STORMWATER MANAGEMENT PLAN

Stormwater Pollution Prevention Plan and Best Management Practices

Cresson Project Sites

Teller County, Colorado

Operator:

Cripple Creek & Victor Gold Mining Company

Victor, Colorado

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1.1 Site Description

Newmont USA Limited's Cripple Creek and Victor Gold Mining Company (CC&V) operates the Cresson Project (Site) located in the Cripple Creek Mining District (Mining District). The approximate center of the Site is 1.25 miles north of Victor, Colorado and two miles southeast of Cripple Creek, Colorado in Teller County, Colorado. The Site can be accessed using the following public roads:

- Colorado Highway 67 on the west and south;
- Teller County Road 82 on the north; and
- Teller County Road 81 on the east.

CC&V's administrative offices are located at 100 N. 3rd Street in Victor, Colorado. The nearest communities to the Site are the towns of Victor, Cripple Creek, and Goldfield, Colorado. Figure 1 shows the general location of the Site.

The surface topography of the Site ranges in elevation from approximately 9,000 to 10,800 feet above mean sea level with an average annual precipitation of approximately 19.2 inches. The permit area of the mine site encompasses approximately 6,007 acres, of which approximately 3,135 acres have the potential to be disturbed as currently permitted.

CC&V currently conducts mining and recovery of gold and silver at the Site. Site activities as of February 2021 include surface mining, cyanide leaching of ore on a modern double and triple lined zero discharge Valley Leach Facility (VLF), milling of high grade ore, environmental monitoring, reclamation and exploration.

1.2 Surface Water Drainage

The current mining, milling, and ore leaching operations at the Site are conducted within the headwaters of the Arequa Gulch, Poverty Gulch, S. Gulch, and Grassy Creek watersheds (Figure 1). Poverty Gulch, Theresa Creek, Bateman Creek, and a few un-named "first order" tributaries that drain the southeast sector of the Site also have the potential to drain stormwater from the property. These drainages are tributary to Cripple Creek or Wilson Creek, which are in turn tributary to Fourmile Creek and ultimately the Arkansas River. Areas that have undergone reclamation, an active overburden storage area (OSA), and a mine haul road are located in the uppermost reaches of the Grassy Creek Watershed, a tributary to Beaver Creek in the upper Arkansas River drainage basin. Named creeks and drainages within and near the Site, including

Wilson Creek and Cripple Creek, can be seen on Figure 1 and various detail figures attached to this document.

Cripple Creek and Wilson Creek are, in general, perennial streams below domestic wastewater treatment plants that are in drainages for both the City of Cripple Creek and the City of Victor, respectively. Wilson Creek is ephemeral to intermittent in its upper reaches above the discharge from the Victor Municipal Sewage Treatment Plant. Arequa Gulch and S. Gulch are ephemeral. Grassy Valley is intermittent before it reaches Beaver Creek. All tributaries to these drainages are ephemeral.

Poverty Gulch is ephemeral in and above the area disturbed by the Site. An engineered diversion channel with capacity for flows from the 100-year 24-hour stormwater event has been constructed that reroutes stormwater around a portion of the mining activities before discharging stormwater back into the Poverty Gulch streambed. The channel is clay and riprap lined and includes energy dissipating inlet and outlet structures to reduce the potential for erosion.

The Mining District is associated with a volcanic diatreme, which is highly brecciated and, as a result, relatively porous and transmissive. In addition, water drainage tunnels were constructed at various elevations above sea level during historic underground mining to drain underground mine workings. The deepest tunnel, Carlton Tunnel, facilitates downward movement of the infiltrating precipitation. Water flows perennially from the Carlton Tunnel. Stormwater from the Carlton Tunnel is managed under the Carlton Tunnel SWMP and is not in scope for this Plan.

Mine operations do not involve discharges of process water.

1.3 Mining Activities

Mining at the Site consists of the following basic steps:

- Clearing and grubbing existing vegetation;
- Stripping and stockpiling topsoil and other growth media;
- Removing overburden;
- Mining and hauling ore;
- Extraction and beneficiation (processing) of ore;
- Reclamation;
- Various other support activities, such as security and environmental monitoring.

Clearing and grubbing existing vegetation is the first step in mining undisturbed land. Trees and shrubs are removed mechanically. Remaining vegetative slash is used to construct wildlife habitat features or sediment traps at the down-gradient edges of disturbed areas, or as mulch for revegetation. Soils and other growth media are stripped after vegetation has been cleared. Soils are stockpiled, or directly used to prepare reclaimed slopes for revegetation during reclamation (described below).

Overburden is mined rock that contains less than the economic gold grade cut-off. Overburden is removed by conventional open-pit mining methods. Overburden is loaded into haul trucks using front-end loaders or hydraulic shovels and is hauled for placement as backfill in pits or in engineered overburden storage areas (OSAs).

Ore is rock containing the minimum economic cut-off gold grade. Ore is mined and hauled in a similar manner as overburden: rock is drilled and blasted, after which it is loaded into haul trucks and transported for further processing.

Ore is processed at the Site in two different ways, depending on the grade. Low-grade ore is crushed, mixed with lime, and heap leached on a synthetically-lined/compacted clay liner combination valley leach facility (VLF). The gold-containing leach solution (pregnant solution) is then processed at the enclosed Adsorption, Desorption, and Recovery Facility (ADR) where gold is recovered from the pregnant solution by adsorption onto activated carbon, followed by desorption, electrowinning and refining processes. A double composite-lined external storage pond may also be used during periods of wet weather to store additional process solution after CN destruction has been applied. During periods when the external storage pond is not needed for contingency solution storage, the external storage pond may be used for fresh water or stormwater storage. Any water or solutions that accumulate in the external storage pond are classified as process water and circulated back to the process circuit. The entire leach process circuit, including VLF, ADR, and associated facilities, are double composite-lined and designed as zero-discharge facilities.

High-grade ore is milled and processed in the High-Grade Mill (HGM) facilities. The HGM facilities are constructed within a double composite-lined area of the S. Gulch OSA that is tied to the S. Gulch and Arequa Gulch VLF liner system, creating a zero-discharge facility. Containment associated with the concrete foundation and curbing within the mill building provides additional protection from potential leaks and spills within the mill building.

Three different qualities of higher grade ore type are stockpiled near the HGM facilities in three stockpiles capable of holding up to 110,000 tons (~70,000 yd^3). A reclaim stockpile is created by blending the differing

higher-grade ore types from the three stockpiles with a front-end loader. Higher grade ore from the reclaim stockpile will be fed into the grinding circuit with an apron feeder and reclaim conveyor.

Several products may be produced in the HGM facilities: 1) free gold separated in a gravity circuit; 2) a gold-laden carbon product that will be further processed in the ADR; 3) a high-grade concentrate slurry that is sent off-site for further refinement, and; 4) a ground tailings product containing up to 15% Au content that will be placed on one of the VLFs for further gold recovery. The second product is produced by flotation processes and in-tank leaching processes. The third product is separated in the flotation and leaching processes that is then placed on one of the VLFs where additional gold recovery occurs using the leach processes. Beginning in 2018, the HGM modified its process and no longer uses cyanide in the milling process. Due to this change, free gold and gold-laden carbon products are not produced, and only the high-grade concentrate and tailings are produced from the HGM. The HGM facilities use pH modifiers, flotation reagents, and flocculants, as shown in Section 4.2.1 below.

Reclamation is undertaken as portions of the OSAs are completed and/or other disturbed areas are no longer needed for operations. Reclamation typically involves grading slopes to blend with surrounding terrain, placement of topsoil or growth medium, amending the growth medium as-needed, and seeding. Wood fiber or other mulch may be applied depending on terrain and location. In certain areas, trees and shrubs are also planted. Reclamation is conducted in accordance with the Mined Land Reclamation Permit No. M-1980-244 issued by the Colorado Mined Land Reclamation Board.

2.0 Areas Subject to Effluent Limitation Guidelines

CC&V currently holds a general stormwater discharge permit (Permit No. COR-040000, Certification No. COR-040049), issued by the Colorado Discharge Permit System (CDPS). In addition, CC&V holds three individual discharge permits:

- Carlton Tunnel discharge (Permit No. CO-0024562)
- Fourmile Creek Springs discharge (Permit No. CO- 0046540)
- Arequa Gulch discharge (Permit No. CO-0043648)

The permits for Carlton Tunnel and Fourmile Creek Springs are discharge permits which were acquired by predecessor companies to monitor the water quality of the flow from the Carlton Tunnel and Fourmile Creek Springs. Stormwater at the Carlton Tunnel is managed using a series of BMPs, culverts, concrete spillways, and ditches under a separate Storm Water Management Plan (Carlton Tunnel SWMP)). Water quality at Fourmile Creek Springs is monitored on a monthly basis.

The permitted discharge location for Arequa Gulch is a sedimentation pond, constructed up-gradient of the designated monitoring point for this permit. Discharges occurring at this location are not subject to technology-based effluent limit guidelines (ELGs), as described in the original permit issued December 31, 2002. The rationale to not include ELGs is summarized below in language from the permit:

> *"Given the changes in the operation of the Cresson project in the area of the above-described drainage systems, the policy changes set out in the Modification Rule, and the fact that limitations based on federal effluent limitation guidelines for Outfall 001A never took effect, the Division is not including limitations based on federal effluent limitation guidelines in this permit. Storm water discharges from outfalls in the previous permit (002A, 003A, 004A) and any other similar storm water outfalls are covered under the general storm water permit re-issued for the Cresson project on September 21, 2001, and the associated storm water management plan provided to the Division and certified by CC&V."*

Stormwater structures within Arequa Gulch are depicted in Figures 3 and 4.

3.0 Site Map

The general location map, site map, and inspection maps for CC&V can be found in the Figures section at the end of this document.

It should be noted that due to required updates for changing features and conditions, some figures were produced by third-party SWMP authors and some figures have been modified by CC&V. Figure authors are indicated on each figure by the title block.

4.0 Stormwater Management Controls

4.1 Permittee & SWMP Administrator

Table 1. SWMP Administrator and Stormwater Pollution Prevention Team

Name	Title	Phone
Melissa Harmon	CC&V General Manager, Permittee	719-851-4111
Justin Raglin	S&ER Manager; SWMP Administrator	719-851-4042
Charles Bissue	Process Manager	719-851-4253
Tige Brown	Mine Manager	719-851-4025
Jason Rampe	Exploration Manager	719-851-4041

4.2 Identification of Potential Pollutant Sources

4.2.1 Chemical Inventory

A summary of the major chemicals and products delivered to and used at the Site, as well as their general locations, is as follows:

- Ammonium Nitrate – Delivered in liquid form by tank truck to the ammonium nitrate storage silos at the Bulk Emulsion Facility.
- Antifreeze – Delivered in liquid form by tank truck to a storage tank within the lined area at the Midway Fuel Farm and to an enclosed storage tank at the Ironclad Maintenance Facility.
- Blasting Emulsion – Delivered in bulk truck or mixed on site and stored at the Bulk Emulsion Facility.
- Waste Crucibles and cupels – Produced through the gold assay process, stored in shipping bins adjacent to the Assay Laboratory for shipment off-site.
- Diesel Fuel Conditioner – Delivered as a liquid and stored in totes at the lined Midway Fuel Farm.
- Diesel Fuel – Liquid delivered by tank truck to storage tanks within the lined area at Midway Fuel Farm, a bermed tank at the Ironclad Maintenance Facility, and a tank at the Bulk Emulsion Facility. All fuel offload areas are within containment.
- Gasoline – Liquid delivered by tank truck and stored in a tank at the lined Midway Fuel Farm. All fuel offload areas are within containment.

- Greases – Delivered in solid form in totes or barrels to contained areas within the Ironclad Maintenance Facility and the Secondary Crusher Area.
- HGM facility reagents – stored and used within the double composite-lined HGM facilities with additional containment provided by tanks, concrete floor and foundations, and curbing:
    - Lime – pH modifier
    - Potassium amyl xanthate – flotation collector
    - Dithiophosphate – flotation modifier
    - Long-chain alcohol – frother
    - Polyacrylamide – flocculant
    - Activated carbon – gold absorption

- Hydrochloric Acid – A liquid material delivered by tank truck to a bermed storage tank located within the lined VLF at the ADR facility. The solution is stored and used entirely within the VLF and ADR facility containment areas.
- Kerosene Fuel – Delivered in liquid form by tank truck to storage tank within lined area at Midway Fuel Farm and to enclosed storage at Ironclad Maintenance Facility. All fuel offload areas are within containment.
- Lime – A solid material delivered by tank truck, transferred to a lime silo located at the secondary crusher area and near Dump 4.
- Lubricating oils – Delivered in liquid form by tank truck to a storage tank within the lined area at the Midway Fuel Farm and to the enclosed storage area at the Ironclad Facility; also delivered in totes or barrels to contained areas within the Ironclad Maintenance Facility and the Secondary Crusher Area.
- Refinery Slag – Produced in the ADR facility and stored in barrels at the ADR (within a lined containment) for shipment to an off-site refinery.
- Sodium Cyanide – A liquid material delivered by tank truck to the Site. The entire delivery system is within a lined containment area and the bulk solution is stored in two 20,000-gallon closed tanks that are within a secondary containment.
- Sodium Hydroxide - Liquid material delivered by tank truck to a bermed storage tank located at the ADR facility and used within ADR containment.
- Used Carbon – Produced in the ADR facility and stored in barrels or bags within the lined VLF for shipment to an offsite refinery.

4.2.2 Loading and Unloading of Chemicals

Unloading of petroleum products from delivery vehicles to bulk storage and transfer of petroleum products onto service trucks and mine equipment presents a risk of chemical release. Bulk transfer and storage occurs within secondary containment areas.

Unloading of explosives materials (ammonium nitrate and emulsions) from delivery tankers to bulk storage and unloading from bulk storage to the mine explosives truck presents a risk of release of dry or non-liquid product. Loading and offloading from the bulk storage area occurs within bermed areas to limit migration of accidental releases.

The pneumatic transfer of lime into the lime silo presents a risk of release of dry lime material. Lime is dispensed from the silo onto a conveyor belt, so there is no bulk removal or transfer of lime from the silo. Some lime, however, periodically accumulates around the base of the lime silo.

Process chemicals (sodium cyanide, hydrochloric acid, sodium hydroxide) are delivered to the ADR facility by bulk truck deliveries. Liquid chemicals are transferred to bulk storage tanks while attended by the driver, providing for an immediate response in the event of an incident. The bulk delivery trucks for acids and bases park within a contained area, located in large part on top of, or draining to, the lined VLF while delivering product. The transfer line connections from the truck to the tanks are made inside the contained area. Potential acid spills would entirely flow into the VLF where excess alkalinity exists to neutralize the solution. Sodium hydroxide solution would flow onto the VLF. In the event that releases do not reach the VLF, the Process Department has a front-end loader and backhoe at their disposal and these, or Mine Operations earth-moving equipment, would respond to berm the areas as necessary and to remove the soil that may be impacted and place it on the VLF. The VLF already has high alkalinity, as noted above.

CC&V is equipped with cyanide dissociation chemicals (oxidizers) such as calcium hypochlorite and hydrogen peroxide to neutralize residual sodium cyanide in the soil, if it should be released outside containment.

Laboratory operations are conducted indoors. Waste products such as fire assay cupels, crucibles, and slags are kept contained and covered until shipped off site for proper disposal or recycling. The covered transport container is located immediately outside of the laboratory building and is routinely inspected by laboratory and other process employees to ensure that no waste is deposited on the ground and that the transport container lid is closed.

The equipment maintenance facilities consist of the Ironclad Maintenance/Warehouse Facility, the Truck Shop, the Light Vehicle Maintenance Facility, and the old and new Wash Bay Facilities. Each of these facilities is enclosed.

Hydraulic shovel maintenance is typically conducted within the Mine area because the shovels are not readily transported to the Ironclad Facility. If minor equipment maintenance and repair is required, it may be performed where the equipment has been operating. Fleet re-fueling may be conducted within the mine areas or at the Midway Fuel Farm. Mobile Mine Operations earth-moving equipment provides rapid response to accidental petroleum releases.

Scrap metals are placed and stored in containers (metal bins or roll-offs) that are periodically taken offsite for recycling by a third-party vendor. Non-recyclable debris is placed in metal bins or roll-off containers that are periodically removed by a commercial trash hauler.

General deliveries of other commercial products or chemicals are made to the warehouse and other points of use at the property. The presence of trained delivery personnel during deliveries provides for prompt response to chemical releases.

4.2.3 *Outdoor Storage of Chemicals and Equipment*

Mine equipment is stored and fueled outdoors. Certain maintenance activities may also occur outdoors. Fueling and service equipment are either equipped with or have ready access to absorbent materials to clean up spills and releases. Vehicles and equipment are also equipped with radios so that operators may immediately call for assistance in the event of an incident. Implementation of the Emergency Response Plan (ERP), which incorporates the site wide Spill Prevention, Controls and Countermeasures Plan (SPCC) and Spill Response Plan (SRP), addresses and mitigates risks of petroleum products mixing with stormwater. According to the ERP, SRP, and SPCC, chemicals contained in bulk storage or sealed weatherproof containers may be stored outdoors. Storage of liquid chemicals outdoors is generally within secondary containment to provide for control and containment of any spilled material. Site chemical inventory and storage is described in Section 4.2.1 above.

4.2.4 *Milling and Processing Activities*

This area includes ore stockpiles, crusher area maintenance facilities and crushing systems (discussed in 4.2.5), conveyors, lime silos, VLFs, HGM facilities, ADR facilities, chemical storage, laboratory, and ancillary facilities such as office buildings and access roads.

The current process operations include those conducted on VLFs and associated ADR facilities described above. The high-grade mill in S. Gulch does not produce conventional mill tailings but rather a low-grade product that will be further leached on the VLFs to recover additional gold. The historic tailing facility within the site permit area associated with the former Carlton Mill has been removed and the associated footprint has been buried beneath Phase V of the Arequa Gulch VLF. Therefore, processing and milling operations do not have significant impacts to stormwater.

The lime silo, located on the end of the secondary crushers and the conveyor that leads to the Load-Out-Bin (LOB), is loaded from trucks. Some release of lime may occur at the base of the silo as the truck transfer hose is connected and disconnected. This material is periodically removed and placed on the VLF, where it joins lime that is routinely applied to ore for pH control.

An additional lime silo (Run of Mine or ROM Lime Silo) was installed in 2019 in the Dump 4/Joe Dandy area. The lime silo is loaded from trucks. Lime is conveyed from the silo to be dumped on haul trucks loaded with ROM, which is then transported to VLF2 for leaching. Some release of lime may occur at the base of the silo as the lime truck transfer hose is connected and disconnected. Some release of lime may also occur at the base of the silo as fugitive dust when loading lime onto haul trucks. This material is removed periodically and placed on the VLF.

There are two VLF areas, the Arequa Gulch VLF (AGVLF or VLF1) and the S. Gulch VLF (SGVLF or VLF2). Both VLFs are zero-discharge facilities constructed with single composite and double composite liner systems with high and low volume solution collection systems and leak collection and recovery systems. Precipitation within the VLF areas is contained and recycled within the VLF. The VLFs are surrounded up-gradient by a stormwater diversion system designed to divert and convey flows generated by the 100-year, 24-hour precipitation design event. The diversion channels are designed to be stable under the peak flows and associated velocities generated from the design event. The channels use revetment, pipe structures, and energy dissipation devices where necessary to meet these design criteria.

Piping systems carrying barren and pregnant leach solutions are located within the VLF containment systems to prevent accidental discharge. The ADR Facilities have bermed concrete floors with secondary containment sumps. The buildings are underlain by a synthetic liner. The VLF liner system extends to the exterior wall of the expanded ADR Facilities to direct any flow back to the VLFs, if necessary.

The primary pollution prevention method in the process area is the diversion of stormwater around these facilities. Other stormwater pollution prevention efforts include: (1) appropriate product storage and use; and (2) secondary and tertiary containment of process solutions, chemicals, and used materials. The ADR

1 Facility and laboratory are located on the drainage divide between the Wilson Creek tributary, Bateman Creek, and Arequa Gulch drainages. Therefore, there is limited run-on potential to the area outside these buildings. Potential run-on is directed to Bateman Creek and enters small detention basins to manage the sediment. The ADR 1 Facility and laboratory roadways, entrance/exits, and parking areas are managed by periodically grading the surface, applying dust palliatives and/or water, and gravel additions to the road surface as necessary. Straw bales, silt fences, basins/sumps, and/or other BMPs accompanied by routine maintenance are used to control the sediment from these areas.

4.2.5 Crushing Facilities and Other Sources of Fugitive Dust

The crusher maintenance area consists of a yard, maintenance buildings, and storage areas. Petroleum and liquid products are primarily stored in barrels and plastic containers located indoors or within bermed areas. During crusher maintenance, accumulated used grease will be stored in barrels until it is shipped off site for disposal. The storage yard area has a transfer bin for scrap metal that is recycled off site as well as transfer bins for “domestic” wastes that are transported off site by a commercial waste hauler. The yard also stores metal crusher parts. The principal potential pollutant from the Crusher Area is sediment.

The laboratory has two baghouses: (1) one baghouse for fire assay venting ducts, which collects solids in a barrel connected to the baghouse system that, when full, joins the cupels, crucibles, and slag in the transport container, and (2) another baghouse that receives pulverized fines, which are then transported to the VLF for processing, along with other remnants of the rock samples the laboratory crushes and discards.

Roads are periodically graded, surfaced with gravel to minimize muddy conditions, and periodically treated with a dust suppressant and/or water to control fugitive dust generated by vehicles and equipment.

4.2.6 On-site Waste Disposal Practices

Currently, there are no regulated landfills operated at the Site. CC&V does not have a Colorado Department of Public Health and Environment, Solid Waste Division, permit to operate landfills. Construction and demolition debris generated onsite are deposited in designated locations within the OSAs. Construction debris includes concrete, stone, brick, wood, asphalt paving materials, metal, and other inert materials. Liquid and solid waste materials are recycled off-site or sent via commercial haulers to off-site disposal facilities.

4.2.7 Stockpiles of Overburden, Ore, Products, and Waste

Soil removed prior to mining or construction is currently stockpiled in various locations outside of active drainages. Soil stockpiling is sporadic and occurs during the initial stages of developing the surface mines, OSAs, or extensions of the VLF. Soil is removed from stockpiles when needed for reclamation. Soil

stockpiles are graded and seeded within one year of completion to reduce erosion concerns and as required under permit M-1980-244. Locations selected for soil storage are generally in upland areas, away from drainages, thereby limiting the need for the diversion of potential run-on.

OSAs are developed in accordance with plans that (1) divert run-on where feasible; and (2) re-establish new drainage routes for concentrated flow at suitable gradients using coarse overburden check dams, and/or detention basins or sumps to develop a stable flow channel.

Reclamation areas are seeded as soon as practicable after they are graded and topsoil is applied. During reclamation grading, most slopes of the OSAs are reduced to approximately 2.5H:1V to reduce erosion potential.

4.2.8 Disturbed Areas

Haul roads are surfaced with gravel and constructed with drainage ditches that lead to road sump BMPs that detain stormwater to settle sediments, or to filters such as erosion logs, silt fences, vegetative filters, and engineered stormwater management ponds (EMPs). Administrative areas, such as the security offices, parking lots, access roads, and delivery docks, are monitored for potential “track-out” of mud and sediment onto public roads nearby. Additionally, entrance/exit access points are equipped with “track-out” pads to prevent the movement of sediment on trucks and delivery vehicles from leaving the Site. Track-out pads are regularly maintained and street sweepers are utilized as a secondary measure as necessary.

4.3 Best Management Practices

4.3.1 Stormwater Diversion

Stormwater runoff will be diverted to the extent practicable around disturbed areas and areas where chemicals, fuel, or other potential contaminating materials are handled or stored.

The following are the most significant handling and storage areas at CC&V and the corresponding BMPs, methods and controls are used to divert stormwater away from each area:

- The VLFs are both zero discharge facilities that are bermed along the perimeter to contain the process solution and to prevent run-on. Stormwater that could potentially enter the VLF from up-gradient areas is diverted around the VLF. Stormwater falling on the VLFs is retained in the processing circuit. Each VLF is designed and operated to maintain the process solution inside the lined containment areas during precipitation events and under extreme conditions.

- With completion in 2004 of Arequa Gulch VLF Phase IV construction, surface water contributions to Arequa Gulch were reduced and some of the flows have been directed to Bateman Creek through EMP-006. Likewise, with completion of Phase V of the Arequa Gulch VLF, the watershed was further reduced in size and stormwater flows were reduced accordingly. Stormwater flows that were previously generated from the S. Gulch Overburden Storage Area (SGOSA) are now contained within the S. Gulch VLF Process Circuit.

- The ADR Facilities and adjacent chemical storage areas are on lined foundations that ultimately are directed to the VLFs. Stormwater that could potentially enter from up-gradient areas is diverted around these lined facilities; stormwater falling on the area is retained and directed to the VLF process circuits.
- The Midway Fuel Farm stores gasoline, diesel, kerosene, lubricants, antifreeze, washer fluid, and diesel additives. The Midway Fuel Storage Area is a lined facility with a down-gradient control management system that includes two channels and a sediment trap. The Midway Fuel Farm has an oil/water separator system in place that captures any spilled fuel within the refueling area. Since the Midway Fuel Farm is a heavily used area during operation of the mine it is routinely inspected by operators and mine personnel. Therefore, the risk of a spill becoming released to the environment or off-site waterways is negligible.
- The HGM facilities, as described above, are constructed within a double composite-lined area of the S. Gulch OSA. Most chemical storage, use, and handling occurs within the concrete foundations and curbing of the HGM, which provides further containment of process reagents. The HGM liner is tied to the VLF liner system, providing full containment of the outdoor HGM area. Chemical releases to stormwater or the environment are, therefore, unlikely to occur.

Maintenance facilities for Mine Operations (Ironclad Maintenance Facility), as well as for the Process Operations are isolated in the interior of the Site so that the only stormwater reaching these areas is the rainfall that directly falls within the facility boundaries; there is no stormwater runoff since the process areas are zero-discharge facilities.

Explosives magazines, silos, and the bulk emulsion facility are isolated from stormwater through location and/or the use of berms and channels.

4.3.2 Materials Handling and Spill Prevention

Spill kits, labeled containers with absorbent materials and other tools and supplies for responding to spill and releases, are located throughout the site wherever the storage, use, or transfer of chemicals may occur. If there is an incident, quick response and cleanup is standard procedure to prevent mixing of chemicals with stormwater.

Bulk loading and unloading of petroleum products is accomplished in areas with engineered drainage control. Loading and unloading is attended by the truck driver, providing for a rapid response in the event of an incident. The Ironclad Maintenance Facility and the Light Vehicle Maintenance Facility have indoor storage for all lubricating fluids, used oil, new and used antifreeze, and small amounts of diesel fuel and kerosene. The Truck Wash Facility and the wash facility at the Ironclad Maintenance/Warehouse Facility are enclosed and equipped with a water recirculation system including a settling basin for solids, a skimmer for hydrocarbons, and a small water treatment unit (also known as the STW3 Unit). The Ironclad Maintenance/Warehouse Facility and Truck Shop are located at the drainage divide between the tributaries to Cripple Creek and Grassy Valley. Therefore, run-on diversions are not necessary.

The transfer of ammonium nitrate into the silos and the gravity fed loading of equipment is attended by the truck drivers, providing for a rapid response in the event of an incident. Drainage at the explosives storage area is separated from general stormwater drainage by grading and a settling area. Dry product that accumulates beneath the silos is transported to the blasting area to be used as stemming.

Lime delivery is attended by the truck driver, providing for a rapid response in the event of a lime release. Lime that accumulates at the base of the silo is collected and transported to the VLF. The gradients near the silos are almost flat, so that movement of the lime away from the silo is limited. Any stormwater runoff that does occur in the Crusher area is diverted to EMP-011, and stormwater runoff from the ROM silo will be diverted to a system of BMPs.

4.3.3 Sediment and Erosion Prevention

The following non-structural erosion-control BMPs are required for CC&V's stormwater management system:

- Develop and implement plans prior to construction activities for the necessary erosion control methods or other BMPs/EMPs.
- Incorporate BMPs/EMPs and stormwater management requirements into construction contracts by reference or by requiring that an activity specific SWMP be submitted by the contractor.

- Incorporate appropriate stormwater management practices into designs of extended or new facilities.
- Reclaim disturbed areas as soon as practicable (concurrent reclamation).
- Install vegetation or riprap revetment (or both, as appropriate) in water flow channels where required.
- Reduce water velocities and erosion potential in constructed swales and channels by installation of check dams and water bars where appropriate.
- Minimize the disturbance of existing vegetation.

Structural BMPs will include straw bales, silt fences, rock check dams, swales and small detention depressions, road-side detention basins or sumps, sediment control ponds, stormwater diversions and channels, culverts, channel revetment protection such as vegetation and riprap, benches to interrupt flow on slopes, and other BMPs as deemed suitable for an application. Examples of BMPs that may be used at the site are included in Attachment 1.

Site entrance/exit access points are equipped with “track-out” pads to prevent the movement of sediment from trucks and delivery vehicles on to public roadways. Track-out pads are regularly maintained and street sweepers are utilized as a secondary measure as necessary.

Overburden storage may affect the quality of stormwater through erosion and transport of sediment if not managed and controlled properly. Stormwater runoff from the OSAs is managed by controlling drainage and sediment using road sumps and other similar BMP structures or applications that provide detention and enhance sediment removal. Runoff from other disturbed areas is managed similarly and diverted to BMPs and / or other engineered structures to control erosion. Sumps and other BMPs are shown on the attached Figures 3-5, 7&8, 10-13 . Examples of typical BMPs and road sump pictures from CC&V are provided as Attachment 1.

EMPs will be employed throughout the currently planned implementation of the Cresson Project. EMPs are ponds or systems of ponds that are designed to contain two times the runoff of a 10-year, 24-hour storm event. The existing EMPs are listed below and shown on the attached Figures:

- EMP-006 (Figure 3): The stormwater runoff system EMP-006 was originally located to collect runoff (1) from the Arequa Gulch OSA (which no longer exists), (2) from a portion of the S. Gulch OSA, (3) from the access roads for the Arequa Gulch VLF, and (4) from portions of mine haul roads,

which, if there were overflow, would enter the Bateman Creek drainage. Note that Figure 3 shows EMP-006 and the locations of sumps which function together to control stormwater flows.

- EMP-011 (Figure 20): The stormwater runoff pond system, EMP-011, is located at the crushing facility. Any overflow from EMP-011 enters a diversion channel that surrounds the VLF.
- EMP-013 (Figure 16): The EMP-013 collects runoff from the East Cresson Mine Area, portions of mine haul roads, soil stockpiles, and associated disturbance in Vindicator Valley. EMP-013 is shown on Figure 16.
- EMP-008b and EMP-008c (Figure 10): EMP-008b and EMP-008c collect runoff from the upper elevation North Cresson Mine Area roads, soil stockpiles, associated disturbance areas, a portion of the reclaimed S. Gulch OSA, interceptor canals above the S. Gulch VLF, and portions of mine haul roads. The EMP-008 system would overflow to Poverty Gulch.
- EMP 009 a, b, c, & d (Figure 9): The stormwater runoff pond system, EMP-009a-d collects runoff from the North Cresson Mine Area, roads, soil stockpiles, associated disturbance areas, a portion of the S. Gulch OSA and portions of mine haul roads. If there were overflow, the flows would report to Poverty Gulch.
- EMP-016, -017, ,and -018 (Figure 11): These ponds comprise a stormwater runoff control system of sediment ponds that collects runoff from the Wild Horse Extension ("WHEX") Mine, East Cresson Overburden Storage Area (ECOSA) and surrounding roads, soil stockpiles, and associated disturbance. This system is designed to capture stormwater runoff and is managed to promote exfiltration from the ponds and to facilitate infiltration into the shallow ground water regime. EMP-017 is the terminal pond that is designed to collect and store excess flow from the other ponds. EMP-019 has been eliminated by construction of the WHEX haul ramp and no longer functions as an EMP. Flows report to the WHEX internal mine or to EMP-16.
- EMP-020 (Figure 15): A stormwater runoff pond below the south portion of East Cresson Overburden Storage Area (ECOSA). The EMP-020 stormwater basin is physically lower, and the interim terrain is higher than EMP-017, thus requiring a separate and independent pond. The pond collects stormwater from the face of the ECOSA, pre-operation stripping, and haul roads.
    - The east inlet channel to EMP-020 has been recently (December 2017) redesigned to improve stormwater conveyance to EMP-020 and reduce the potential for stormwater to overwhelm the channel.
    - The EMP-020 spillway has been evaluated (2018) and will be redesigned if necessary.

- EMP-022 (Figure 9): EMP-022, also known as Conley Sediment Trap and the Chicago Tunnel Bypass detention pond, is a stormwater detention pond located below the Chicago Tunnel bypass system that collects stormwater flows from within Poverty Gulch, the historic Chicago Tunnel mining area, and from the North Cresson Mine area, roads and undisturbed slopes. This pond was been evaluated in 2018 and a secondary pond (EMP-022B) was constructed in 2020 to provide additional storage volume.

- EMP-023 (Figure 12): EMP-023 and it's system of BMPs are designed to collect and store stormwater flow from Poverty Gulch. The channel is clay and riprap lined and includes energy dissipating inlet and outlet structures to reduce the potential for erosion.

4.3.3.1 Design Criteria for EMPs

The downstream EMP's are the primary structural control measure used to manage stormwater discharge from each of the stormwater management areas and basins. The Site EMPs are designed according to the following criteria:

EMPs are detention pond systems consisting of one or more detention basins or structures designed to contain at least twice the volume of runoff resulting from a 10-year, 24-hour precipitation event. Pond embankments will be constructed to withstand the peak flow associated with at least two times the 10-year, 24-hour storm event. An overflow spillway or equivalent water release structure will be provided to protect the structural integrity of the embankment as well as avoid excessive erosion of the downstream streambed. The spillway or water release structure will be designed to pass the peak flows from a 100-year, 24-hour storm event.

Stormwater ponds capable of handling at least two-times the 10-year, 24-hour precipitation event will be maintained until reclamation activities within the contributing watershed is completed. Diversion of surface runoff from undisturbed and reclaimed areas around the EMPs will be employed where appropriate. Discharges of stormwater are not expected to occur under the 10-year, 24-hour storm event. Discharges may occur, however, as a result of:

- Evacuating sediment from ponds to regenerate the pond system's capacity to contain the design volume of runoff resulting from a 10-year 24-hour precipitation event. Sampling of discharge is

required as per the General Stormwater permit and certification if ponds are evacuated and the water is to be discharged.

- Overflow related to a precipitation event greater than the 10-year, 24-hour precipitation event.
- Actions implemented to protect or maintain the pond systems.
- Overflow related to the occurrence of multiple precipitation events that may or may not individually exceed the 10-year, 24-hour precipitation design event.

Design criteria are summarized in Table 3, below:

Table 2. Design Criteria Summary

Stormwater Feature	Design Criteria	Design Storm Event Depth[1]
EMP Ponds	Two times volume of 10 year:24 hour event	2.4 inches
Diversion channels, spillways	100 year: 24 hour event	4.1 inches
[1]Based on Knight-Piesold evaluation (2018)		

4.3.4 *Sampling of Regenerative Release*

Per an internal memo to file (2010), a regenerative release may occur in:

"…the extremely unlikely scenario whereby CC&V was unable to meet the downstream water augmentation requirements (due to any number of factors including broken pumps, messed up meters, etc.) by normal means that are being done at our augmentation point near the Andrews Mine. In such an instance, CC&V could meet the water augmentation requirement by delivering water to the affected drainages by siphoning off the ponds or even pumping them. Such activities would be "regenerative releases" and therefore would be subject to the sampling requirements outlined in the SWMP. "

Water quality sampling will be performed for regenerative releases from the most down-gradient point of the EMPs described herein. A regenerative release may be required in the event that CC&V is unable to meet downstream water augmentation requirements by normal means. In this instance, CC&V may meet water augmentation requirements by delivering water to affected drainages by siphoning off or pumping of stormwater management ponds. If such releases occur, monitoring will be conducted as follows:

Monitoring will be conducted up to twice per calendar year when regenerative releases occur. It is anticipated that such releases will not occur frequently. Such sampling will occur once between January 1 and June 30 and once between July 1 and December 31, with at least three months separating the sampling

events. After sufficient characterization of the regenerative release has been accomplished, the monitoring frequency may be reduced upon concurrence from the Colorado Water Quality Control Division ("WQCD").

Regenerative release monitoring parameters are summarized in the following table

Table 3. Monitoring parameters for regenerative releases from EMPs.

Parameter	Sample Type
pH	In-situ/Grab
Total Suspended Solids	Grab/Composite
Cadmium, dissolved	Grab/Composite
Copper, dissolved	Grab/Composite
Iron, total recoverable	Grab/Composite
Lead, dissolved	Grab/Composite
Zinc, dissolved	Grab/Composite

Samples will be collected between the release point from the lower pond in each pond system and the receiving stream, as appropriate. Grab samples will be collected at a point in time that is partway through the release, or CC&V may collect composite samples, with aliquots collected at approximately evenly spaced intervals throughout the period of flow release from the EMP. The pH will be measured in-situ.

CC&V will include details on the release monitoring, if any, in its Annual Report. CC&V will provide the date and duration of the storm event that generated the sampled release, and an estimate of the total volume (in gallons) of the release.

If a need for stormwater sampling is identified for other reasons, the 'Surface and Ground Water Sampling SOP" document should be consulted for recommend sampling methodologies (available in Controlled Documents). For specific analyses, the laboratory completing the characterization should be consulted for sampling technique and preservation requirements.

4.4 Schedules and Procedures

4.4.1 Preventive Maintenance

The following preventive maintenance activities are integral to the proper functioning of CC&V's stormwater management system:

- Road sump and sediment basin BMPs – Inspect quarterly and after major storm events to ensure adequate basin capacity and properly functioning spillways; excavate sediments to restore capacity as needed.
- EMPs – Inspect quarterly and after major storm events to ensure adequate basin capacity; inspect inlets and spillways for erosion or scouring; repair as needed.
- Vehicles and equipment – Inspect vehicles and equipment every shift; ensure vehicles are properly maintained and promptly repaired to minimize and prevent fluid leaks; perform maintenance and repairs indoors whenever possible. Vehicles should also be washed regularly and after precipitation events to minimize track-out.
- Lime silos – Ensure lime around the silo is regularly cleaned up and moved to the VLF (at least weekly and prior to anticipated storm events).
- Site entrance/exit access points – Ensure track-out pads are functioning by inspecting regularly and after a storm event. Ensure any visible track-out on the public roadway is cleaned with a street sweeper.

4.4.2 Good Housekeeping

Good housekeeping and maintaining clean, orderly work areas are paramount to maintaining health and safety and are essential to the proper functioning of CC&V's stormwater management system. Good housekeeping procedures are followed throughout the mine as a standard practice, including disposing of trash and other waste in approved containers and storing chemicals and petroleum products in designated areas.

4.4.3 Spill Prevention and Response Procedures

Spill prevention, controls, and countermeasures (SPCC) procedures are detailed in the sitewide SPCC plan and Spill Response Plan (SRP). Implementation of the SRP/SPCC directly addresses and mitigates risk associated with petroleum product storage, use, and handling.

4.4.4 Employee Education

Employee education is recognized as a fundamental component for a successful stormwater management and stormwater pollution prevention program. The following outlines the employee education component of this plan.

There are two levels of training required: 1) employees that will conduct quarterly stormwater inspections, and 2) all other CC&V employees. Employees that will conduct quarterly inspections generally include Sustainability and External Relations (S&ER) Department personnel and Operations and Process

personnel who are responsible for ongoing stormwater management. All other CC&V employees and select contractors will require a more general introduction to stormwater management. The required elements of each training program are described below.

Employees Conducting Quarterly Inspections - Detailed Site-Specific Stormwater Training

Items to be addressed in Training Sessions for Employees Conducting Quarterly Inspections and Stormwater Management:

1. Provide information as to where employee can access the Stormwater Management Plan in hard copy and on the CC&V intranet;
2. Employee to review and become familiar with the Stormwater Management Plan;
3. Provide information as to where employee can access the Stormwater Management Plan's Inspection Forms on the local network drive or intranet site;
4. The SWMP Administrator or his designee will accompany employee on a field tour of the features to be inspected providing training on inspection and sampling protocols, context regarding areas of interest for the different structures, appropriate thresholds for maintenance vs. repair, and any other items required to fill out the inspection forms properly. Employee should be briefed as to the frequency interval of inspections (quarterly) and whom to supply completed inspection forms to.
5. Document training on the Internal Employee Training form;
6. Training refresher should be every 5 years, or sooner, if SWMP is significantly revised.

Who Should Be Trained in General Stormwater Management Efforts?

All CC&V employees will be trained annually. Contractors will be trained as appropriate.

When and How Often Will Training Be Conducted for General Stormwater Management?

Employee training will occur annually at scheduled Mine Safety and Health Administration (MSHA) refresher trainings, new miner training, task training sessions, or safety meetings. Special training will be conducted as needed.

Course Content – General Stormwater Management Training

7. Definition of "stormwater" as it occurs at CC&V mine sites;
8. Review requirements and purpose of stormwater management and the SWMP;
9. Status of the Cresson Project and Carlton Tunnel;
10. Locations and proper functioning of stormwater BMPs/EMPs;
11. Stormwater flow routes and locations of stormwater discharge;

12. Potential spills and releases – potential sources of pollutants, risks of spills and releases, preventative measures, other management practices, and maintenance;
13. General review of:
    A. Preventative Maintenance
    B. Spill Prevention and Response
    C. Good Housekeeping

4.5 Identification of Discharges Other than Stormwater

The stormwater conveyance system on the site will be evaluated periodically for the presence of flows other than stormwater. A description of the results of any evaluation for the presence of flows other than stormwater, the method used, the date of any evaluations and the on-site locations that were directly observed during the evaluation will be included, as appropriate, in the inspection record.

This evaluation is also accomplished through careful consideration of the use and disposition of materials and chemicals on the site, the design and operation of the VLFs as zero-discharge facilities, the lack of need to dewater the mine, and management of domestic effluents in biological/septic systems. All new construction is examined for potential non-stormwater discharges and for the use of appropriate BMPs. Periodic inspections serving as the basis for annual reports examine the site for non-stormwater flows at least four times (quarterly) per year. If any non-stormwater flows are found, their presence and their nature will be described in this plan or identified in the inspection record.

5.0 Comprehensive Inspection

The SWMP Administrator and the members of the stormwater management team who are responsible for maintenance of stormwater structures will perform periodic visual site inspections—both preventative maintenance inspections and comprehensive inspections. Information will be verbally transmitted to those who have the authority to implement the recommendations that may be generated. Comprehensive inspections will be completed at least twice each year, in spring and fall, and preventative maintenance inspections will be completed at least quarterly. Results of the inspections will be summarized in the annual reports submitted to the WQCD, pursuant to Stormwater Permit No. COR-040000 as certified (COR-040049) for the Cresson Project.

Part I.B.4.c of COR-0400000 requires a preventative maintenance program as part of the SWMP that includes inspecting and testing of equipment and systems to prevent conditions that could cause breakdown or failures resulting in discharges of pollutants to surface waters. Part I.B.5.a of COR-040000 requires comprehensive inspections in addition to the preventative maintenance inspections. CC&V will inspect all stormwater features quarterly with preventative maintenance or repair requirements being

assessed during the inspection. Details of the preventative maintenance testing and inspection protocols can be found in the Preventative Maintenance Section 4.4.1 of this SWMP described above.

The attached Figures correspond to an inspection form that can be found in Attachment 2. Each inspection form lists the BMPs and/or EMPs that can be found on the corresponding Figure. The inspection forms also require a general assessment of the condition of the site-wide stormwater system.

6.0 Consistency with Other Plans

The following is a list of other relevant plans or permits that may detail procedures for the management of stormwater, and the management of materials that have a potential to contaminate stormwater runoff. The other listed plans and permits provide construction details for containment facilities, diversions, and other materials and are on file in CC&V's Administration Building in Victor and/or on the Newmont intraweb.

- Emergency Response Plan (ERP)
- Spill Prevention Control and Countermeasures Plan (SPCC)
- Spill Response Plan (SRP)
- Colorado Division of Reclamation Mining Safety, Amendment No. 12 to Permit M-1980-244 and all subsequent Technical Revisions
- Carlton Tunnel Storm Water Management Plan
- Carlton Tunnel Discharge Permit No. CO-0024562
- Four Mile Creek Springs Permit ID CO-0046540
- Arequa Gulch Discharge Permit No. CO-0043648
- Delineations of Wetlands and Waters of the U.S.
- Teller County Conditional Use Permit and Planned Unit Development Authorization for ECME
- Teller County Septic Permits
- APCD Construction Permit No. 98TE0545

7.0 Corrective Action Plan

A corrective action plan will be implemented to address deficiencies identified during quarterly inspection of Site BMPs and EMPs. Following the quarterly inspection, an Assessment is entered into Cintellate where corrective actions may be assigned. Corrective actions include a description of the BMP or EMP location

and deficiency, summary of the action to be taken (repairs, non-routine maintenance, or installation of additional BMP/EMPs), an owner, a due date, and a date the corrective action was initiated and completed. If modifications to the SWMP are required, a corrective action will be assigned with a completion date 30 days from initiation of the action.

8.0 SWMP Modifications

The SWMP is intended to be a "living" document that is kept up-to-date to reflect the changing conditions at the site. The SWMP Administrator shall maintain a master hard copy of the SWMP. Field design changes and other changes to the stormwater management system or site conditions will be documented in red-line on the master digital copy during each quarterly site stormwater inspections.

The SWMP Administrator shall notify relevant Mine Operations, Processing, and Maintenance personnel upon completion of each quarterly inspection and any significant observations.

No less than annually, or at such time that a field revision or cumulative field revisions become significant in the judgement of the SWMP Administrator, the SWMP shall be updated to include all previous and necessary revisions. The updated SWMP shall be document controlled, new hard copies distributed to relevant departments and employees, and old hard copies destroyed.

Table 4 summarizes previous updates to the Site SWMP.

Table 4. Summary of SWMP Updates

Update No.	Date	Author	Description of Modifications
01	June 16, 2005	TCC	Initial release of document
02	July 29, 2010	MDE	Plan Update
03	November 2013	Steffens / Ellis	Plan Updated for MLE2
04	July 2014	MDE	Minor typos corrected, stormwater team members changed, footers revised
05	January 2015	Steffens / Ellis	Major updates to maps, text, inspection sheets
06	January 2018	Golder Associates	Major rewrite of text, maps, and inspection forms: BMPs renamed to "Sumps";
07	January 2019	JMR	Minor text rewrites and updates, inspection sheet updates.

08	April 2020	JMR	Text updates – inclusion of ROM lime silo, all figures updated with updates to BMPs, addition of EMP-022b and designation of Poverty Gulch Diversion as EMP-023. Inspection form revised to reflect changes.
09	August 2020	JD	Added page numbers, added map of discharge locations (Figure 0)
10	August 2021	MJB	Removal of Carlton Tunnel from Cresson Project SWMP; included management of sediment track out at entrance/exits, minor updates to language including, Squaw Gulch changed to S. Gulch; removed EMP 021, 009a, and added EMP-023; updated figures
11	October 2021	MJB	Removed BMPs along HWY 82 (Teller Co.); Now managed by Teller County
12	March 2022	MJB	Minor edits to Table 4 to include permittee and accurate job titles