

MEMO

Date:	March 13, 2020
То:	File
From:	Richard Tuohey – Technical Services Superintendent Eagle Gold Project
Subject:	2019 Engineer of Record Summary Report for the Eagle Zone Open Pit

As identified in the Eagle Gold Project Water Management Plan Version 2020-01 with an effective date of January 2020, I am the designated Engineer of Record for the Eagle Zone Open Pit.

During the 2019 period, a total of 4.8 million tonnes (Mt) of material was removed from the open pit by standard drill, blast and haul methods. Of the material removed from the pit, 2.6 Mt was ore and 2.2 Mt was classified as waste rock.

The pit has been developed, and is performing, in accordance with the design intent, performance objectives and indicators, applicable guidelines, standards and legal requirements, and relevant clauses of the Type A Water Use License QZ14-041-1.

At December 31, 2019, the pit configuration was as shown in Figure 1. The majority of the pit wall developed was within the upper highly weathered rock mass. There have been localized relatively small wedge failures occurring along a well-defined shear zone in the upper benches; however, the wall stability is performing as per design. These localized failures were remediated and stabilized as they were encountered with the use of excavators and dozers.

The configuration of the open pit at the end of 2019 did not include any final pit walls and all planned operational requirements were achieved.

There are currently no plans, nor requirement, to conduct any major maintenance work within the open pit in 2020.

The is currently no damaged or faulting monitoring or control equipment associated with the open pit and thus no requirement to repair or replace any equipment.

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MEMO

Date:	March 13, 2020
То:	File
From:	Richard Tuohey – Technical Services Superintendent Eagle Gold Project
Subject:	2019 Engineer of Record Summary Report for the Platinum Gulch Waste Rock Storage Area (PG WRSA)

As identified in the Eagle Gold Project Water Management Plan Version 2020-01 with an effective date of January 2020, I am a designated Engineer of Record for the Waste Rock Storage Areas associated with the Eagle Gold Project.

During the 2019 period, a total of 4.8 million tonnes (Mt) of material was removed from the Eagle Zone open pit by standard drill, blast and haul methods. Of the material removed from the pit, 2.2 Mt was classified as waste rock which was subsequently placed in the PG WRSA. Waste rock was deposited on the 1255 and 1185 lifts of the WRSA.

At December 31, 2019, the PG WRSA configuration was as shown in Figure 1.

The PG WRSA has been developed, and is performing, in accordance with the design intent, performance objectives and indicators, applicable guidelines, standards and legal requirements, and relevant clauses of the Type A Water Use license QZ14-041-1.

The configuration of the WRSA at the end of 2019 achieved all planned operational requirements. There are currently no plans, nor requirement, to conduct any major maintenance work within the PG WRSA in 2020.

The is currently no damaged or faulting monitoring or control equipment associated with the PG WRSA and thus no requirement to repair or replace any equipment.

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November 19, 2019 Project No.: 0792026

Mark Ayranto, Executive VP Strata Gold Corporation Suite 1000 - 1050 West Pender Street Vancouver, Canada V6E 3S7

Dear Mark,

Re: Eagle Gold Heap Leach Facility – Annual Inspection

1.0 INTRODUCTION

1.1. General

BGC Engineering Inc. (BGC) was retained by Strata Gold Corporation's (SGC) to carry out an annual geotechnical inspection of the Heap Leach Facility (HLF) at the Eagle Gold Mine located in Yukon Territory, Canada. SGC is a directly held, wholly owned subsidiary of Victoria Gold Corporation. The general site layout of the HLF is shown on Figure A1 in Appendix A.

This annual inspection work was carried out in general accordance with the BGC proposal P19213, dated July 12, 2019. BGC is the Engineer of Record (EoR) for the HLF and has been involved with final design and construction oversight. As-built and construction completion reports will be completed by BGC under a separate scope. The timing of this initial inspection of the HLF allows for establishing roles and responsibilities for maintenance and surveillance of the facility and for collecting baseline data for monitoring efforts going forward. Going forward, the annual inspections will normally be conducted by July 1.

The inspection took place over 2 days on site and was in general conformance with the monitoring plan outlined in the Operations, Maintenance, and Surveillance (OMS) Manual. The scope of this annual dam inspection work was limited to:

- Visual inspection of the HLF and dam by the EOR, including taking appropriate photographs of the observed conditions
- Review of routine inspection records prepared by operating personnel in the past year
- Review of instrumentation and monitoring data
- Evaluation of the structural performance of the embankment and related components and identify any potential safety deficiencies or recommended items that need to be addressed in the coming year

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- Review of construction records, quality assurance and quality control (QA/QC) data and as-built information on facility construction
- Evaluation of the OMS Manual to assess the need for updating
- Interview of the Victoria Gold HLF Operations Manager and a close out meeting after the site inspection to discuss the findings.

During the course of the site reconnaissance, check list type inspection forms were completed, documenting the visible condition of each of the above noted structures at the time of the site visit. The inspection forms are included in Appendix B. In addition, several photographs were taken of each of the above-mentioned structures, a selection of which are presented in Appendix C. The approximate location and orientation of the photos taken are shown on Figures A2 and A3 in Appendix A. The inspection record includes recommendations for follow-up actions, where required. Given the limited operational duration at the time of inspection the focus was on HLF start-up issues and early phase operational planning as they might affect the performance or integrity of the facility.

1.2. Background

The Eagle Gold Mine is an open pit gold mine and heap leach operation. The Eagle Gold Heap Leach Facility (HLF) consists of an embankment that lies across the Ann Gulch valley about 200m upstream of the confluence with Dublin Gulch. The ore is stacked behind an embankment within Ann Gulch. The embankment provides confinement of the crushed ore and creates an In-Heap Pond for temporary storage of pregnant solution, which is pumped to the recovery plant.

The major design components for the HLF include the following: the embankment; a composite liner system; the In-Heap Pond; solution recovery wells; associated piping network for solution collection and distribution; a leak detection and recovery system (LDRS); and a downstream Event Pond to contain excess solution that could result from extreme precipitation or emergency events. An overflow spillway connects the HLF In-Heap Pond to the Event Pond and an emergency spillway allows overflow from the Event Pond to environment. Figure A-1 presents an aerial photograph of the site provided by SGC and taken September 16, 2019.

The HLF will be progressively developed in phases: one phase during initial construction (pre-mining), and subsequent phases during mining operations as needed to provide HLF pad space for ore stacking operations. The HLF will occupy an area of 106 ha and contain about 86 MT of crushed ore at the end of the facility life.

Construction of Eagle Gold Mine Phase 1A HLF was completed by September 2019 with initial operations starting in July 2019 by stacking and leaching of ore in lower pad area while the upper pad area was completed. Phase 1B will extend the pad liner from the current limit of 990m elevation to the Phase 1 interceptor ditch at approximate elevation 1050m.

The HLF pad consists of two liner systems, the up-gradient liner system and the in-heap pond liner system. The single composite liner system in the upper portion of the pad (above the in-heap solution storage area) is comprised of a double-side textured 80 mil linear low-density, polyethylene (LLDPE) liner over a geosynthetic clay liner (GCL) system. The double composite

liner system in the lower portion of the pad (forming the in-heap solution storage area) is comprised of two discrete layers of LLDPE liner, separated by a layer of geonet material to form the LDRS, over a GCL system.

The In-Heap Pond (essentially a saturated zone within the lower extent of the HLF ore pile) at the spillway invert elevation of 937.5 m) contains up to 126,800 m3 of solution within the pore spaces of the stacked ore. Typical In-heap Pond occupied operational volume will be about 52,200 m3 (minimum volume and elevation to keep the sump full and prevent pump cavitation plus the gradation of moisture content above the operational level that would be expected under normal conditions), which is about 40% of the total capacity within the In-Heap Pond itself. Storage of PLS in the In-Heap Pond is a cold-weather mitigation and has the added benefit that PLS will not be exposed during normal operations.

Process (barren) solution containing cyanide will be applied to the ore via a drip irrigation system (buried during winter). The resultant PLS will be captured in the solution collection system and flow to the In-Heap Pond. The PLS will be recovered via a well system using pumps and standpipes. The PLS is transferred to the ADR plant for gold recovery. The heap leach pad is constructed with a network of pipes that will be distributed throughout the limits of the facility at the base of the ore pile. This pipe network will collect and convey PLS and any infiltrated stormwater to the In-Heap Pond area where it will be pumped to the process plant via the solution collection wells. The pipe network was designed to accommodate stormwater volume from a 100-year, 24-hour storm event in addition to 150 percent of the design capacity of the anticipated PLS solution flow (150 percent PLS flow + 100-year, 24-hour storm event).

Process (barren) solution containing cyanide will be applied to the ore via a drip irrigation system (buried during winter). The resultant PLS will be captured in the solution collection system and flow to the in-heap solution pond. The PLS will be recovered via well system using pumps and standpipes. The PLS is transferred to the adsorption/desorption recovery (ADR) plant for gold recovery.

The downstream Events Pond serves as an overflow containment area that provides additional solution storage in case the In-Heap Pond capacity is exceeded. The Events Pond is sized to provide containment storage for the Probable Maximum Flood (PMF) Event assuming the In-Heap Pond solution storage is at maximum capacity. As designed, the Events Pond has an operational storage capacity of approximately 299,900 m3 to the spillway invert at elevation 894.5m.

Inspection and monitoring systems are included in the HLF to assess the ongoing performance of the facility. The In-Heap Pond fluid levels are monitored using a network of vibrating wire piezometers. The Events Pond fluid levels are monitored visually with level gauges or survey.

Liner Integrity is monitored by regular inspection flows into the LDRS monitoring sumps for both the In-Heap Pond and the Events Pond. The HLF design includes an underdrain system for the collection and drainage of subsurface water beneath the lined facility to limit upward pressure on the HLF liner. The underdrain system conveys subsurface flows to a monitoring vault. Flows reporting to the monitoring vault can either be released to environment or pumped back to the plant for make-up water.

The HLF confining embankment has been classified as a high hazard dam. A full description of the HLF design criteria and the currently defined monitoring approach is presented in the Operation, Surveillance and Maintenance (OMS) manual (SrataGold, 2019). Embankment integrity is monitored using a network of survey monuments and inclinometers. Dam safety inspections are required annually by the Engineer or Record (EOR) and more comprehensive dam safety review is required by a qualified third-party every five years.

The parameters and criteria presented in Table 1-1 below form the basis of design for the HLF taken from the OMS Manual (SGS, 2019).

Heap Leach Facility	Criteria
Mine Life	10 years
Life of Mine Ore Quantity to be Stacked on the Heap Leach Pad	86 MT
Crushing Rate, stages	Average of 10.8 Mt/a of crushed ore over a 275-day crushing and stacking season. Three-stage crushing to 6.5 mm (P80) - primary crushing 365 days (29,500 tpd), secondary/tertiary 275 days per year (39,154 tpd)
Leach pad type	Permanent, multiple lift
Initial stacking capacity	Minimum of 2 years for Phase 1 pad
Stacking Rate	Approximately 40,000-45,000 tpd
Stacking method	Conveyor-stacker
Stacked dry density of ore	Initial - 1.70 t/m³
Stack/lift height	Nominal 10 m lifts
Overall slope angle of stacked ore	2.5:1 (H:V), 22 degrees
Ore Setback	5 m from perimeter road 10 m from dam
Ore solution storage	0.137 m ³ of solution per m ³ of ore
Leach schedule	365 days per year
Solution application method	Drip emitters (buried during cold weather operations)
Solution application rate	10 l/hr/m ² (7 L/hr/m2 nominal operations application rate)
Leach cycle time	90-day primary leach (45-day primary leach planned for operations)
Solution application flow	1,500 m3/hour nominal operations rate, additional capacity available for additional dynamic storage purposes
Geotechnical Stability	Criteria
Design Basis Earthquake (DBE)	PGA = 0.25g (1 in 2475-year return period
Maximum Design Earthquake (MDE)	PGA = 0.35g (corresponds to the Maximum Credible Earthquake or MCE event)
Minimum embankment Factor of Safety	Static Loading - 1.5 (impounding),1.3 (non-impounding), Seismic Loading - 1.0 (pseudo-static)
Permafrost	Ice-rich materials encountered in the pad or pond foundations, if thaw unstable, will be removed.

Table 1-1. E	Engineering	design	criteria.
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Heap Leach Facility	Criteria			
Confining Embankment	Criteria			
General	To provide stable confinement of the ore and in-heap storage of solution.			
Overflow spillway	Sized to pass the PMF peak flow with 0.5 m of freeboard assuming heap storage is at capacity at the start of the event.			
Groundwater	Criteria			
General	A drainage system is required beneath the liner system to control groundwater pressures. The system is to collect and monitor groundwater in a controlled manner before discharge downslope of the containment embankment if discharge criteria are met.			
Pad Liner System	Criteria			
Overliner Drain Fill (ODF)	Crushed clean rock to provide a free draining layer under the placed ore and to protect the lining system from damage by ore placement while not impacting the conveyance of solution to the recovery wells. ODF will consist of a minimum 1.0 meter thickness (within the In-Heap Pond, minimum of 0.6 m otherwise) of minus 38 mm clean durable rock with less than 20 percent passing the No. 4 ASTM sieve size, and less than 5 percent fines passing the No. 200 ASTM sieve size and minimum in place hydraulic conductivity of 2x10- 4 m/s.			
Geosynthetic (geomembrane) liner	Suitable liner material to provide required puncture resistance, elastic strain range and resistance to solution attack and chemical breakdown along with cold weather performance for the Project's climate conditions (refer to LLDPE project standard specifications).			
Geosynthetic Clay Liner (GCL)	Geosynthetic clay liner below the geosynthetic liner to provide a composite liner to minimize leakage. Objective maximum permeability 1 x 10-5 cm/s or 1 x 10-6 cm/s in the absence of a leachate detection and removal system.			
Leak detection and recovery system (LDRS)	A system within the In-Heap Pond and Events Pond to collect leakage through the composite liner and convey it to monitoring points. The system to comprise geonet or similar synthetic drainage product to collect and convey any leaked solution to a gravel filled sump and pumping system.			
LDRS monitoring	Monitoring of the flow into the LDRS to ensure that allowable rates (determined by permitting authorities) are not exceeded.			
Solution Recovery Wells	Criteria			
General	Solution is to be recovered from the heap through inclined well casings equipped with submersible pumps installed in the In-Heap Pond solution storage area along the upstream dam slope. Adequate access for installing and recovering pumps from well casings will be provided on the dam crest.			

Heap Leach Facility	Criteria
Events Pond	Criteria
General	The purpose of the Events Pond (constructed downstream of the embankment) is to temporarily store excess inflows that cannot be stored in the In-Heap Pond. Any overflow into the events pond will be evacuated, and used as make-up water, as fresh ore is added to the HLF. During the initial heap operation, the Events Pond may also be used as temporary storage for make-up water. Otherwise, the Events Pond will be kept dry.
Overflow spillway	Sized for routed PMF peak flow with 0.5 m of freeboard.
Storage Capacity	Sized to contain the runoff volume from the PMF event assuming the In-Heap Pond is full.
Liner system	Lining to comprise a double composite geosynthetic liner system with LDRS

Note:

1. Typical industry standard for heap leach draindown storage capacity is 24 to 48 hrs. A more conservative draindown duration of 72 hrs was chosen for Eagle Gold to allow for contingency related to pump replacement in the PLS inclined riser system.

2.0 CONSTRUCTION FOLLOW-UP ITEMS

The Phase 1A HLF construction was managed by JDS Energy and Mining (JDS) with the work completed by various contractors and sub-contractors. BGC performed on-site QA and engineering during construction of Phase 1A of the HLF. These services were performed between September 2017 and June 30, 2019. Off-site engineering support was also performed by BGC intermittently throughout this time period. All documentation related to this work is compiled in a construction completion report (BGC, September 2019).

BGC demobilized from the site on June 30, 2019 and noted a few pending construction items to be completed (email correspondence with JDS). Table 2.1 presents the pending items identified by BGC in June and the current status.

At the time of BGC's demobilization from the construction project, the Overliner Drain Fill (ODF) was advanced to approximate elevation 938 m on the Phase 1A pad and dam slope. SGC accepted the responsibility of construction oversight and quality assurance for the pregnant leach solution (PLS) pipework and ODF placement after June 30, 2019 (email correspondence with SGC). At the time of the annual inspection the PLS pipework and ODF had been advanced to about 965 m to 970 m elevation. Based on discussions with SGC personnel, BGC understands overliner system construction on the upper Phase 1A pad will continue as the ore pile advances.

SGC should provide confirmation and acceptance that the PLS pipework is installed per the project specifications and that ODF material produced meets the requirements of the project

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specifications and/or design intent and that ODF placement is performed in a manner protective of the HLF liner system. Potential consequences of incomplete or improper installation of overliner components include damage to the liner, elevated fluid levels over the liner, increased leakage through the liner system, and ore pile or embankment instability.

Freezing temperatures can cause geomembrane liner to crack when impacted or loaded. Section 3.8.1.2 of the project technical specifications (BGC January 8, 2018) addresses placement of Overliner Drain Fill (ODF) on the installed liner. Cold weather installations should follow guidelines as outlined in GRI GM9: *Standard Practice for Cold Weather Seaming of Geomembranes.* A geomembrane sheet temperature of minus 10 degrees C (14 degrees F) is the lower limit that ODF should be placed on the geomembrane. Any liner left exposed over the winter should be thoroughly inspected by qualified personnel prior to covering with ODF.

No.	Item	Status	Notes
1	Event Pond permanent pump installation	Complete	Tsurumi LH675 on wheeled skid
2	Completing casing stickup on three standpipe piezometers on the embankment crest and installation of vibrating wire instruments.	Complete	See Photo 23
3	Pad cell piezometer installation.	Pending	See Drawing EGHLF-XD-09-02 in BGC (January 8, 2018)
4	Instrument transmitter node post construction and placement in the field.	Partially Complete	Complete: Geokon Sensor Nodes at HLF Embankment and Event Pond Pending: Barometer and Sensor Node on HLF Pad
5	Instrument setup for continuous data download.	Pending	
6	Event Pond ballast selection and installation.	Pending	See Drawing EGHLF-XD-07-01 in BGC (January 8, 2018)
7	Installation of signage to mark underdrain discharge locations.	Pending	
8	Minor regrading of the north Event Pond perimeter road.	Complete	
9	Final tie-in of HLF underdrains to monitoring vault and frost protection of exposed pipes	Complete	See Photos 10 and 11

Table 2-1.	Construction	follow-up	items.
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3.0 2019 ANNUAL INSPECTION

3.1. Site Reconnaissance

The 2019 inspection was completed by Mr. Troy Meyer, P.Eng. of BGC on October 2 and 3, 2019. Mr. Matt Mock of SGS was present during a portion of the full inspection on October 2.

3.1.1. Heap Leach Facility

The visual inspection of Heap Leach Facility (HLF) was conducted on October 3, 2019. The downstream slope of the dam has been smoothed and covered with a layer of growth medium in preparation for reclamation. The upstream slope is double lined with geomembrane with a leak detection layer between the liners which conveys any leakage through the top liner to the LDRS sump. The top liner is covered with drainage gravel and the ore has been stacked to the elevation of the spillway invert (approximately 937.5 m) and an additional lift of ore was being stacked to the 945 m elevation at the time of the inspection. A crushed ore transport system consisting of mobile "grasshopper" conveyors and a radial stacker is utilized for the stacking operations. Some limited truck haulage and placement of Run-of-Mine (ROM) ore with 40-ton articulated trucks was being done along the western portion of the Phase 1A pad at the time of this inspection.

The site inspection included walking along the HLF embankment crest, downstream toe, and portions of the upstream pad area, as well as observing the respective abutments, spillway, diversion channel and outlets of the underdrain pipelines. The Event Pond was inspected by walking along the south embankment toe, up the emergency spillway and around the pond crest.

At the time of the visual inspection, water was not being discharged to the environment from the HLF underdrain flows but was being pumped back into the process circuit. Flows were apparent in underdrains #1, 2 and 5 which collect seepage under the Phase 1 HLF. No discharge was observed from underdrains #3 and 4, which are blank pipes installed in reserve for future phases of the HLF. The underdrain pipes are numbered from east to west (Figure A2 and Photo 11).

Some unevenness, most likely caused by vehicle traffic, was visible on the dam's crest near the PLS risers, with ponding apparent (Photo 13). A few minor surface erosion gullies (Photo 11), which appear to be caused by rainfall runoff, were observed on the downstream slope of the underdrain containment area. BGC recommends that SGC place additional coarse fill on the dam crest to limit ponding and construct a small berm along the crest of the underdrain containment area.

Based on discussions with SGC personnel, BGC understands the PLS pipeline, which is currently positioned on the HLF dam crest (Photo 19), will be repositioned down onto the ore at elevation 937.5 m in order to provide better containment and protection of the dam in case of a spill. BGC also understands that the ROM ore ramp placed near the western HLF dam abutment (Photo 21) will be regraded to provide more space between the fill and the spillway culvert entrance. BGC recommends a minimum 5 m setback to ensure free flow into the culverts. A 10 m setback is required between the dam crest and the ore pile toe per the construction documents (BGC, January 8, 2018).

Moderate cracking was observed on the HLF spillway access road (Photo 3). These cracks were not apparent in June 2019 during routine construction inspection by BGC personnel. The cracks are up to 2 cm wide and about 10 m long. The cracks do not pose a threat to the HLF embankment but could affect the access road and possibly the HLF spillway if not mitigated. BGC recommends mitigation of this area by excavating a trench along the toe of the access road fill down to

competent frost-free material and placing imported fill (structural or rock fill) into the trench and onto at least the bottom half of the access road slope to form a buttress. BGC can provide engineering guidance and oversight for the work. SGC should document this work and report back to BGC and this area should be monitored during routine HLF inspections by SGC personnel.

Other than the observations indicated above, the dam, emergency spillway, and the outlets of the discharge pipelines, based on the visual inspection, were observed to be functional and in good condition. A summary of recommended maintenance and monitoring action items is presented in Section 3.4.

3.1.2. Event Pond

The visual inspection of the Event Pond and associated HLF Spillway and Emergency Spillway was conducted on October 3, 2019.

Minor cracking was observed along the crest of the south embankment of the Event Pond (Photo 6). This was compared to construction records (BGC, September 2019) it appears the crack were first observed by BGC personnel in June 2019. The cracks do not appear to have expanded in width or length over that time period. BGC recommends continued monitoring of these cracks.

Minor cracking and settlement was observed along the Event Pond access road adjacent to the emergency spillway outfall (Photo 8). The affected area is located well outside the toe limits of the Event Pond embankment but could affect the access road and emergency spillway outfall. BGC recommends placement of additional fill to bring the area back to design grade. SGC should document this work and report back to BGC and this area should be monitored during routine HLF inspections by SGC personnel.

The perforated pipe drain that collects seepage along the HLF spillway was not flowing at the time of the inspection. Flow was not observed at the assumed location of the Event Pond underdrain outlet. This outlet should be located by survey and clearly marked with signage.

BGC recommends that wind uplift ballast be installed on Event Pond liner. The pond is currently being used for temporary water storage. It is BGC's understanding that the Event Pond will normally be kept empty after start-up operations are complete. Ballast should be installed according to the design documents (BGC, January 8, 2018) as soon as the pond is emptied to prevent liner damage from wind. BGC can provide guidance for selection of equivalent ballast options.

3.2. Monitoring

Three standpipe piezometers were installed through the HLF dam crest in 2018. BGC supervised the installations and issued a report with well logs (BGC, June 27, 2018). SGC installed vibrating wire piezometers in the standpipes in early August 2019. Table 3-1 presents the most recent readings converted to water level for each piezometer. Piezometer P1 was installed into the dam

foundation bedrock and Piezometers P2 and P3 were installed in the dam fill just above the western and eastern underdrains, respectively. Piezometers P2 and P3 have been reportedly dry since installation. The water level in P1 reflects groundwater in the fractured and weathered bedrock foundation. The well log for P1 indicates a bedrock contact elevation of about 899.5 m. The water level readings since mid-August for P1 are presented in Figure 3-1 and reflect a general downward trend.

An inclinometer casing was also installed through the HLF dam crest and details are presented in BGC (June 27, 2018). SGC is currently in the process of procuring a portable inclinometer probe (as recommended by BGC) for obtaining data. BGC recommends initial readings be collected before end of year and the data be sent to BGC for verification of validity for use as baseline data for comparison with future readings.

ID	Water Depth (m)	Piezo Tip Elevation (m)	Water Elevation (m)
P1	6.656	885.0	891.7
P2	0.0	905.0	DRY
P3	0.0	915.0	DRY

Table 3-1. HLF embankment piezometer readings.



Figure 3-1. Piezometer P1 readings.

The HLF In-Heap Pond elevation was at approximate elevation 923.6 m, based on readings provided by SGC. Readings are obtained using an instrument installed in the inclined Pregnant Leach Solution (PLS) riser pipe. This elevation is approximately 13.9 m below the HLF spillway invert and approximately 12.1 m above the bottom of the PLS sump. The water level in the Leak Detection and Recovery System (LDRS) sump was approximately 909.7 m. This elevation is approximately 1.2 m above the bottom of the LDRS sump. Readings are obtained using a sounding tape in the inclined PLS and LDRS riser pipes.

The Event Pond elevation was at approximate elevation 886.5 m, based on survey data provided by SGC. This elevation is approximately 8.0 m below the Event Pond emergency spillway invert. The water level in the LDRS sump was approximately 879.4 m. This elevation is approximately 0.4 m above the bottom of the LDRS sump. Readings are obtained using a vibrating wire piezometer in the inclined LDRS riser pipe.

Based on conversations with SGC personnel, the HLF and Event Pond LDRS sumps are pumped out once per week regardless of readings. BGC recommends the LDRS sumps be evacuated based on observation of LDRS sump water level readings. Generally, sumps should be pumped prior to the water level reaching 0.5 m above the bottom of the LDRS end of pipe elevation. This

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will limit the hydraulic head on the bottom liner. Pumped flow volumes and water level readings should be recorded per the OMS manual.

3.3. HLF Operations, Maintenance and Surveillance Manual

An updated Operation, Maintenance and Surveillance (OMS) Manual (Rev.2019-03), dated June, 2019 was prepared by SGC and presents roles and responsibilities, reference documents and reports, HLF description, operation, design basis, maintenance, dam surveillance program, emergency identification and evaluation, and emergency planning and response. The OMS Manual accounts for the initial construction phase and startup operations and includes the details of the facility layout, current SGC personnel, and the HLF operational plan. Updates to the OMS Manual are not needed at this time.

3.4. 2019 Recommendations

Table 3-2 provides a summary of our recommended maintenance and monitoring action items for the HLF. These recommendations are based on a review of the pending construction items and construction records report (BGC, September 2019), and our October 2019 site inspection.

As discussed in Section 3.1.2, BGC recommends remediation of two areas that require minor earthworks and engineering review. This work should be completed as soon as practicable and prior to winter includes 1) HLF upper spillway access road slope, and 2) Event Pond access road adjacent to emergency spillway outfall.

BGC recommends ballast be installed according to the design documents (or equivalent) as soon as the pond is emptied to prevent liner damage from wind. Evacuation of the LDRS sumps should be based on water level readings, as discussed in Section 3.2.

Other action items listed on the inspection forms in Appendix B indicate areas that should continue to be monitored, but do not require specific action at this time.

	Maintenance/Monitoring Actions Required ⁽¹⁾				
Name of Structures	Routine Monitoring/ Maintenance	Increased Monitoring/ Maintenance	Remediation and Engineering Review Necessary	Recommendations	
Heap Leach Facility (HLF)	Yes	-	-	 Continue the routine inspection and monitoring of the dam, abutments, emergency s pad liner, PLS and barren pipes, monitoring wells (P-1, P-2, P-3), and pond level at Document all unusual/adverse conditions observed, as well as maintenance work us Install pad cell piezometers per BGC (January 8, 2018) Drawing EGHLF-XD-09-02 Install barometer and remaining Geokon sensor nodes and set up system for autor Collect initial inclinometer reading in casing INC-1. Evacuate the LDRS sump based on water level readings (no greater than 0.5m about the dam crest to limit ponding and construct a small be to direct surface water flows to the west edge of the monitoring vault area. Install signage to clearly mark the HLF east underdrain outlet. 	
Event Pond (EP)	Yes	-	-	 Continue the routine inspection and monitoring of the embankment, abutments, po OMS manual. Document all unusual/adverse conditions observed, as well as maintenance work to Select and install wind ballast per BGC (January 8, 2018) Drawing EGHLF-XD-07- Evacuate the LDRS sump based on water level readings (no greater than 0.5m about 10.5m about 10.5m	
HLF Spillway	Yes	-	Yes	 Continue the routine inspection and monitoring of the spillway armoring, adjacent current OMS manual. Document all unusual/adverse conditions observed, as well as maintenance work use Remediation of the apparent slope creep at the upper HLF spillway access road. 	
Emergency Spillway	Yes	-	Yes	 Continue the routine inspection and monitoring of the spillway armoring, adjacent current OMS manual. Document all unusual/adverse conditions observed, as well as maintenance work use Remediation of the settlement and cracking along the access road adjacent to the settlement and cracking along the access road adjacent acces	

Table 3-2. Recommended maintenance and monitoring action items – 2017 Annual Dam Inspection.

Note:

1. Items that require action are denoted by "Yes" ; Items that do not require action are denoted by "-"

spillway, discharge outlet areas, LDRS sump, PLS sump,
s per the current OMS manual.
undertaken.

- 2.
- omatic data collection.
- bove bottom end of LDRS pipe should be allowed).
- berm along the crest of the underdrain containment area

ond liner, LDRS sump, and pond level as per the current

- undertaken.
- **-**0.
- bove bottom end of LDRS pipe should be allowed).

nt access road, seepage collection pipe outlet as per the

undertaken.

t access road, seepage collection pipe outlet as per the

undertaken.

spillway outfall area.

4.0 CLOSURE

BGC Engineering Inc. (BGC) prepared this document for the account of Strata Gold Corporation. The material in it reflects the judgment of BGC staff in light of the information available to BGC at the time of document preparation. Any use which a third party makes of this document or any reliance on decisions to be based on it is the responsibility of such third parties. BGC accepts no responsibility for damages, if any, suffered by any third party as a result of decisions made or actions based on this document.

As a mutual protection to our client, the public, and ourselves, all documents and drawings are submitted for the confidential information of our client for a specific project. Authorization for any use and/or publication of this document or any data, statements, conclusions or abstracts from or regarding our documents and drawings, through any form of print or electronic media, including without limitation, posting or reproduction of same on any website, is reserved pending BGC's written approval. A record copy of this document is on file at BGC. That copy takes precedence over any other copy or reproduction of this document.

Note the conclusions provided herein will change as the recommended maintenance measures are undertaken.

In conformance with BGC's engineering practices procedures, this report has been reviewed by Michael Henderson P.Eng., Principal Geotechnical Engineer, of BGC.

We trust the above satisfies your requirements at this time. Should you have any questions or comments, please do not hesitate to contact us.

Yours sincerely,

BGC ENGINEERING INC. per:

Ja Ma

Troy Meyer, P.Eng. Principal Geotechnical Engineer

TM/MH/wn/mm

REFERENCES

- BGC Engineering, Inc. (2018, January 8). Eagle Gold Project Heap Leach Facility Detailed Design.
- BGC Engineering, Inc. (2018, June 27). 2019 Eagle Gold HLF Dam Instrumentation, Letter Report.
- BGC Engineering, Inc. (2019, September). Eagle Gold Project Construction Summary Report for Phase 1A of the Heap Leach Facility.

APPENDIX A AERIAL PHOTOS



Figure A1 Site Aerial Photograph (provided by Strata Gold Corp and taken September 16, 2019)

BGC ENGINEERING INC.



Figure A2 Inspection Photo Map for HLF



Figure A3 Inspection Photo Map for Event Pond

APPENDIX B INSPECTION FORMS



2019 Annual Inspection Eagle Gold Mine Heap Leach Facility Victoria Gold Corporation

Project Number:	0792026	Page 1 of 2	
BGC Representative:	Troy Meyer	Date: October 3, 2019	
STRUCTURE:	Designation: Heap Leach F Pond Elevation: Downstream Pond Elevation:	Facility Crest Elevation: 940 m 918 m Spillway Invert El: 937.5 m - Notes: Dam crest and spillway invert elevations were based on construction records. Pond elevation was for in-hear PLS pond based on piezometer reading.	ap
CREST		OBSERVATIONS (provide description if apparent as notes)	Action Required
Cracking Settlement/Uneven Erosion Sinkholes Other Movement Crest Vegetation Comments:	X not apparent not apparent apparent X apparent X not apparent apparent apparent X not apparent apparent X not apparent apparent	Notes: Minor unevenness on the crest and one area with ponded water Notes: Notes: Notes: Sparse moderate heavy Notes:	N N N N N N Y
DOWNSTREAM SLC	PE AND TOE AREA	Approximate Slope Angle: 2.5H:1V	N
Slope Visually Uniform Erosion Settlement/Uneven Bulging/Cracking Sloughing Slope Protection Animal Burrows Slope Vegetation	Xyesnonot apparentXapparentXnot apparentapparentXnot apparentapparentXnot apparentapparentXnot apparentapparentXnot apparentapparentXnot apparentapparentXnot apparentapparentXnot apparentapparentXnot apparentapparentXnot apparentapparent	Notes: Minor erosion at underdrain containment berm just upsream of monitoring vault Notes:	N N N N N N N N N
Seepage Location of Seepage: Estimated Rate: Apparent Clarity:	X not apparent apparent damp trickle clear muddy	Notes: Steady estimated flow //s Sample Taken: Yes No	N
Estimated Rate: Apparent Clarity: Location of Seepage: Estimated Rate:	2 damp trickle clear muddy 3 damp trickle	Image: Steady estimated flow I/s Sample Taken: Yes Notes: Image: Steady Image: Steady estimated flow	N
Apparent Clarity: Location of Seepage: Estimated Rate: Apparent Clarity:	clear muddy 4 fill damp trickle clear muddy	Sample Taken: Yes No Notes: Sample Taken: Yes No	N
Toe Vegetation	X not apparent apparent	Sparse moderate heavy	Ν
Soft Ground at Toe Comments:	X not apparent apparent A small berm is needed along the to Continue routine monitoring.	Notes:	Y
UPSTREAM AREA		Approximate Slope Angle: 2.5H:1V	Ν
Erosion Degree Slope Visually Uniform Settlement/Uneven Bulging/Cracking Sloughing Slouge Protection	X not apparent apparent minor severe X yes no X not apparent apparent X not apparent x X not apparent X	Notes: Type: waves runoff flow from discharge Notes: Notes	N N N N N N N
Animal Burrows Sinkholes Upstream Surface	X not apparent apparent X not apparent apparent X not apparent apparent X Ore Water	Notes: Notes: Notes: Notes: Notes: Notes: Ore has been stacked to within 2.5m of the crest elevation.	N N N
Comments:	Continue routine monitoring.		Y



Eagle Gold Mine Heap Leach Facility Victoria Gold Corporation

Project Number: Structure Designation:		0792026			Page 2 of 2				
		Heap Leach Facility							
SPILLWAY/FI	LOW CONT	ROL STRUCTURE					nd		
Tvpe:		none	X spillway	Dimensions:	-		Actic		
.) [decant	weir	Invert:	937.5 m		`ĕ		
		wing walls	Notes: The	e spillway culverts are pa	rtially blocked by a process line	and ramp fill.			
Flow:		Estimated Rate	: L/s	measured	estimated none				
		Apparent Clarit	y: • Irea	clear ading apparent	muddy ice				
		euige III iuce					,,		
Comments:		The HLF spillway c The process line in	stalled through the spi	vent Pond, see inspection Ilway culvert should be re	n sheet for Event Pond. emoved and the ramp fill pulled l	back in this area to allow free flow into culver	t Y		
DIVERSION/D	DISCHARGI	E STRUCTURE							
Type:		none	X Diversion	Notes	s: Surface Water Diversion Ditc	h.			
,,			Discharge				<u> </u>		
Blockage:		X not apparent	apparent						
	Location: Type:	1 debris	beaver activity	Notes X siltation	S:		Y		
	Degree:	minor	severe						
	Location: Type:	2 debris	beaver activity	Notes	S:		N		
	Degree:	minor	severe						
Erosion:		X not apparent	apparent				, -		
	Location: Degree:	1 Iminor	severe	Notes:			N		
	Location:	2		Notes:			N		
	Degree: Location:	minor 3	severe	Notes:			N		
	Degree:	minor	severe						
Comments:		Continue routine m	onitoring of the diversi	ion ditch.			Y		
PIPELINES				not applicable	e X applicab	e			
		Vinling		Commonte	Barran colution pipe inst	alled along 040 banch and BLS pipe on dam crest	N		
		X III OSC		oonmente					
INSTRUMEN	TATION								
None			Vepperent	Notes: P1 P2 and P3 v	ibrating wire piezometers in star	adaines through dam			
Monitoring We	ells	X not apparent	apparent	Notes: Notes:	ibrating wire piezometers in star				
Inclinometers		not apparent	X apparent	Notes: INC1 inclinomete	er casing installed. Probe is bei	ng procured for initial baseline readings			
Other	5	not apparent	X apparent	Notes: Leak detection in	nclined riser along upstream slop	be is being read manually			
Were Reading	as Taken W	nile On-Site?	XYes	No					
Commontor	-	Continuo routino m							
comments.			United by Diezemete				ii		
CHANGES FF	ROM PREV	IOUS YEAR		X not applicable	e applicab	e			
		Repairs	Construction	Maintenance	Seepage Other				
Comments:							N		
RECOMMEN	DATIONS								
Continue routi	ne inspectio	n and monitoring of	the dam, diversion dite	ch, piezometers, and pon	d level as per the current HLF n	nanagement plan and OMS manual.	Y		
Document all u	unusual/adv	erse conditions obse	erved, as well as main	tenance work undertaker	1. ert surface water flows around t	ne vault	Y Y		
The process li	ine installed	through the spillway	culvert should be rem	loved and the ramp fill pu	illed back in this area to allow fre	ee flow into culvert	Y		
]		
MONITORING	G / ACTIONS	8 REQUIRED			ATTACHMENTS				
		None Required			Plan or Sketch Attached:	Drawing 01			
		X Routine Monito	ring / Maintenance		Photographa Takan	October 3, 2019			
		Remediation ar	nd Engineering Review	v Necessary	Photographs:	10 to 22			
		Other							

October 3, 2019

Date:

BGC Representative:

Troy Meyer



2019 Annual Inspection Eagle Gold Mine Heap Leach Facility Victoria Gold Corporation

Project Number:	0792026		_		Page 1 of 2		
BGC Representative:	GC Representative: Troy Meyer				Date: October 3, 2019	_	
STRUCTURE:	Designation: Pond Elevation [:]	Event Pond	886 5 m	Crest Elevation:	895.5 m	_	
	Downstream Po	ond Elevation:		Notes:	Dam crest and spillway invert elevations were based on construction record drawings.		
]	
CREST			OBSERV (provide description i	ATIONS f apparent as notes)		Action Required	
Cracking Settlement/Uneven	not apparent X not apparent	X apparent apparent	Notes: Minor crack	ing along the south embar	kment crest, about 3mm wide and up to 10m long	N	
Erosion Sinkholes Other Movement	X not apparent X not apparent	apparent apparent	Notes:			N N	
Crest Vegetation	X not apparent	apparent	Notes:	moderate	heavy	N	
Comments:	Notes: Is: Cracking on crest has not expanded in width or length since first noted by BGC construction personnel in June 2019 Continue routine monitoring.						
DOWNSTREAM SLO	OPE AND TOE AR	EA	Approxi	mate Slope Angle: 2	H:1V	Ν	
Slope Visually Uniform Erosion	yes X not apparent	X no apparent	Notes: <u>Final smoo</u> Notes:	thing of the slope face has	been complete only on the western 1/3 of embankment	Y	
Settlement/Uneven Bulging/Cracking	not apparent not apparent	X apparent X apparent	Notes: The access Notes: The emerge	road along the south edge ency spillway lower berm (e of the emergency spillway shows minor settlement outside the embankment toe) shows some minor cracks	N N	
Sloughing	X not apparent	apparent	Notes:		· · · · · · · · · · · · · · · · · · ·	N	
Slope Protection	not apparent	X apparent	Notes: Concrete cl	oth armouring on the eme	rgency spillway	N	
Slope Vegetation	X not apparent	apparent	sparse	moderate	heavy	N	
Seepage	X not apparent	apparent	······			-	
Location of Seepage: Estimated Rate:	1 Idamp		Notes:	estimated flow	l/s	Ν	
Apparent Clarity: Location of Seepage:	clear 2	muddy	Sample Taken: Notes:	Yes	No	N	
Estimated Rate: Apparent Clarity:	damp clear	trickle muddy	steady Sample Taken:	estimated flow Yes	No I/s	ر	
Location of Seepage: Estimated Rate:	3 damp	trickle	Notes: steady	estimated flow	l/s	N	
Apparent Clarity: Location of Seepage:	clear 4	muddy	Sample Taken: Notes:	Yes	No	N	
Estimated Rate: Apparent Clarity:	damp clear	trickle muddy	steady Sample Taken:	estimated flow Yes]No		
Toe Vegetation	X not apparent	apparent	sparse Notes:	moderate	heavy	Ν	
Soft Ground at Toe	X not apparent	apparent	Notes:			N	
Comments:	Event Pond underd	rain outlet needs	to be surveyed and prop	perly posted with signage.	Slope smoothing should be completed on face.	Y	
UPSTREAM AREA	The emergency opin			mate Slope Angle: 21	1:1V	N	
Erosion	not apparent	X apparent	Notes: Minor erosi	on rills on north slope cut a	bove Event Pond	N	
Degree Slope Visually Uniform	x minor yes	severe X no	Type: waves Notes: Some unev	X runoff	flow from discharge t corner of Event Pond below the HLF spillway	Y	
Settlement/Uneven	not apparent	X apparent	Notes: Upper acce	ess road along HLF spillwa	y shows some settlement	Y	
Sloughing	X not apparent	apparent	Notes:			N	
Slope Protection Slope Vegetation	X not apparent X not apparent	apparent apparent	Notes: sparse	moderate	heavy	N N	
Animal Burrows	X not apparent	apparent	Notes: Notes:			N	
Sinkholes	X not apparent	apparent	Notes:			N	
Upstream Surface	Tailings	XWater	Notes: Water in do	buble lined pond		N	
Comments: The access road along the upper HLF spillway (about 10m length) shows creep movement. Mitigation is required to prevent further movement and possible failure of slope. The pine drain outlet that collects seenage along the HLE spillway was not flowing						Y	
A water returning (HDPE pipe) has been installed in the HLF spillway. This pipe should be relocated outside the spillway on the bench.						Ý	
Wind uplift ballast should be installed on the liner slopes per the design. Y							



			E	2019 Annu agle Gold Mine	al Inspection	ility		
Project Number:		0702026	_	Victoria Go	ld Corporation	Dogo	2 - 6 2	
Project Number:		0/92026			Page 2 of 2			
Structure Designation:		Event Pond						
SPILLWAY/FL	OW CON	TROL STRUCTURE						tion uired
Туре:		none decant wing walls	X spillway weir Notes:	Dimensi Invert:	ons: - 894	.5 m		Ac Req
Flow:		Estimated Rate: Apparent Clarity Gauge in Place:	: reac	ding apparen	ed estimated muddy t X not appare	X none ice		
Comments:		Continue routine mo	nitoring of the emerge	ency spillway.				Y N
DIVERSION/D	ISCHARG	E STRUCTURE						i
Туре:		X none	Diversion Discharge	٢	lotes:			_
Blockage:		X not apparent	apparent					-
	Location Type Degree	debris minor	beaver activity severe	siltation	lotes:			
	Location Type	t 2 debris	beaver activity	N siltation	lotes:			N
Frosion:	Degree	: minor						
Erosion.	Location	1		Notes:				Ν
	Location	: 2		Notes:				Ν
0	Degree		severe					-
Comments:								<u>N</u>
INSTRUMENT	ATION							
None Piezometers		not apparent	X apparent	Notes: Notes: Piezometer	installed in inclined r	iser pipe to monito	or leak detection sump in lined pond	-
Monitoring Wel	lls	X not apparent X not apparent	apparent N	Notes:				-
Survey Stakes		X not apparent	apparent N	Notes:				- -
Were Reading	s Taken W	hile On-Site?	Yes	X No				-
Comments:		Continue routine mo	unitoring of leak detecti	ion sump water leve	els and pump out the	sump at least we	ekly or as appropriate to keep level low.	Y
CHANGES FR	OM PREV	IOUS YEAR		X not appl	cable	applicable		
		Repairs	Construction	Mainten	ance Seepage	Other		
Comments:		Read the leak detection level low in the sum	tion piezometer and p	ump out the lead de	etection sump on a re	egular basis, at lea	ast weekly or as needed to keep the water level	Y
								11
RECOMMEND		ded to mitigate appare	ant creen in the clone :	along the upper HL	spillway. A key tre	ch should be exc	avated to frost free competent around along	r
the toe and the	material f	rom the slope (or impo	orted material) should	be placed to fill the	key and flatten the s	lope in this area.	avaled to most-free competent ground along	Y
Wind uplift ball	ast should	be installed on the lin	er slopes per the desig	nower emergency s gn.	piliway below the EV	ent Pona.		Y
The Event Pon The Event Pon	d underdra d leak dete	ain outlet could not be ection sump should be	iocated and should be monitored and pump	e surveyed and prop ed out on a regular	perly marked with sig basis.	nage.		Y
		S REQUIRED	est ONIS plan. Docume	ent all unusual/adve		ITS		Jj
		None Required			Plan or Sketc	n Attached [.]	Drawings 02 and 03	
		X Routine Monitori	ng / Maintenance		Dhata	Tokon:	October 3, 2010	-
		X Remediation and	d Engineering Review	Necessary	Photographs:		1 to 9	-
BGC Represer	ntative:	Troy Meyer			Date:	October 3, 201	9	

APPENDIX C SELECTED PHOTOGRAPHS

Annual Inspection of Eagle Gold HLF_Final



Photo 1. Event Pond and HLF spillway looking west.



Photo 2. Event Pond looking south.



Photo 3. Upper portion of HLF spillway access road.



Photo 4. Upper portion of HLF spillway looking west.



Photo 5. Bottom portion of HLF spillway looking east.



Photo 6. Event Pond south embankment crest looking west.



Photo 7. Event Pond Emergency spillway looking south from crest.



Photo 8. Berm and access road adjacent to bottom portion of Event Pond spillway.



Photo 9. Bottom portion of Event Pond Emergency spillway looking south.



Photo 10. HLF underdrain outlet into monitoring vault looking east.



Photo 11. HLF underdrain outlet between dam and monitoring vault looking east.



Photo 12. HLF Dam and monitoring vault looking north.



Photo 13. HLF Dam crest looking west.



Photo 14. HLF Dam Slope looking west from crest.



Photo 15. HLF Dam Slope looking north from toe.



Photo 16. HLF Dam Slope looking south from crest.



Photo 17. HLF Dam Slope looking south from crest.



Photo 18. HLF Dam Slope looking east from spillway access road.



Photo 19. HLF Phase 1 Pad looking east from dam crest.



Photo 20. HLF Phase 1 Pad looking northeast from dam crest.



Photo 21. HLF Spillway culverts looking west from dam crest.



Photo 22. HLF Phase 1 interceptor ditch looking east.



Photo 23. HLF embankment crest piezometers.