



Alaska Gold Company
A subsidiary of NovaGold Resources Inc.

**ADEC and ADNR
ANNUAL REPORT 2007**

**Rock Creek and
Big Hurrah Mines**



May 2008



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**Rock Creek and
Big Hurrah Sites**

Report Prepared for
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1 Introduction

This annual report has been prepared by SRK Consulting for Alaska Gold Company (AGC), a wholly owned subsidiary of NovaGold Resources Inc., in accordance with ADEC Waste Management Permit 2003-DB0051 and ADNR Reclamation Plan Approval F20069578. The report is based solely on information provided by Alaska Gold Company.

Although the Rock Creek and Big Hurrah sites were permitted jointly, the two sites are located over 40 miles apart. In 2007, all construction activities were focused on the Rock Creek site. Only minor drilling activities were conducted at the Big Hurrah site in 2007. As a result, the majority of this report pertains to the Rock Creek site.

The following activities took place at the Rock Creek site in 2007:

- Ore was mined and stockpiled, but no milling activities took place;
- All development rock generated was used for construction purposes, therefore no development rock stockpiles were constructed;
- Stage 1 (Commissioning Dam) of the Tailings Storage Facility was under construction;
- Components of the stormwater management system, including the diversion ditches were under construction;
- The inert solid waste landfill facilities were not operational;
- No underground injection of treated mine dewatering wastewater took place;
- The baseline groundwater and surface water monitoring programs continued.

In an effort to optimize the efficiency of the site personnel, AGC has prepared one annual report to address the requirements of both the Waste Management Permit and Reclamation Plan Approval.

Table 1 summarizes the reporting requirements for the Waste Management Permit and Reclamation Plan Approval, along with the location in the report where the information fulfilling these requirements is located.

Table 1: Location of Reporting Requirements

Ref.	Requirement	Report Ref.
Waste Management Permit 2003-DB0051		
1.9.1	Submit an annual report summarizing the inspection and monitoring results set out in Section 1.8:	
1.8.1.1	<ul style="list-style-type: none"> ▪ Weekly visual monitoring: <ul style="list-style-type: none"> ○ Signs of damage at facilities; above-grade portions of groundwater monitoring devices; visible portions of liners; containment structures and retaining walls; erosion control/diversion structures; waste escaping or leachate; unauthorized waste disposal; violations of permit conditions ○ As per Certificate of Reasonable Assurance (AK 0605-05AA), Item (8): Include monitoring of adequacy and effectiveness of Stormwater Management Best Management Practices in weekly visual monitoring required in the Waste Management Permit 	Section 5.1
1.8.1.2	<ul style="list-style-type: none"> ▪ Surface water monitoring near the sites to ensure that water quality standards are not exceeded outside the waste management areas 	Section 5.2
1.8.1.3	<ul style="list-style-type: none"> ▪ Quarterly groundwater sampling and analyses ▪ Seep sampling and analyses 	Section 5.3 Section 5.4
1.8.1.4	<ul style="list-style-type: none"> ▪ Monitoring of treated pit dewatering wastewater prior to injection to ensure permit limits are met 	Section 5.5
1.8.1.5	<ul style="list-style-type: none"> ▪ Geochemical monitoring of development rock and tailings samples from Rock Creek Mine to ensure that there is low potential for production of leachate that is acidic and/or contains elevated levels of metals 	Section 5.7
1.8.1.6	<ul style="list-style-type: none"> ▪ Monitoring of paste tailings prior to placement in the TSF <i>and water recycled to the TSF or contained in the water recycle pond</i> to ensure that limitations in Sections 1.2.3 and 1.2.4 are met¹ 	Section 5.6
1.8.1.7	<ul style="list-style-type: none"> ▪ Geochemical monitoring of development rock produced at Big Hurrah designed to detect and segregate PAG development rock as per Section 1.7.1.2 	Section 5.7
1.8.1.8	<ul style="list-style-type: none"> ▪ Monitoring of seepage, leachate, runoff and down-gradient groundwater of the PAG development rock storage area 	N/A ²
1.8.1.9	<ul style="list-style-type: none"> ▪ Fluid management monitoring plan including a water accounting of: <ul style="list-style-type: none"> ○ Quantity of seepage through the TSF ○ Treated pit dewatering wastewater discharged at Rock Creek ○ Treated pit dewatering wastewater discharged at Big Hurrah 	Section 3.5.2 Section 3.7 Section 4.5
1.8.1.10	<ul style="list-style-type: none"> ▪ Wildlife monitoring as required in Section 1.4.16 	Section 5.8
1.8.1.11	<ul style="list-style-type: none"> ▪ Water quality monitoring of the recycle water pond 	Section 5.6.2 ³
1.8.2.2	<ul style="list-style-type: none"> ▪ Submit updated QAPP annually (or whenever changes to methods or labs used occur) 	Section 5.10
1.8.2.4	<ul style="list-style-type: none"> ▪ Inspections of TSF in conformance with Operations, Maintenance and Emergency Action Manual approved by ADNR 	Section 3.5.1

¹ The requirements outlined in Section 1.8.1.6 of the Waste Management Permit have been modified in the above table to include water recycled to the TSF or contained in the water recycle pond. Section 1.8.1.6 states to monitor paste tailings to ensure the limitations in Sections 1.2.3 and 1.2.4 are met. Section 1.2.4 refers to Cyanide limitations on recycled water.

² Monitoring of seepage, leachate, runoff and down-gradient groundwater of the PAG development rock storage area will be implemented when this development rock storage area is constructed.

³ Section 5.6.2 of this report refers to monitoring for Cyanide.

Ref.	Requirement	Report Ref.
1.8.4	<ul style="list-style-type: none"> ▪ Samples that had a positive result for CN (previously reported to ADEC) from: <ul style="list-style-type: none"> ▪ Any groundwater well or ▪ Surface water monitoring location 	<p>Section 5.3 Section 5.2</p>
1.8.5	<ul style="list-style-type: none"> ▪ Summary of log of wastes disposed in: <ul style="list-style-type: none"> ○ TSF, inert solid waste landfill facilities and development rock dump at Rock Creek ○ TSF, inert solid waste landfill facilities, PAG and Non-PAG development rock dump and any backfill of satellite pit at Big Hurrah 	<p>Section 3.9 Section 4.6</p>
1.8.9	<ul style="list-style-type: none"> ▪ Any additional monitoring of influent, effluent, receiving water, air or solid waste in addition to those in the permit or more frequently than required 	<p>Section 5.9</p>
1.9.4	<p>Adequacy of financial responsibility, including, but not limited to, inflation, significant changes in reclamation activity costs, and concurrent reclamation, expansion or other changes to the operation of the facility</p>	<p>Section 6</p>
1.9.5	<p>Amendments to Plan of Operations affecting waste disposal operations authorized by permit at:</p> <ul style="list-style-type: none"> ▪ Rock Creek ▪ Big Hurrah 	<p>Section 3.12 Section 4.8</p>
Reclamation Plan Approval - F20069578		
	<p>Summary of results of all fourth quarter monitoring required by state/federal authorizations</p>	<p>Section 5</p>
	<p>Reclamation activities and surface acreage disturbed at:</p> <ul style="list-style-type: none"> ▪ Rock Creek ▪ Big Hurrah 	<p>Section 3.2 Section 4.2</p>
	<p>Milling activities, quantities of topsoil salvaged and stockpiled, tons (and CY) of ore and development rock mined and the available pit volume below the anticipated pit lake elevation at the end of the previous year and expected at the end of the next year at:</p> <ul style="list-style-type: none"> ▪ Rock Creek ▪ Big Hurrah 	<p>Section 3.1 Section 4.1</p>
	<p>As built map submitted with annual report showing current development of all facilities within project area described in the Rock Creek Mine Plan of Operations Volume 4, including cleared and grubbed areas, topsoil or growth medium stockpiles, roads, PAG and Non-PAG waste rock dumps, material sites, tailings facility, facility construction, and unreclaimed exploration disturbance at:</p> <ul style="list-style-type: none"> ▪ Rock Creek ▪ Big Hurrah 	<p>Figures 4, 5 Figure 7</p>
	<p>Adequacy of financial responsibility - inflation, changes in reclamation cost, concurrent reclamation, expansion or other changes to operation of facility</p>	<p>Section 6</p>

2 Project Overview

The Rock Creek and Big Hurrah sites, shown on Figure 1, are located on the Seward Peninsula, along the west coast of Alaska.

2.1 Rock Creek Site

The Rock Creek site is located approximately six miles north of Nome, Alaska, in the Snake River Peninsula, on private lands owned by the Bering Straits Native Corporation and Alaska Gold Company. The ultimate facilities, shown on Figure 2, will include an open pit mine, non-acid-generating development rock stockpiles, a gold recovery plant and a paste tailings storage facility. Support facilities include a maintenance shop, administration and mine dry building, warehouse, explosive storage and fuel storage.

Standard drilling and blasting techniques are currently used to produce development rock for construction purposes. The same techniques will be employed for mining. Planned ore milling rates are expected to be approximately 7,700 tons per day⁴ for a total of 2.75 million tons per year. When the Big Hurrah site is constructed and in operation, Rock Creek mill feed will reduce to approximately 6,600 tons per day and Big Hurrah mill feed will make up the remainder (see Section 2.2). Planned development rock volumes at the Rock Creek site are expected to range from 4.4 to 5.5 million tons per year. Milling operations will include crushing, screening, gravity separation, flotation and a cyanide leaching process. The expected mine life is four to five years, with potential for additional discovery and expansion. The mine will be operated on a schedule of two 12-hour shifts per day for 365 days per year. At year end of 2007, the project employed 120 operations personnel, with an expected staff exceeding 150 personnel.

2.2 Big Hurrah Site

The Big Hurrah site is located approximately 42 miles east of Nome, in the Solomon River watershed, on land owned by Alaska Gold Company. The surrounding lands are owned by the Solomon Native Corporation. The ultimate facilities, shown on Figure 3, will consist of a smaller open pit gold mine, non-acid-generating development rock stockpile, temporary stockpile for acid-generating development rock that will eventually be placed in the pit, and an ore stockpile. Support facilities include a truck maintenance shop, small administration and mine dry building, explosive storage and fuel storage.

⁴ Ore milling rates and development rock volumes for Rock Creek are those provided in the Plan of Operations, dated May 2006.

Ore will be mined at 1,650 tons per day on a seasonal basis, for a total of approximately 300,000 tons per year. Ore will be stockpiled and trucked to the Rock Creek Mill Complex for processing at an average rate of 1,100 tons per day⁵. Approximately 1.1 million tons of development rock will be produced annually. The mine will be operated with two 12-hour shifts per day for approximately 180 days per year, for a projected mine life of four years. Trucking will likely occur on a year-round basis. The project is expected to require 50 personnel.

2.3 Environmental Policy

Alaska Gold Company follows the corporate governance of NovaGold, which recognizes environmental management as a corporate priority. NovaGold employees care about preserving the environment for future generations, while also providing for safe, responsible and profitable operations by developing natural resources for the benefit of its employees, shareholders and communities.

In adopting the following Statement of Principles throughout all stages of exploration, development, mining and closure, NovaGold intends to set and maintain standards of excellence for environmental performance at all its operations.

- NovaGold will communicate its commitment to excellence in environmental performance to its subsidiaries, employees, contractors, other agents and the communities in which it operates.
- All new activities and operations will be managed to ensure compliance with applicable laws and regulations. In the absence of regulation, best management practices will be applied to minimize environmental risk.
- Remediation and mitigation of historical mining impacts on properties acquired by NovaGold will be managed through the cooperative involvement of NovaGold with previous owners, government agencies and the community.
- To achieve its commitment to environmental excellence, NovaGold will use an environmental management system that ensures prioritization, planning, implementation, monitoring and honest reporting.
- NovaGold will strive to minimize releases to the air, land or water and will ensure appropriate treatment and disposal of waste.
- NovaGold will allocate the necessary resources to meet its reclamation and environmental obligations.

⁵ Ore production, total annual ore produced, ore milling rates and development rock volumes for Big Hurrah are those provided in the Plan of Operations, dated May 2006.

- NovaGold will continuously seek opportunities to improve its environmental performance through adherence to these principles.
- NovaGold will regularly report progress to its employees, shareholders and the communities in which it operates.

2.4 Regulatory Instruments

The Rock Creek and Big Hurrah sites are regulated primarily by the State of Alaska, with oversight by the federal government. The various permits, approvals and authorizations in effect as of December 31, 2007 are listed in Table 2.

Table 2: List of Regulatory Instruments

Regulatory Instrument	Issued by	Description
Waste Management Permit 2003-DB0051	ADEC	Disposal of wastes from the Rock Creek and Big Hurrah projects to the Tailings Storage Facility, inert solid waste landfills, underground injection of treated wastewater systems, groundwater and surface water monitoring, and management of development rock
Department of the Army Permit POA-2006-742-M	Dept. of the Army	Placement of approximately 15,592,411 cubic yards of fill material into 346.5 acres of waters of the U.S. for development, operation and reclamation of the Rock Creek and Big Hurrah projects
Certificate of Reasonable Assurance	ADEC	Certificate of Reasonable Assurance for Department of the Army Permit POA-2006-742-M
Air Quality Control Minor Permit AQ0978MSS01	ADEC	Installation and operation of emission units in crushing and grinding circuit, shop/warehouse, emergency generators, and CIL, process, mill, laboratory and administration buildings
Underground Injection Control Permit AK- 5X27-001-A	EPA Region 10	Injection of treated mine dewatering wastewater and a one time disposal of treated wastewater contained in the Tailings Storage Facility associated with closure of the Rock Creek Mine Project utilizing Class V injection wells – <i>received January 2008</i>
NPDES General Permit for Storm Water Discharges from Construction Activities No. AKR10BT00	EPA and ADEC	Discharge of storm water from construction activities at the Rock Creek Project
Reclamation Plan Approval F20069578	ADNR	Approval of Reclamation Plan for the Rock Creek and Big Hurrah Projects
Final Consistency Response AK 0605-05AA	ADNR	Final response regarding consistency of Rock Creek and Big Hurrah Project with the Alaska Coastal Management Program and affected coastal district's enforceable policies

Regulatory Instrument	Issued by	Description
Certificate of Approval to Construct A Dam AK00309	ADNR	Construction of the Tailings Storage Facility at the Rock Creek Mine Project
Fish Habitat Permit FH06-III-0233	ADNR	Rehabilitation of 2.5 miles of existing access road along Big Hurrah Creek and installation of culverted road crossings in Big Hurrah and Linda Vista creeks
Temporary Water Use Authorization TWUP F2006-09	ADNR	Withdrawal of groundwater from 11 interceptor wells surrounding Rock Creek Mine Pit (pit dewatering)
Temporary Water Use Authorization TWUP F2006-10	ADNR	Withdrawal of surface water from Rock Creek drainage within the Rock Creek Mine Pit (pit dewatering)
Temporary Water Use Authorization TWUP F2006-11	ADNR	Withdrawal of surface water from a tailings pond, tailings storage facility and process plant site drainage channels for mill process water for the Rock Creek Mine Project
Temporary Water Use Authorization TWUP F2006-12	ADNR	Diversion of surface water from Rock Creek drainage diversion channels into Lindblom Creek to minimize drainage through the Rock Creek Mine Site
Temporary Water Use Authorization TWUP F2006-13	ADNR	Withdrawal of groundwater from five interceptor wells surrounding the Big Hurrah Mine Pit (pit dewatering)
Temporary Water Use Authorization TWUP F2006-14	ADNR	Withdrawal of surface water from the Little Hurrah Creek drainage within the Big Hurrah Mine Pit (pit dewatering)

In addition to the permits, approvals and authorizations listed in Table 2, there are state and federal laws that must be complied with, including, but not limited to, state regulations regarding spill reporting, water quality standards, mining, reclamation and solid waste management, Resource Conservation and Recovery Act, Emergency Planning and Community Right-to-Know Act, Toxic Substances Control Act, Clean Air Act and Clean Water Act.

This annual report has been prepared in accordance with Waste Management Permit 2003-DB0051 and Reclamation Plan Approval F20069578. The requirements of this permit and approval are summarized in the following sections.

2.4.1 Waste Management Permit

The Waste Management Permit was issued to Alaska Gold Company by the Alaska Department of Environmental Conservation on August 9, 2006 and is effective for five years. The permit includes the requirement to submit quarterly and annual reports and regulates the following:

- Disposal of tailings to the Tailings Storage Facility at the Rock Creek site;
- Disposal of waste to inert solid waste landfill facilities at the Rock Creek and Big Hurrah sites;
- Underground injection of treated mine dewatering wastewater at the Rock Creek and Big Hurrah sites;
- Groundwater and surface water monitoring at the Rock Creek and Big Hurrah sites;
- Storage of potentially acid generating (PAG) development rock prior to disposal in the pit at closure at the Big Hurrah site;
- Hazardous chemical storage and containment at the Rock Creek and Big Hurrah sites;
- Reclamation and closure activities at the Rock Creek and Big Hurrah sites.

2.4.2 Reclamation Plan Approval

The Reclamation Plan Approval for the Rock Creek and Big Hurrah sites was issued to Alaska Gold Company by the Alaska Department of Natural Resources, Division of Mining, Land and Water, on August 9, 2006, and is effective for five years. It was issued in accordance with Alaska Statutes 27.19 (reclamation) and 38.05 (Alaska Land Act) and the Alaska Administrative Code, Title 11, Chapter 97 (mining reclamation). The approval requires quarterly and annual reporting and includes stipulations regarding the following:

- Financial assurance;
- Review of geochemical characterization and water quality data;
- Stockpiling of organic materials;
- Geochemical characterization of development rock;
- Waste rock handling;
- Fuel and hazardous substances management;
- Reclamation and mine closure;
- Environmental audits.

3 Activities at Rock Creek

3.1 Mining and Milling Activities

The current infrastructure and mining operations for the Rock Creek site are shown on Figure 4. Excavation of the open pit began on the west side of the designed pit at the 80 meter bench, using standard drilling and blasting techniques. Material from the west side of the pit was used to construct haul roads, as well as for site development and a portion of the Rock Creek causeway. Excavation efforts were concentrated on the western side of the deposit, beginning on the 135 meter bench, once access roads to the east side of the deposit were developed.

The bulk of the development rock was used in the construction of the Tailings Storage Facility, with lesser amounts used to construct and maintain haul roads and other facilities. Because all development rock was used in construction, no development rock stockpiles were constructed.

At the end of December 2007, mining activities were concentrated on the 100 and 105 benches of the east side of the pit. Ore was stockpiled at the mill site (under construction) and in the portion of the west pit previously mined. The current mine plan calls for the pit to be excavated to the 75 meter bench by the end of December 2008.

The quantities of ore mined and milled, topsoil stockpiled, development rock removed and the volume in the pit below the anticipated pit lake level at the end of year for the Rock Creek site are shown in Table 3 for 2007 and planned for 2008.

Table 3: Mining and Milling Quantities at Rock Creek

Description	Units	2007	2008 Plan
Mill Production	Tons	0	1,660,000
Topsoil Salvaged and Stockpiled	CY	305,800	597,600
Ore Mined	Tons	78,700	1,660,000
	CY	34,500	735,700
Development Rock	Tons	1,783,500	3,754,500
	CY	781,900	1,810,800
Pit Volume Below Anticipated Pit Lake Elevation at End of Year	CY	0	1,530,300

3.2 Disturbance and Reclamation

The areas disturbed and reclaimed at the Rock Creek site in the previous year and planned for the current year are summarized in Table 4. The total disturbance up to December 31, 2007 is shown on Figure 5.

In 2007, disturbance was due to the following activities:

- Facilities construction;
- Construction of access roads;
- Earthworks (diversion ditches, TSF, overburden and organic removal, drill pads); and
- Open pit development.

Table 4: Areas Disturbed/Reclaimed at Rock Creek

Year	Area (Acres)			
	Wetlands		Uplands	
	Disturbed	Replaced	Disturbed	Reclaimed
2007 ⁶	90	0	92	0
Cumulative – End of 2007⁷	241	0	139	
Net – End of 2007	241		139	
2008 Plan	0	0	42	5

3.2.1 Disturbance and Reclamation at Borrow Areas

Borrow materials were removed from the Glacier Creek borrow site and used for construction activities at the Rock Creek site. Approximately 3.4 acres were disturbed, as shown on Figure 6⁸. Reclamation of the Glacier Creek borrow site was designed to reclaim sections of Glacier Creek previously impacted from historical mining activities. The borrow site is currently closed and is scheduled to be reclaimed during 2008.

3.3 Development Rock Stockpiles

Development rock from the Rock Creek site was used entirely for construction activities, therefore no stockpiles were constructed in 2007.

⁶ Areas disturbed in 2007 were calculated by subtracting the disturbance at the end of 2006 from the disturbance at the end of 2007.

⁷ The total disturbance at the end of 2007 was calculated from drawings provided by AGC.

⁸ The disturbance at Glacier Creek borrow site is not included in the total disturbance at the Rock Creek site.

3.4 Organics Stockpiles

The volumes of organic and overburden material removed and placed in Stockpiles 1 through 3 for future reclamation purposes at the Rock Creek site are listed in Table 5. Approximately 457,000 m³ of organic and overburden material will be excavated from the footprint of the TSF in 2008 as part of the Stage 2 construction (i.e. pre-stripping) of the TSF. This material will be placed in Organics Stockpiles 2 and 3. Organic and overburden material from the footprint of the TSF during Stage 3 construction will be placed in Organics Stockpile 1 in 2009.

Table 5: Volumes of Organics Stockpiles at Rock Creek

Description	Units	Stockpile #1	Stockpile #2	Stockpile #3	Total
Total Capacity	m ³	1,225,000	185,000	640,000	2,050,000
Total Volume End of 2006	m ³	160,557	0	0	160,557
Volume Placed - 2007	m ³	93,814	140,000	0	233,814
Total Volume End of 2007	m ³	254,371	140,000	0	394,371
End of 2007 Capacity Remaining	m ³	970,629	45,000	640,000	1,655,629
	%	79%	24%	100%	81%
Volume Placed - 2008 Plan	m ³	0	45,000	411,898	456,898
Total Volume End of 2008	m ³	254,371	185,000	411,898	851,269
End of 2008 Capacity Remaining	m ³	970,629	0	228,102	1,198,731
	%	79%	0%	36%	58%

3.5 Tailings Storage Facility

Construction of the diversion ditches and Stage 1 of the Tailings Storage Facility were ongoing during 2007. The Commissioning dam was 50% complete, not including lining, as of December 31, 2007. The Commissioning dam is scheduled to be completed in mid 2008. Construction of Stage 2 of the TSF will continue throughout the remainder of 2008 and is expected to be completed by mid-December of 2008.

3.5.1 Inspections

Once the TSF is constructed and operational, inspections will be conducted in conformance with the Operations, Maintenance and Emergency Action Manual.

3.5.2 Quantity of Seepage

Once the TSF is constructed and operational, the quantity of seepage that passes through the TSF will be reported.

3.6 Recycle Water Pond

The recycle water pond was under construction and excavation in 2007. Placement of the liner occurred in 2007 and continued into 2008. The pond is expected to be completed and approved for operation in mid-2008.

3.7 Treated Wastewater Injection

The Rock Creek treated wastewater injection system and associated water treatment plant are scheduled to be operational in the third quarter of 2008. The water treatment plant will employ a ferric chloride treatment process to treat naturally occurring elevated metals. Once the treated wastewater injection system is operational, the quantities of wastewater discharged to the injection wells will be reported.

3.8 Solid Waste Landfill

There was no solid waste landfill in operation in 2007 at the Rock Creek site. Inert and putrescible wastes were placed in containers and subsequently removed from the site by a waste management contractor.

3.9 Waste Management

The materials disposed during the year at the waste management facilities at the Rock Creek site are listed in Table 6. As shown, no wastes were placed in the facilities regulated under the Waste Management Permit in 2007 at the Rock Creek site. All development rock was used for construction materials (roads, causeways, TSF and mill site). Solid wastes were removed from site by a waste management contractor.

Table 6: Materials Disposed at Waste Management Facilities at Rock Creek

Location	Material	Quantity	Units
Tailings Storage Facility	None	0	N/A
Development Rock Stockpile	None	0	N/A
Inert Solid Waste Landfill	None	0	N/A

3.10 Stormwater Management

In 2007, AGC continued the development and implementation of site-specific storm water practices to address runoff during construction at the site. Such activities included continuing implementation and refinement of the CGP SWPPP and related monitoring strategy. As a result of storm events in September 2007, AGC adopted a number of

focused measures to address storm water runoff. Such measures included (1) minimizing construction activities at the site and diverting resources to mitigating storm water impacts; (2) terminating development activities in the Glacier Creek Pit and installing additional temporary silt fencing and hay bales in this area; (3) constructing a gravel berm to prevent direct discharge to Glacier Creek and undertaking site grading to prevent erosion; (4) implementing additional slope stabilization measures within Diversion Channel 1 and portions of Rock Creek; and (5) implementing additional site inspections to insure the efficacy of various storm water measures.

In 2008, additional storm water controls were implemented using a two tier approach as part of revisions to the CGP SWPPP for construction. Tier 1 storm water facilities were constructed in early 2008 to address as a priority snow melt conditions and provide additional control of sediment in storm water discharging from the site. These Tier 1 facilities were designed to be constructed under the limited available time and under the prevailing winter conditions at the site. As part of the transition to the MSGP-2000 storm water regulation planned for mid-2008, AGC concurrently commissioned the site engineering design consultant to prepare engineering plans for Tier 2 storm water controls. The Tier 2 facilities will be designed to provide additional sediment control for storm water discharging from the site. AGC continues to coordinate closely with the State on storm water measures, and maintains an active program for monitoring and updating such measures in accordance with SWPPP requirements.

3.11 Reportable Spills

There were 19 reportable spills at the Rock Creek site in 2007, as shown in Table 7. The substances spilled were related to construction activities and included fuel, hydraulic oil, transmission fluid and used oil in quantities ranging from 0.5 to 50 gallons. All spills were reported and cleaned up immediately in accordance with applicable regulations. Corrective actions were taken as appropriate to minimize the reoccurrence of spills.

3.12 Updates to Plan of Operations

There were no updates to the Plan of Operations in 2007. A review of the mine plan will be carried out by AGC in mid to late 2008. Any resulting updates to the Plan of Operations will be submitted to the appropriate agencies for review and approval.

Table 7: Reportable Spills in 2007 at Rock Creek

Product Spilled	Date of Spill	Potential Responsible Party	Location	Quantity Spilled	Units	Cause of Spill
Diesel Fuel	05/24/07	Alaska Gold/Fimon Trucking	Rock Creek Mine - north of equipment/ material storage area	20	gallons	25-gallon dump truck fuel tank hit rock, which tore hole in bottom
	08/19/07	Alaska Gold Company	Rock Creek Mine	9	gallons	Fuel nozzle failed to shut off
	10/11/07	Alaska Mechanical Incorporated	Rock Creek Mine - SW side of AMI building	4	gallons	Fuel truck nozzle failed to shut off
	10/26/07	Alaska Mechanical Incorporated	Rock Creek Mine	2	gallons	Fuel nozzle on fuel truck failed to shut off
	11/26/07	Alaska Mechanical Incorporated	Rock Creek Mine - Truck Shop	40 to 50	gallons	Fuel sprayed from fueling point on fuel truck and was ignited by an exhaust manifold inside truck shop
	12/16/07	Alaska Gold Company	Rock Creek Mine	2	gallons	Accidental overfill in truck #2
Gasoline	11/10/07	Alaska Mechanical Incorporated	Rock Creek Mine	0.5	gallons	Container tipped over in bed of pickup; cap loose on gas can
Hydraulic Oil	03/16/07	Alaska Mechanical Incorporated	Rock Creek Mine - Area 300 West	50	gallons	Metal fitting failed on hydraulic system on Grove Crane, causing hydraulic hose to leak under pressure
	07/13/07	Alaska Mechanical Incorporated/Alaska Gold	Rock Creek Mine	10 to 15	gallons	The crane swing lock pin punctured the hydraulic hose as crane was swinging
	07/24/07	Alaska Mechanical Incorporated	Rock Creek Mine	2	gallons	Ruptured hydraulic line on CAT 320 BL Excavator
	07/30/07	Alaska Mechanical Incorporated	Rock Creek Mine - East of Admin building	2	gallons	Ruptured hydraulic hose on Grove 55 ton Crane
	08/10/07	Alaska Mechanical Incorporated	Rock Creek Mine	4.5	gallons	Blown hydraulic line on CAT VR loader

Product Spilled	Date of Spill	Potential Responsible Party	Location	Quantity Spilled	Units	Cause of Spill
	08/24/07	Alaska Gold Company	Rock Creek Mine	2	gallons	Broken hydraulic line on CAT 320 backhoe
	11/07/07	Alaska Mechanical Incorporated	Rock Creek Mine	2	gallons	Blown hydraulic line on track hoe
	12/16/07	Alaska Gold Company	Rock Creek Mine	5	gallons	Keyway - Junction box came loose and fuel fitting at bottom of tank main fuel line
Transmission Fluid	08/22/07	Alaska Gold Company	Glacier Creek Borrow Pit	3 to 4	gallons	Broken fitting on CAT 980 loader transmission
Used Oil	08/08/07	Alaska Mechanical Incorporated	Rock Creek Mine	3.5	gallons	Drain line broke on used oil storage tank
	09/26/07	Alaska Gold Company	Rock Creek Mine	5	gallons	Drum of used oil tipped over while being transported
	12/19/07	Alaska Gold Company	Rock Creek Mine	0.5	gallons	Drum of used oil slid off trailer while transporting causing puncture

4 Activities at Big Hurrah

4.1 Summary of Activities

The current infrastructure and mining operations for the Big Hurrah site are shown on Figure 7. Two groundwater wells were constructed to test their potential for use as future dewatering wells. The wells were constructed on previously disturbed ground and no drill pad construction was required. A sump was excavated and used as a settling pond, which resulted in minor land disturbance. No other activities took place at the Big Hurrah site in 2007.

The quantities of ore mined and milled, topsoil stockpiled, development rock removed and the volume in the pit below the anticipated pit lake level at the end of year for the Big Hurrah site are shown in Table 8 for 2007 and planned for 2008. As shown, there were no milling or mining activities conducted at the Big Hurrah site in 2007. Mining of Big Hurrah was planned to begin in the third quarter of 2008. However, AGC will be conducting a review of its mine plan, including the development plan for the Big Hurrah site in mid to late 2008. The same mining techniques applied at the Rock Creek site will be employed at the Big Hurrah site. Mining for the 2008 season will terminate on the 70 meter bench and will resume in the second quarter of 2009.

Table 8: Mining and Milling Quantities at Big Hurrah

Description	Units	2007	2008 Plan ⁹
Mill Production	Tons	0	300,000
Topsoil Salvaged and Stockpiled	CY	0	26,160
Ore Mined	Tons	0	300,000
	CY	0	131,580
Non-PAG Development Rock	Tons	0	932,610
	CY	0	532,110
PAG Development Rock	Tons	0	76,800
	CY	0	43,820
Pit Volume Below Anticipated Pit Lake Elevation at End of Year	CY	0	0

⁹ The numbers shown in the table for the 2008 plan are those provided in the Plan of Operations, dated May 2006.

4.2 Disturbance and Reclamation

The areas disturbed and reclaimed at the Big Hurrah site in the previous year and planned for the current year are summarized in Table 9. The total disturbance up to December 31, 2007 is shown on Figure 7. The area disturbed in 2007 resulted from the excavation of a sump that was used as a settling pond.

Table 9: Areas Disturbed/Reclaimed at Big Hurrah

Year	Area (Acres)			
	Wetlands		Uplands	
	Disturbed	Replaced	Disturbed	Reclaimed
2007	0	0	0.005	0
Cumulative – End of 2007	0	0	13.9	4.6
Net – End of 2007	0		9.3	
2008 Plan	N/A	N/A	N/A	N/A

4.3 Development Rock Stockpiles

No development rock was removed from the Big Hurrah site in 2007.

4.4 Organics Stockpiles

There were no organics stockpiles constructed at the Big Hurrah site in 2007.

4.5 Treated Wastewater Injection

The treated wastewater injection system at the Big Hurrah site remains to be designed and permitted. Once the treated wastewater injection system is operational, the quantities of wastewater discharged to the injection wells will be reported.

4.6 Waste Management

The materials disposed during the year at the waste management facilities at the Big Hurrah site are listed in Table 10. As shown, no wastes were placed in the facilities regulated under the Waste Management Permit in 2007 at the Big Hurrah site.

Table 10: Materials Disposed at Waste Management Facilities at Big Hurrah

Location	Material	Quantity	Units
Non-PAG Development Rock Stockpile	None	0	N/A
PAG Development Rock Stockpile	None	0	N/A
Backfill of Satellite Pit	None	0	N/A
Inert Solid Waste Landfill	None	0	N/A

4.7 Reportable Spills

No spills were reported to occur at the Big Hurrah site in 2007.

4.8 Updates to Plan of Operations

There were no updates to the Plan of Operations in 2007. A review of the mine plan, including the development of the Big Hurrah site, will be carried out by AGC in mid to late 2008. Any resulting updates to the Plan of Operations will be submitted to the appropriate agencies for review and approval.

5 Monitoring

The Waste Management permit requires monitoring of surface water, groundwater, seepage, treated wastewater, development rock, tailings, recycle water, wildlife and regulated facilities. The monitoring activities conducted in 2007 are summarized in the following sections.

It should be noted that AGC retained SRK Consulting in 2007 to conduct a comprehensive audit of the baseline surface water and groundwater data collected at the Rock Creek and Big Hurrah sites. At the time this report was written, SRK had completed the audit of all the baseline surface water and groundwater data collected at the Rock Creek site, and all the baseline surface water and the 2007 groundwater data collected at the Big Hurrah site. An analysis of duplicate samples from 2007 of surface water and groundwater collected at both the Rock Creek and Big Hurrah sites was included as part of the audit. As a result of the audit, several samples were rejected from the database, as described in Sections 6.2 and 6.3.

5.1 Visual Monitoring

Weekly visual monitoring will be conducted once the facilities regulated under the permit are constructed and operational. Monitoring of erosion control structures and diversion structures commenced in July 2007 and continued in 2008 at the Rock Creek site in accordance with the SWPPP.

5.2 Surface Water Monitoring

5.2.1 Surface Water Monitoring at Rock Creek

Surface water samples were collected at stations in the Rock Creek area in 2007 as part of the baseline monitoring program. The sampling locations are shown on Figure 8 and Figure 9. Analyses included total and dissolved metals, total dissolved solids, total settleable solids, alkalinity, anions, mercury, cyanide, ammonia and phosphorous. Results of monitoring and the associated laboratory reports are located in Appendix B. The laboratory quality control data have been excluded from the reports in Appendix B, pursuant to ADEC instructions.

The locations sampled and the number of samples taken in 2007 are summarized in Table 11 (not including duplicates). There were no surface water samples taken in the first quarter of 2008 due to frozen conditions.

Table 11: Surface Water Locations Sampled at Rock Creek in 2007

Station		No. of Samples
<i>Rock Creek Project (North of Glacier Creek ,Figure 8)</i>		
GLAC	Glacier Creek East of Glacier Creek Road Bridge	4
LIND	Lindblom Creek East of Glacier Creek Road	4
RCK1A	Rock Creek Between Pit and Diversion Channel 1	4
RCK1B	Rock Creek Between Pit and Diversion Channel 1	4
RCK2	Rock Creek East of Glacier Creek Road	3
SABC	Snake River above Balto Creek	4
<i>Bonanza/Saddle Project (South of Glacier Creek, Figure 9)</i>		
ANV1	Anvil Creek Headwaters	1
ANV2	Anvil Creek North of Old Glacier Creek Road	2
ANV3	Anvil Creek South of Old Glacier Creek Road	2
ANV4	Anvil Creek North of Nome Teller Road	2
BOST	Glacier Creek at Boston Gulch Outlet	2
MARY	Mary Gulch, West Side of Bonanza Hill	2
Grand Total		34

All of the baseline surface water monitoring data has been provided in Appendix B. Following a quality assessment, samples were marked as either “Accepted” or “Rejected” under the column “Status”. A list of rejected samples, along with the reasons for rejecting the sample data are presented in Table 12. These samples will appear in this annual report only. They have been excluded from calculations and charts and will not appear in future reports. As part of the quality assessment of the data, an analysis of the 2007 duplicate samples is also provided in Appendix B.

Table 12: Rejected Surface Water Samples at Rock Creek

Station	Sample ID#	Date	Reason Rejected
LIND	1102	7/30/2003	Uncertain if sample is from this station
LIND	5212	11/19/2003	Uncertain if sample is from this station
ROCK	1104	7/30/2003	Uncertain if sample is from this station
SNBG or SRBG	5248	12/16/2003	Uncertain if sample is from this station
GLAC	5387	5/11/2004	Total and dissolved metals bottles or data appear to have been switched
Duplicate GLAC	DUPL 5954	1/16/2007	Collection station not recorded. Appears to be GLAC. No field documents

The results of the baseline surface water quality at the Rock Creek site were compared to the most stringent of the Alaskan standards for drinking, agriculture, aquaculture and industrial water supply, water recreation, propagation of fish, aquatic life and wildlife, and human health criteria for non-carcinogens. From these baseline data, it is evident that a number of parameters in the natural background surface water were higher than the state water quality standards including pH, aluminum, ammonia, antimony, arsenic, cadmium, iron, lead, manganese, selenium and molybdenum. A technical review of background water quality at the Rock Creek site will be carried out in 2008, at which time AGC will pursue natural condition-based water quality standards.

5.2.2 Surface Water Monitoring at Big Hurrah

No surface water monitoring was conducted at the Big Hurrah site in 2007 or in the first quarter of 2008. Results of prior monitoring conducted as part of the baseline monitoring program are included in Appendix C. The sample locations at the Big Hurrah site are shown on Figure 10. Analyses included total and dissolved metals, total dissolved solids, total settleable solids, alkalinity, anions, mercury, cyanide, ammonia and phosphorous.

All of the baseline surface water monitoring data has been provided in Appendix C. Following a quality assessment, samples were marked as either “Accepted” or “Rejected” under the column “Status”. None of the samples examined were rejected.

The results of the baseline surface water quality at the Big Hurrah site were compared to the most stringent of the Alaskan standards for drinking, agriculture, aquaculture and industrial water supply, water recreation, propagation of fish, aquatic life and wildlife, and human health criteria for non-carcinogens. From these baseline data, it is evident that a number of parameters in the natural background surface water were higher than the state water quality standards including aluminum, cadmium, iron, manganese, silver and zinc. A technical review of background water quality at the Big Hurrah site will be carried out in 2008 or 2009, at which time AGC will pursue natural condition-based water quality standards.

5.3 Groundwater Monitoring

5.3.1 Groundwater Monitoring at Rock Creek

The baseline groundwater monitoring program at Rock Creek site was continued in 2007. Analyses included total and dissolved metals, total dissolved solids, total settleable solids, alkalinity, anions, mercury, cyanide, ammonia and phosphorous. The associated lab reports are included in Appendix D. The laboratory quality control data have been excluded from the reports in Appendix D, pursuant to ADEC instructions.

Table 13 and Table 14 list the locations and quantities of samples taken in 2007 and the first quarter of 2008, respectively, not including duplicates.

Table 13: Groundwater Samples Taken at Rock Creek in 2007

Location		No. of Samples
IN-02	Above Development Rock Stockpile (NDRD)	1
MW06-10	Rock Creek – West of TSF	6
MW06-8A	South of TSF	6
MW06-8B	South of TSF	6
MW06-9A	Southwest of TSF	5
MW06-9B	Southwest of TSF	6
MW07-11	Below Stockpile #1	16
MW07-12	West side of Development Rock Stockpile (NDRD)	16
MW07-13	North side of Stockpile #1	13
PW-04	Between the limits of the mine pit and the causeway on the east side of the Rock Creek watershed	1
PW-08	Between PW-2 and PW-6 on the west side of the pit	3
Grand Total		79

Table 14: Groundwater Samples Taken at Rock Creek in 1st Quarter of 2008

Location		No. of Samples
MW03-01	Above TSF	1
MW03-05	West side of the TSF near the Lower South Diversion Channel	5
MW07-11	Below Stockpile #1	6
MW07-12	West side of Development Rock Stockpile (NDRD)	6
MW06-10A	Rock Creek – West of TSF	6
MW06-8A	South of TSF	6
MW06-8B	South of TSF	6
MW06-9A	Southwest of TSF	6
MW06-9B	Southwest of TSF	6
Grand Total		48

All of the baseline groundwater monitoring data is provided in Appendix D. Following a quality assessment of the groundwater data, samples were marked as either “Accepted”

or “Rejected” under the column “Status”. A list of rejected samples, along with the reasons for rejecting the sample data are presented in Table 15. These samples will appear in this annual report only. They have been excluded from calculations and charts and will not appear in future reports. As part of the quality assessment of the data, an analysis of the 2007 duplicate samples is also provided in Appendix D. It should be noted that training of site environmental staff on proper groundwater well sampling techniques was conducted by SRK Consulting in 2008.

Table 15: Samples Rejected from Groundwater Wells at Rock Creek

Station	Date	Reason Rejected
MW03-01	04/22/04	Total and Dissolved metals data or bottles appear to have been switched.
MW03-03	04/21/04	Dissolved sample appears to have been contaminated by Al, Cu, Pb, Sn. Too high to be explained by sample variability. Values are still low.
MW03-05	01/15/04	Total and Dissolved metals data or bottles appear to have been switched.
MW03-05	04/20/06	Dissolved Metals do not appear to be MW03-05. Looks more like MW03-06.
MW03-06	04/20/06	Either the Dissolved metals sample was contaminated, or the Total and Dissolved metals data or bottles were switched.
MW03-15	02/21/06	Looks more like this sample/data was switched with the 02/20/2006 sample of MW03-16.
MW03-16	02/20/06	This appears to have been switched with the 2/21/2006 sample of MW03-15.
MW07-10	11/21/07	Contaminated sample? Unusually high TSS sample for this station, resulting in high total metals and some elevated dissolved metals, particularly aluminum. Actual sample date was 11/20/07.
MW07-11	12/28/07	Appears that Total and Dissolved metals data or bottles may have been switched.
MW07-11	03/18/08	This is not a sample of MW07-11. Looks like MW07-12.
MW07-12	12/28/07	This is not a sample of MW07-12. Looks like MW07-11. Appears that Total and Dissolved metals data or bottles may have been switched.
MW07-12	03/18/08	This is not a sample of MW07-12. Looks like MW07-11.
MW07-12	01/25/08	Poor ion balance. Alkalinity is a bit low. Several Dissolved metals slightly high. Possible that Total and Dissolved metals bottles or data have been switched. Lab confirmed data was entered correctly.
MW07-13	10/18/07	Dissolved metals data is from MW07-12
MW07-8A	10/21/07	Total and Dissolved metals data or bottles appear to have been switched.
MW07-8A	11/06/07	Total and Dissolved metals data or bottles appear to have been switched. Lab confirmed that results were reported correctly (rerun results were same).
MW07-9A	11/06/07	Appears that Total and Dissolved metals data or bottles may have been switched. Lab confirmed that results were reported correctly (rerun results were same).
Duplicate MW03-01?	04/22/04	Is likely MW03-01. Total and dissolved metals data or bottles appear to have been switched. Differences in metal concentrations between sample and duplicate likely due to significant differences in TSS.

Station	Date	Reason Rejected
Duplicate MW06-8A?	11/25/07	Poor Duplication. Rerun confirmed results.
Duplicate MW06-8B?	10/21/07	Total and Dissolved metals data on bottles appear to have been switched. Lab confirmed that it is not a data entry error (rerun produced same results).
Duplicate MW06-9B?	09/11/07	TSS a bit high resulting in poor duplicate.
Duplicate MW07-12?	06/14/07	Uncertain if duplicate is from station indicated
Duplicate MW07-12?	06/26/07	Uncertain if duplicate is from station indicated
Duplicate MW07-12?	08/28/07	Uncertain if duplicate is from station indicated
Duplicate MW07-12?	12/28/07	Field sheets say duplicate was collected at MW07-11. Chemically, this is certainly MW07-12. None of the other samples collected on this date are actually MW07-12.
Duplicate MW07-13?	04/26/07	Uncertain if duplicate is from station indicated
Duplicate MW07-13?	09/07/07	This is not a duplicate of MW07-12 as indicated on Field Form. Looks like MW07-13.
Duplicate MW07-13?	10/18/07	Dissolved metals data is from MW07-12

Thirteen holes were drilled as pilot exploration wells for the potential future injection well program in 2007 by T & J Drilling Services. The wells were located to the east and north east of the proposed pit area in accordance with proposals approved by the State of Alaska regulatory authorities. The depths of the wells range from 100 to 300 ft in depth. Three of the wells, MW07-11, MW07-12 and MW07-13, were selected for groundwater quality monitoring, and have been sampled bi-monthly since July 2007 by AGC staff.

The results of baseline monitoring indicate levels of dissolved arsenic and manganese in groundwater at the Rock Creek site higher than the Alaskan water quality standards. Elevated levels of total metals, including aluminum, arsenic, cadmium, copper, iron, lead, manganese and zinc are also present. These elevated levels of total metals reflect the influence of naturally occurring elevated levels of these metals in the groundwater at the Rock Creek site. In late November 2007, AGC commissioned SRK to prepare a technical summary document of existing background/natural conditions of bedrock aquifers at the Rock Creek site. This work is in progress, and a draft report was submitted in April 2008 (SRK 2008). AGC is in the process of establishing alternative background water quality standards. In late November 2007, Alaska Gold Company commissioned SRK to prepare a technical summary document of existing background/natural conditions of bedrock aquifers at the Rock Creek site. This work is in

progress, and a draft report was submitted in April 2008 (SRK 2008). AGC is in the process of establishing alternative background water quality standards.

5.3.2 Groundwater Monitoring at Big Hurrah

The baseline groundwater monitoring was continued at the Big Hurrah site. Analyses included total and dissolved metals, total dissolved solids, total settleable solids, alkalinity, anions, mercury, cyanide, ammonia and phosphorous. The associated lab reports are included in Appendix E. The laboratory quality control data have been excluded from the reports in Appendix E, pursuant to ADEC instructions. Table 16 lists the locations and number of samples taken in 2007 (not including duplicates). There were no samples taken in the first quarter of 2008.

Table 16: Groundwater Samples Taken at Big Hurrah in 2007

Location		No. of Samples
HMW-3A	Big Hurrah – Downgradient of development rock facility	1
HMW-4A	Big Hurrah – Upgradient of the pit	1
HMW-5A	Big Hurrah – Monitor historical workings impact in/near pit	1
Grand Total		3

All of the groundwater monitoring data is provided in Appendix E. All of the baseline surface water monitoring data has been provided in Appendix E. Following a quality assessment of the 2007 data, samples were marked as either “Accepted” or “Rejected” under the column “Status”. None of the 2007 samples examined were rejected.

The results of baseline monitoring conducted thus far indicate levels of total iron and manganese in excess of the state water quality standards. Baseline data will continue to be collected and a technical review of the data will be conducted.

5.4 Seepage Monitoring

Water quality monitoring of seepage from the TSF and the development rock stockpiles will be conducted as facilities at the Rock Creek site become operational in mid-2008.

5.5 Wastewater Injection System

The treated wastewater injection systems were not operational in 2007 at either the Rock Creek or Big Hurrah sites. Once the groundwater injection systems are operational, treated pit dewatering wastewater will be monitored prior to injection to ensure the limits in Table 17 are met.

Table 17: Limitations on Wastewater for Groundwater Injection

Parameter	Maximum Effluent Concentration (µg/L)	Method	Monitoring Frequency
Antimony, total recoverable	6	EPA 200.8	Weekly
Arsenic, total recoverable	10	EPA 200.8	Weekly
Copper, dissolved	14	EPA 200.8	Weekly
Iron, total recoverable	100	EPA 200.7	Weekly
Manganese, total recoverable	50	EPA 200.8	Weekly
pH	6.5 to 8.5	EPA 150.1	Daily
Conductivity	NA	EPA 120.1	Daily
Chloride	250	EPA 300	Weekly
Cyanide – WAD	5.2	SM20 4500	Monthly
Cyanide – Total	200	SM20 4500	Monthly
Hardness	NA	EPA 130.1	Weekly
Nitrate	10	EPA 300	Weekly
Sulfate	250	EPA 300	Weekly
Temperature	NA	EPA 170.1	Daily
Total Dissolved Solids	500	EPA 160.1	Weekly
Flow	NA	Meter	Continuous

5.6 Cyanide Monitoring

5.6.1 Cyanide Monitoring of Tailings

Tailings from the cyanide leach process will be treated with a ferrous sulphate process for cyanide detoxification prior to disposal in the Tailings Storage Facility. These tailings will be tested to ensure they do not exceed the following WAD cyanide levels:

- At least 90% of the samples shall contain less than 10 mg/kg of WAD cyanide;
- None of the samples shall contain more than 25 mg/kg of WAD cyanide.

There were no paste tailings produced in 2007, therefore no results of monitoring are included in this report.

Although the permit specifies that the paste tailings be monitored for WAD cyanide in mg/kg, this can not be achieved. The leachate from the paste tailings will be monitored in accordance with standard procedures, and compared to the above-noted standards in mg/L.

5.6.2 Cyanide Monitoring of Recycle Water

The recycle water pond was not operational in 2007. Once operational, water contained in the water recycle pond will be tested to ensure it does not exceed the following WAD cyanide levels:

- At least 90% of the samples shall contain less than 10 mg/L WAD cyanide;
- None of the samples shall contain more than 25 mg/L WAD cyanide.

5.7 Geochemical Monitoring

5.7.1 Monitoring of Development Rock and Ore at Rock Creek

The results of geochemical monitoring of composite samples of development rock and ore at the Rock Creek site are presented in Appendix F. Three different sets of analyses are performed:

- A composite is created weekly of every tenth blast hole and analyzed for Paste pH, total Carbon, total Sulfur, Sulfur as Sulfate and neutralization potential (NP).
- A split of one of the weekly samples is analyzed on a monthly basis for the above parameters, in addition to siderite corrected neutralization potential and bulk rock chemistry; and
- A quarterly composite of the weekly blast hole composites is analyzed under the Meteoric Water Mobility Procedure.

The analyses of a number of samples were pending at the time this report was written. Results of the meteoric water mobility procedure are in progress and were not available at the time this report was written. Analysis of CaNP was not carried out on any of the development rock samples.

The Acid Potential (AP), Net Neutralizing Potential (Net NP) and ratio of NP:AP were calculated by SRK Consulting and are provided in Appendix F. The AP, Net NP and NP:AP ratio were calculated as follows:

$$AP = \text{Total Sulfur} - \text{Sulfur as Sulfate}$$

$$\text{Net NP} = \text{NP} - \text{AP}$$

$$\text{NP:AP ratio} = \text{NP/AP}$$

The NP/AP values are also represented spatially on figures located in Appendix F (note that locations shown in grey represent samples with pending data). The figures show the

drill holes for a given week, year and bench within the pit. A composite is created weekly of every tenth blast hole and the resulting NP/AP is assigned to all the blast holes for that week within the drill pattern shown on the drawings. Therefore, the assigned NP/AP value represents the acid generation potential of the rock (mixture of ore and development rock) at the particular location on the bench.

All samples indicated a strong excess of neutralization potential over acid potential and are therefore classified as having negligible acid generation potential. The ICP data showed elevated arsenic concentrations, which indicates a potential for leaching of this element.

5.7.2 Monitoring of Development Rock and Ore at Big Hurrah

There was no development rock removed at the Big Hurrah site in 2007, therefore no results of geochemical monitoring are presented in this report.

5.7.3 Monitoring of Tailings

There were no paste tailings produced in 2007, therefore no results of geochemical monitoring are included in this report.

5.8 Wildlife Monitoring

Numerous wildlife observations were made in 2007, including reindeer, moose, fox and muskoxen. There were no reported mortalities in 2007. Hazing was required on occasion and included the use of shotgun blasts. The current policy is to contact the Security Office when wildlife is observed. AGC will implement a formal wildlife tracking system in 2008 to document wildlife observations.

5.9 Additional Monitoring

The Waste Management Permit requires that ADEC be notified of any additional monitoring of influent, effluent, receiving water, air or solid waste in addition to those identified in the permit or more frequently than required. Additional monitoring includes:

- Hazardous wastes as required by the Resource Conservation and Recovery Act;
- Air emissions as required by Air Quality Control Minor Permit AQ0978MSS02;
- Meteorological data from site weather stations;
- Field turbidity and TSS monitoring as part of additional SWPPP requirements.

5.10 Updates to QAPP

The Quality Assurance Project Plan was reviewed in the first quarter of 2008. There have been no changes to the sampling procedures or quality assurance and control methods outlined in the QAPP in 2007, therefore no updates to the Plan were required.

6 Financial Responsibility

AGC posted a Reclamation Bond in the amount of \$6,844,700, which is backed by an Irrevocable Standby Letter of Credit between AGC and the Wells Fargo Bank. The current Reclamation Bond amount of \$6,844,700 was approved by the agencies in 2006 as sufficient for reclamation purposes based on the closure and long-term monitoring cost estimate after the final closure of both the Rock Creek and Big Hurrah sites.

As part of the annual financial review conducted by NovaGold, AGC concluded that the existing Reclamation Bond amount of \$6,844,700 remains sufficient to fund closure. No significant changes to mine operation or mine size are planned at this time. Reclamation activity costs remain consistent with those costs discussed and approved by the State in 2006. No new information exists to suggest reclamation costs have increased or will exceed those originally contemplated.

The reclamation plan will be updated annually during operations beginning in 2008. As indicated previously in this report, AGC will be completing a review of its Mine Plan, which could trigger updates to the Plan of Operations and Reclamation Plan.

7 References

- SRK 2008 *Rock Creek Groundwater Baseline Review*, SRK Consulting (US) Inc., April 2008
- Bristol 2006 *Rock Creek Project Annual Report 2006*, Bristol Environmental and Engineering Services Corporation, April 13, 2007
- AGC 2006 *Big Hurrah Project 2006 Annual Reclamation Report*, Alaska Gold Company
- AGC 2007 *Big Hurrah Project 2007 Annual Reclamation Report*, Alaska Gold Company

8 Abbreviations

ADEC	Alaska Department of Environmental Conservation
ADNR	Alaska Department of Natural Resources
EPA	Environmental Protection Agency
NP/AP	Ratio of neutralizing potential to acid potential
QA	Quality Assurance
QAPP	Quality Assurance Project Plan
SWPPP	Storm Water Pollution Prevention Plan
TSS	Total Suspended Solids
TSF	Tailings Storage Facility
UIC	Underground Injection Control
WAD	Weak Acid Dissociable