this activity, work which would disturb such resources is to be stopped, and the State Historic Preservation Office, Division of Parks and Outdoor Recreation, Department of Natural Resources (907-465-4563), is to be notified promptly.
- 2.7 APPLICATIONS FOR RENEWAL. In accordance with 18 AAC 15.100 (d), applications for renewal or amendment of this permit must be made no later than 30 days before the expiration date of the permit or the planned effective date of the amendment.
- 2.8 OTHER LEGAL OBLIGATIONS. This permit does not relieve the permittee from the duty to obtain any other necessary permits from the Department or from other local, state, or federal agencies, and to comply with the requirements contained in any such permits. All activities conducted and all plans implemented by the permittee pursuant to the terms of this permit shall comply with all applicable local, state, and federal laws and regulations.
- 2.9 TRANSFER OF OWNERSHIP In the event of any change in control or ownership of the permitted facility, the permittee shall notify the succeeding owner or controller of the existence of this permit by letter, a copy of which shall be forwarded to the Director of Air and Water Quality. The original permittee remains responsible for permit compliance unless and until the succeeding owner or controller agrees in writing to assume such responsibility, and the Department approves assignment of the permit. The Department will not

unreasonably withhold such approval. However, the Department may require a reasonable period of post-closure observation of water quality before approving assignment of this permit to the organization contemplated by the Agreement for Funding Post-Reclamation Obligations, to be entered into by the permittee and the Alaska Department of Natural Resources.

As between the State and the permittee, no transfer of this permit shall relieve the permittee of any liability arising out of operations conducted prior to such transfer, regardless of whether such liability accrues before or after such transfer.

2.10 POLLUTION PREVENTION In order to prevent and minimize present and future pollution, when making management decisions that effect waste generation, the permittee shall consider the following order of priority options as outlined in AS 46.06.021:

- waste source reduction,
- recycling of waste,
- waste treatment, and
- waste disposal.

APPENDIX C

FINANCIAL RESPONSIBILITY FOR THE FIRST FIVE YEARS OF THE FORT KNOX PROSPECT, TAILING IMPOUNDMENT SOLID WASTE CLOSURE AND MAINTENANCE COSTS

Solid waste regulations, 18 AAC 60, allows the Department to require proof of financial responsibility for closure of the facility and post-closure monitoring. The total proof of financial responsibility for the life of this permit, unless modified sooner, shall be \$9,262,340. The total is based on the following:

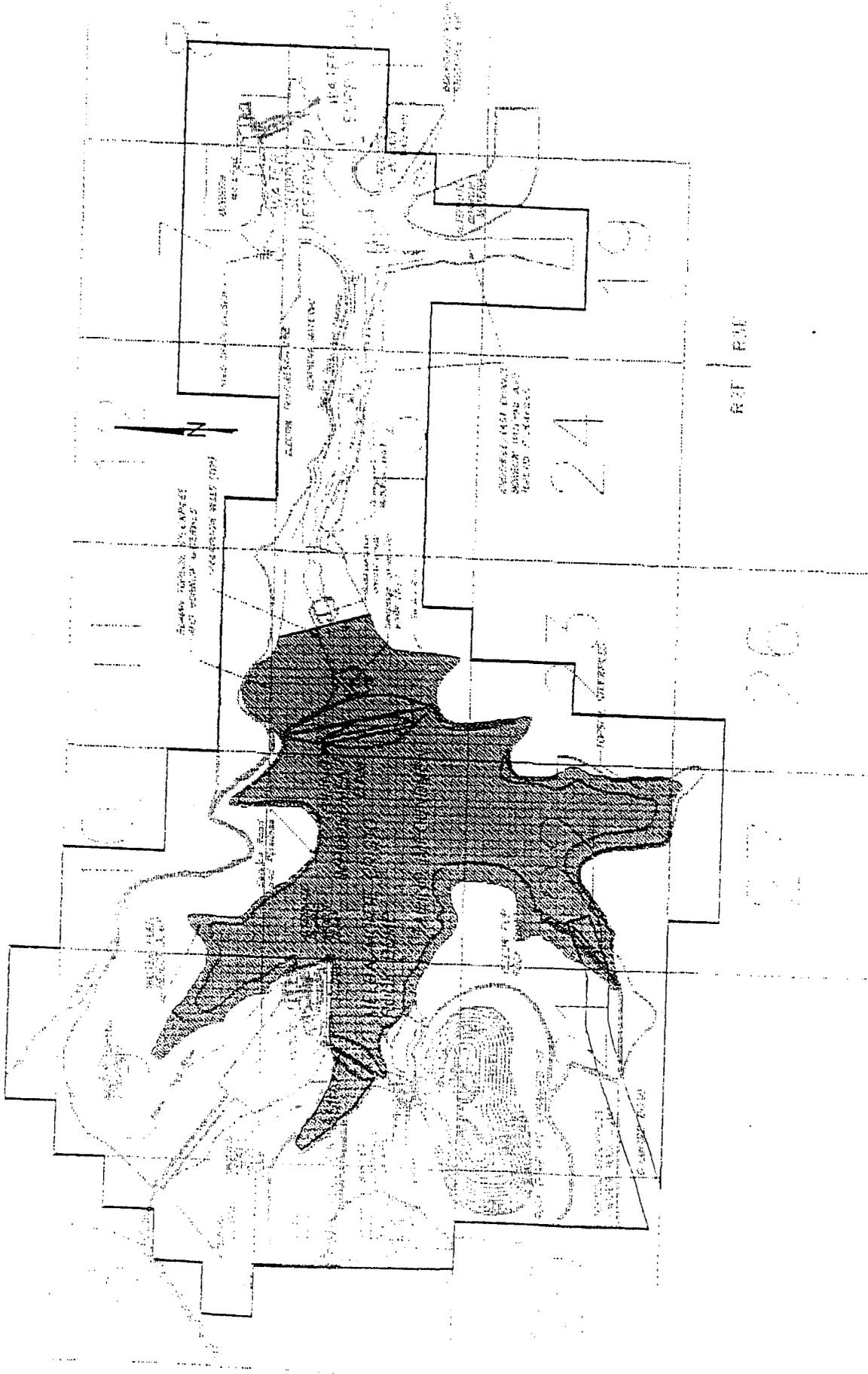
CLOSURE/MAINTENANCE ITEM	FINANCIAL RESPONSIBILITY
Tailing Channels 1-4/Impoundment	\$2,541,409
Post Spillway Channels 5-6	\$420,620
Fish Creek Rock Dump	\$423,053
Spillway	\$377,869
Closure Monitoring (Long Term)	\$187,204
Tailing Dam Monitoring (Long Term)	\$51,362
Tailing Dam Maintenance (Long Term)	\$104,974
Tailing Pond Water Treatment	\$2,535,878
Supervisor Labor	\$203,484
SUBTOTAL	\$6,845,853
Mobilization/Demobilization (5% of contract cost)	\$342,293
Profit (10% of contract cost)	\$684,585
Sub Total	\$7,872,731
Contract Administration (5% of contract cost)	\$393,637
Contingency (5% of contract cost)	\$393,637
Inflation (1.5%) (8% of contract cost)	\$602,335
TOTAL	\$9,262,340¹

¹ The financial responsibility will be reevaluated and adjusted as appropriate during renewal of the solid waste permit.

APPENDIX D – FACILITY MAP

See Following Page

DEC SOLID WASTE DISPOSAL PERMIT AND CLOSURE BOND FOR TAILINGS



FAIRBANKS GOLD MINING, INC.