APPENDIX C

CC&V CYANIDE CONTAINMENT POLICY

CYANIDE CONTAINMENT POLICY

Policy: SOLUTIONS CONTAINING CYANIDE SHALL BE CONTAINED WITHIN THE VALLEY LEACH FACILITY, ADR BUILDING AND THE ASSOCIATED TANKS, EXTERNAL STORAGE POND, AND ALL INTERCONNECTING PIPELINES. NECESSARY PROCEDURES SHALL BE FOLLOWED TO PREVENT THE RELEASE OF CYANIDE.

Implementation:

Design, construction, operation, and maintenance of the process components involving cyanide will adhere to the Cyanide Containment Policy. Any action or reaction undertaken by a CC&V employee will not occur until the potential effect on cyanide containment is assessed.

Education:

This Policy will be distributed to all CC&V Process Department employees and will be specifically addressed in new miner and annual refresher training.

All employees with access to the cyanide containment system (VLF/ADR) will be required to know the general cyanide containment features of the facilities in order that they will not compromise (adversely affect) that containment with their actions.

Design (containment, transfer, application, storage, and makeup):

Equipment, structures, or facilities involving cyanide containment will be reviewed by a properly qualified CC&V employee, assisted as appropriate by qualified consultants, to ensure that the risks of cyanide release are appropriately identified, assessed, and minimized or prevented. Designs and specifications shall be developed as necessary to achieve and maintain containment of cyanide.

Construction (implementation of designs):

Construction will adhere to approved designs unless substantive changes are reviewed and approved. Construction activities will be coordinated with operations to assure cyanide containment.

Operations (Reagent supply, makeup, storage, transfer, application, and other beneficiation steps involving cyanide):

The cyanide containment system and the components of cyanide solution conveyance application, removal, and recovery will be reviewed for integrity on a routine basis. This will include regular inspections of operating conveyance and application systems to

ensure that cyanide will remain within containment in the event of an incident. Procedures developed in connection with this policy will include an appropriate preventive maintenance ("PM") program to maintain, actively test (as appropriate), or replace critical elements of the system associated with the use of cyanide.

Maintenance (Preventative, routine, emergency, and new construction):

No maintenance activity involving cyanide containment systems will be undertaken until those familiar with the work and area involved have planned activities to prevent a release of cyanide outside containment.

Emergency Response (Actions taken in the event of a release):

Cyanide released outside containment will be addressed as directed by the Spill Prevention Control and Countermeasure (SPCC) Plan and the Cyanide Emergency Response Plan (CERP). A release of cyanide outside containment will require a review of the incident to identify additional preventative measures as appropriate and to assure conformance with the provision of the Mined Land Reclamation Act, Hard Rock Rules, and our approved MLRB permit.

_____ _____

Raymond G. DuBois Date
Vice President & General Manager

Revision No	Revision Date	By Whom	Description
01	September 25,2006	P. Roberts	Initial release of document
02	February 12, 2007	G. Goodrich	Plan Updates
03	January 8. 2008	P. Roberts	Replace RWL w LN
04	July 1, 2009	P. Roberts	Name chg & CAR-CCV-2008-002 Update
05	June 2, 2010	P Roberts	Remove reference to ESP
06	August 17, 2010	P Roberts	Change Guenther to DuBois
07	August 31, 2012	P. Roberts	Transfer from EMS to HSMS

APPENDIX D

FORMULAS FOR NEUTRALIZING CYANIDE

FORMULAS FOR NEUTRALIZING CYANIDE

The destruction of cyanide with chlorine involves using 8 parts of CL2 to one part of NaCN. The calcium hypochlorite that is used contains 65% available CL2.

For a 1000 gallon spill containing 2 pounds per ton cyanide, use 51 pounds of calcium hypochlorite.

Some useful numbers:

One (1) gallon water weighs .00418 tons

One (1) ton water has 239.23 gallons

One (1) pound NaCN (not CN) requires:

3-1/4 gallons household bleach,

1-1/4 gallons commercial sodium hypochlorite, or

2-1/4 pounds dry calcium hypochlorite.

There are 100 pounds of calcium hypochlorite per container; therefore, one drum will treat 2000 gallons. Exact measurement is not necessary, however, it would be better to over estimate.

Solutions must be dilute solutions. Recommendation is to treat a maximum 1% NaCN solution with a maximum 1% hypochlorite solution, mixing slowly by adding 10% of hypochlorite every 1 to 3 minutes while stirring.

PH must be controlled to avoid cyanogen chloride release.

APPENDIX E

STORMWATER RELEASE FORM

Appendix E. CC&V SRP Plan

Secondary Containment
Contained Storm Water Release Form

(Completed Every Time Storm Water is Released From Secondary Containment)

Date of Release	Person Releasing Storm Water	Quantity Released	Oily Sheen?	Area Released From	If Treated, Describe Treatment

APPENDIX F

CC&V ERP/SPCC TRAING RECORD

APPENDIX G

CC&V TANK VISUAL INSPECTION AND INTEGRITY TESTING

CC&V TANK VISUAL INSPECTION AND INTEGRITY TESTING (Page 1 of 2)

Tank No. or Container	Tank / Container Material	Volume Tank	Units	Contents of Tank or Container	Visual Inspection	Integrity Testing[1]	Location or Comment
Tanks and Containers INSIDE the Ironclad Facility							
OTS-1	Cylindrical Steel Tank	658	gal	Rock Drill Oil	Monthly		Ironclad Facility - Old Truck Shop Oil Room
OTS-2	Cylindrical Steel Tank	658	gal	Rock Drill Oil	Monthly		Ironclad Facility - Old Truck Shop Oil Room
OTS-3	Cylindrical Steel Tank	1,248	gal	HD Transmission Oil	Monthly	These Tanks were tested	Ironclad Facility - Old Truck Shop Oil Room
OTS-4	Cylindrical Steel Tank	1,248	gal	Antifreeze/Ethylene Glycol	Monthly	by Acuren in June 2011.	Ironclad Facility - Old Truck Shop Oil Room
OTS-5	Cylindrical Steel Tank	4,888	gal	Hydraulic Oil	Monthly	They will be re-tested in	Ironclad Facility - Old Truck Shop Oil Room
OTS-6	Cylindrical Steel Tank	4,888	gal	15W-40 Oil	Monthly	2016 / 2017 if still in service	Ironclad Facility - Old Truck Shop Oil Room
OTS-7	Cylindrical Steel Tank	11,844	gal	Used Oil	Monthly		Ironclad Facility - Old Truck Shop Oil Room
OTS-9	Cylindrical Steel Tank	658	gal	Drive Train 30W Oil	Monthly		Ironclad Facility - Old Truck Shop Oil Room
OTS-10	Cylindrical Steel Tank	658	gal	E.P. 80W-90 Oil	Monthly		Ironclad Facility - Old Truck Shop Oil Room
Tanks and Containers INSIDE the New Truck Shop							
NTS-1	Steel Cylindrical Tank	12,000	gal	Used Oil	Monthly		New Truck Shop Oil Room
NTS-2	Steel Cylindrical Tank	6,000	gal	30 Wt Transmission Fluid	Monthly	These Tanks were tested	New Truck Shop Oil Room
NTS-3	Steel Cylindrical Tank	6,000	gal	Final Drive Oil	Monthly	by Acuren in June 2011.	New Truck Shop Oil Room
NTS-4	Steel Cylindrical Tank	6,000	gal	XL 400 Motor OIl 15W40	Monthly	They will be re-tested in	New Truck Shop Oil Room
NTS-5	Steel Cylindrical Tank	6,000	gal	HD Trans 10 Oil	Monthly	2016 / 2017 if still in service	New Truck Shop Oil Room
NTS-6	Steel Cylindrical Tank	3,000	gal	Antifreeze Premix	Monthly		New Truck Shop Oil Room

[1]40 CFR Part 112.7(d) requires that for bulk storage containers, periodic integrity testing of containers and leak testing of valves and piping must be conducted. Steel Tank Institute SP001-03 Inspection of Shop Fabricated ASTs will serve as the reference method for testing. American Petroleum Institute 653 may also be used for tanks and API Standard 570 may be used for piping. Appropriate integrity testing may be done by a CC&V employee providing the employee has received training by the company that manufactures the device used to conduct the testing. For example, if the CC&V employee uses a model "25DL plus" by Olympus to conduct ultrasonic tests, then he/she must verify in writing that he/she has completed a training course by Olympus or has been instructed by a competent instructor in the proper use of the equipment. This written record of training must be kept with the current SPCC plan. Previous training and experience can suffice if the employee documents use of the equipment and signs a statement that he/she is competent in the use of the device in question. This record must be kept with the current SPCC plan. It is the opinion of the certifying engineer that this procedure of allowing a qualified CC&V employee to conduct the testing is "equivalent environmental protection" under the SPCC regulations at 40 CFR Part 112.

CC&V TANK VISUAL INSPECTION AND INTEGRITY TESTING (Page 2 of 2)

Tank No. or Container	Tank / Container Material	Volume Tank	Units	Contents of Tank or Container	Visual Inspection	Integrity Testing[1]	Location or Comment
Tanks and Containers at the Midway Fuel Farm							
MWFF- (1- 6)	Cyl. Single Wall Steel Tanks Mounted Horizontally (6 tanks)	30,000	gal	Off-road Diesel Fuel	Monthly	Since these tanks were all newly constructed in 2012 and the Steel Tank Institute Fireguard Documents and the Underwriters Lab Documents were provided by Eaton Tank, no further integrity testing will be required until 2025.	Midway Fuel Farm
MWFF-7	Cyl. Double Wall Steel Tank Mounted Horizontally	12,000	gal	Gasoline	Monthly		
MWFF-8	Cyl. Double Wall Steel Tank Mounted Horizontally	1,000	gal	DFO#1 (Kerosene)	Monthly		
MWFF-9	Cyl. Double Wall Steel Tank Mounted Horizontally	1,000	gal	DFO#2 (Light Vehicle Diesel)	Monthly		
MWFF-10	Cyl. Double Wall Steel Tank Mounted Horizontally	1,000	gal	Diesel Additive (anti-gel)	Monthly		
MWFF-11&12	Rectangular Steel Single Wall Tanks (2)	750	gal	Antifreeze	Monthly		
MWFF-13&14	Rectangular Steel Single Wall Tanks (2)	750	gal	10 Wt Oil (Hydraulic)	Monthly		
MWFF-15&16	Rectangular Steel Single Wall Tanks (2)	750	gal	30 Wt OIl	Monthly		
MWFF-17&18	Rectangular Steel Single Wall Tanks (2)	750	gal	15W40 OIl	Monthly		
MWFF-19	Rectangular Steel Single Wall Tank for Oil Water Separator	4,000	gal	Oily Water	Monthly		
Adsorption Desorption Recovery Plant Generators							
ADRG-1	Steel Rectangular Belly Tanks Generator Units (4 @ 3,000)	12,000	gal	Diesel Fuel	Monthly	It is impractical to test these tanks due to the location of the generator units and the fact they rest directly on the ground. The visual inspections combined with adequate containment provide" equivalent environmental protecction" in the opinion of the certifying engineer.	
ADRG-2	Steel Rectangular Belly Tank Generator Units (1 @ 1,200)	1,200	gal	Diesel Fuel	Monthly		

[1]40 CFR Part 112.7(d) requires that for bulk storage containers, periodic integrity testing of containers and leak testing of valves and piping must be conducted. Steel Tank Institute SP001-03 Inspection of Shop Fabricated ASTs will serve as the reference method for testing. American Petroleum Institute 653 may also be used for tanks and API Standard 570 may be used for piping. Appropriiate integrity testing may be done by a CC&V employee providing the employee has received training by the company that manufactures the device used to conduct the testing. For example, if the CC&V employee uses a model "25DL plus" by Olympus to conduct ultrasonic tests, then he/she must verify in writing that he/she has completed a training course by Olympus or has been instructed by a competent instructor in the proper use of the equipment. This written record of training must be kept with the current SPCC plan. Previous training and experience can suffice if the employee documents use of the equipment and signs a statement that he/she is competent in the use of the device in question. This record must be kept with the current SPCC plan. It is the opinion of the certifying engineer that this procedure of allowing a qualified CC&V employee to conduct the testing is "equivalent environmental protection" under the SPCC regulations at 40 CFR Part 112.

ATTACHMENT A

ADR SPCC PLAN

SPILL PREVENTION CONTROL AND COUNTERMEASURES PLAN for ADSORPTION DESORPTION RECOVERY PLANT at the CRESSON PROJECT

Cripple Creek & Victor Gold Mining Company
near Victor, Colorado

Prepared for:
Cripple Creek & Victor Gold Mining Company
P.O. Box 191
100 North 3rd Street
Victor, Colorado 80860

Prepared by:
Geosyntec Consultants

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SPILL PREVENTION CONTROL and COUNTERMEASURES PLAN and MATERIALS CONTAINMENT PLAN for the ADSORPTION DESORPTION RECOVERY FACILITY at CRIPPLE CREEK & VICTOR GOLD MINING COMPANY'S CRESSON PROJECT

NEAR VICTOR, COLORADO in TELLER COUNTY, COLORADO

1.0 Purpose and Scope

This Spill Prevention Control and Countermeasures Plan ("SPCC") for the Adsorption Desorption Recovery ("ADR") Facility is to be used by CC&V Team Members (all employees) of the Cripple Creek & Victor Gold Mining Company at the Cresson Project Operations, located in the Cripple Creek Mining District of Colorado. This Plan is intended to be used alongside the main SPCC plan for the CC&V Cresson Project, but contains additional information such as materials, procedures and processes specific to the ADR facility. The procedures and policies described herein apply to the activities of all CC&V Team Members and to other persons on site under CC&V supervision or contract. Distribution of this Plan is to be restricted to CC&V employees, contractors, and applicable government agencies/organizations.

It is CC&V's policy to prevent releases to the environment of petroleum products and hazardous substances that may pose a threat to human health and/or the environment. Any releases that do occur and which are not in compliance with applicable Federal and State requirements expressed in site-specific permits or applicable regulations must be appropriately contained, remediated, recorded and reported.

This SPCC is a combined plan that also serves to meet the requirements of the Colorado Division of Reclamation, Mining, and Safety ("DRMS") for a Materials Containment Plan. The specific requirements of the SPCC regulations at 40 CFR Part 112 pertain mainly to oil products and used oil, and this plan is crafted in the spirit of those regulations. For example, engineered secondary containment, periodic inspections, security, training, agency reporting in the event of a spill, record-keeping, and spill clean-up measures are integral parts of this plan.

1.1 Management Commitment of Resources

The CC&V facility management is committed to provide the necessary manpower, equipment, and materials to control and remove any quantity of oil discharged as outlined in this Spill Response Plan and Spill Prevention Control Countermeasures Plan per §112.7(d)(2) of 40 CFR Part 112.

Signed: _____ Title: General Manager

Printed Name: Jack Henris Date: 12/15/15

1.2 Engineer's Statement and Certification

I, Ryan A. Wymore, P.E., hereby attest that I am familiar with the CC&V ADR facility and I also understand the Rules and Regulations promulgated under 40 CFR Part 112 Oil Pollution Prevention and how they apply. On July 17, 2002, EPA published a final rule that amended the SPCC regulations *(67 FR 47042)*, which became effective on August 16, 2002. The final rule included compliance dates in §112.3 for preparing, amending, and implementing SPCC Plans. The original compliance dates were amended on January 9, 2003 (68 FR 1348), again on April 17, 2003 (68 FR 18890), a third time on August 11, 2004 (69 FR 48794), a fourth time on February 17, 2006 (71 FR 8462), and a fifth time on May 16, 2007 (72 FR 27443). These extensions provided additional time for the regulated community to understand the 2002 SPCC amendments (67 FR 47042), the clarifications developed by EPA during the course of litigation settlement proceedings (69 FR 29728), and alleviated the need for individual extension requests. On June 19, 2009, EPA published in the *Federal Register* a SPCC compliance date extension for all facilities until November 10, 2010. Facilities must amend or prepare, and implement SPCC Plans by the compliance date in accordance with revisions to the SPCC rule promulgated since 2002. This SPCC document was written to comply with the spirit of applicable requirements (as amended) by the November 10, 2010 deadline.

I personally visited the site on March 9th, 2015 for the purposes of gathering information in order to prepare the ADR SPCC plan.

The SPCC Plan has been prepared in accordance with good engineering practice, including considerations given for applicable industry standards as well as the requirements of 40 CFR Part 112. Procedures for inspecting the tanks and containers have been established and are herein incorporated. Based on my professional engineering judgment, this SPCC Plan is adequate for the ADR facility.

This certification in no way relieves the owner or operator of the facility of his/her duty to prepare and fully implement this SPCC plan in accordance with the requirements of 40 CFR Part 112. This plan is valid only to the extent that the facility owner or operator maintains, tests, and inspects equipment, containment, and other devices as prescribed in this Plan.

Ryan A. Wymore, P.E. (Colorado P.E.
Registration Number 39602)

Date: 07/09/15

Seal:

2.0 Chemicals & Reagents at CC&V's Adsorption Desorption Recovery Facility ("ADR")

Chemical reagents include caustic, acidic and cyanide solutions. The Adsorption Desorption Recover Facility ("ADR") uses chemicals and reagents to recover precious metals from ore processed at the CC&V mine. The location of the ADR facility is identified on Figure 2 in the main plan.

2.1 Bulk Storage of Water Treatment Chemicals & Reagents

Adsorption Desorption Recovery Facility – See Figure A1 for a site plan.

Table A1 lists the products contained in bulk/solution tanks or other equipment at the ADR.

3.0 Description of ADR Facility and Chemical Reagents Used

Overview of ADR Facility

The ADR facility is located in the southern portion of CC&V's Cresson Project, approximately 1 mile west of the town of Victor, CO. The ADR Plant uses process (minerals beneficiation) reagents to recover precious metals from the ore. Diluted cyanide leach solution (typically 0.01% to 0.02% or 100 – 200 ppm) is directed to and from the Valley Leach Facility (VLF) through an HDPE/steel piping system. Pregnant lines are steel and barren lines are steel/HDPE depending on location.

Bulk Chemicals and Reagents Delivery, Storage, and Handling

The facilities for unloading, mixing, and storage of chemicals and reagents are located within the security perimeter of the mine—physically distant (1-2 miles) from any dwellings or communities. See Figure A1 for a site plan. In addition, **the ADR building and storage areas are constructed entirely upon the Arequa Gulch Valley Leach Facility ("AGVLF") liner system**. Therefore, impacts to public health and safety from delivery, storage and handling of chemicals at the ADR should be minimal.

Any spills will be contained inside of the ADR building itself, or within the AGVLF lined system.

Delivery trucks are staged on a concrete pad west of the plant. This unloading and storage area are protected by bollards to prevent accidental collisions between trucks and storage tanks.

Mixing of chemicals takes place either inside the ADR plant or within the tanks located outside the building on the west and north sides. See Figure A1.

Storage of chemicals and reagents in the quantities shown in Table A1 are within the chemical storage area, within operating systems, and within pipes, pumps, and other appurtenances as further described below:

Sodium Hydroxide - NaOH liquid is stored directly west of the ADR in a 20,000-gallon tank within concrete secondary containment and within the tertiary containment of the lined area of the VLF. The concrete containment sump is equipped with a float-activated pump that would return fluid to the plant circuit in the event of a release. A release outside the concrete containment would remain on the VLF liner and migrate north toward the main liner system.

Hydrochloric Acid - HCl liquid is stored directly west of the ADR in an 8,200-gallon, double-walled tank within concrete containment and within the lined area. Releases outside the tank containment would flow north, completely contained within the liner.

Antiscalant - Antiscalant liquid is not a hazardous chemical. It is stored in various locations at the ADR Plant in poly-plastic 600 to 8,000 gallon capacity single-walled, foam-insulated tanks. The ADR is located on liner that drains to the VLF. Antiscalant is also stored within the VLF in poly plastic insulated tanks various sizes (see Table A1 for container sizes).

Release of Antiscalant should be controlled, even though the residue is not hazardous. Complete removal of impacted soils is not required. Contaminated soils may be placed on the VLF if desired.

Secondary and Tertiary Containment at the ADR Facility - Several redundant containment features exist at the ADR including: (1) liner extends under the building itself forming a continuous barrier to guard against spills reaching the ground water; (2) the ADR building has a concrete floor and curbing that provides secondary containment for spills from reagent tanks; and (3) some of the tanks are double walled construction.

Any spills or releases of materials from the tanks / containers located outside of the ADR Plant would be contained by the liner and would report to the AGVLF. Spills or releases from the tanks inside the plant would be captured within the building itself.

4.0 Spill Prevention and Spill Response Procedures

This section summarizes the routine operating procedures that must be followed to prevent releases of chemicals or reagents subject to control under this SPCC plan. This Section also provides procedures to follow in the event of a specific type of chemical spill and procedures to monitor the potential migration of spilled materials. These procedures are the subject of training sessions for CC&V Team Members, and they apply to any activities conducted by CC&V at the Cresson Project.

4.1 General Spill Prevention Procedures

The following procedures primarily relate to on-site movement and use of chemicals. Team Members involved in chemical handling (including oils) will receive instruction on safe handling of storage containers and materials handling during product transfers:

- Storage Containers: (1) Driving vehicles (trucks and forklifts) carefully and in accordance with conditions to avoid collisions or ruptures of storage containers; and (2) constructing adequate berms and barriers to protect storage containers.

- Storage Containers: Making certain that there is adequate clearance when positioning a truck or equipment adjacent to storage areas or distribution points and ensuring that the operator has examined the surroundings to identify where a spill would go and how they would control it.

- Storage Containers: Checking to make sure containers are securely placed to prevent tipping and spilling and in a manner that prevents collisions with mobile equipment.

- Transfer of Materials: Examining fittings and transfer lines or hoses to be assured of tight-fits that will not come apart during transfer.

- Transfer of Materials: Examining fittings to assure they are in proper working order and do not leak or lose fluid during transfer.

- Transfer of Materials: Ensuring that valves are closed and transfer pipes are drained or contained prior to disconnect.

- Transfer of Materials: Examining the "weak spots" of any transfer procedure and visualizing where the substances would go and what control measures would be used should a transfer line break or leak. Taking a second look at these "weak points" to see if anything can be done to further prevent a release. "Cleaning up" spills.

Inspection of storage facilities is completed routinely (Table A1). The ADR Plant storage facilities are checked during routine operations by facility personnel to identify and repair leaks and to maintain containment. Inspections include checking for visible signs of leakage, checking containers and piping for any sign of weakness, tearing or rupturing, and checking for cracks or breaks in containment berms, as well as for any significant reduction in the capacity of the containment. Any observed problem will be immediately reported to a supervisor and repaired. Spillage will be cleaned up as appropriate for the substance involved. Inspections are recorded and the records retained onsite in the CC&V ER Department.

Labels on storage containers are also part of the chemical spill prevention program and are posted at all material storage areas. These labels identify the contents of the permanent storage vessels and applicable sections of the fire code. These labels are posted to remind team members of the nature of the material, to promote safe practices, and to provide clear direction about the spill prevention and control procedures to be employed.

4.2 Security

The ADR is surrounded by a fence, well lit during night hours, and is manned 24/7. There is additional security for the entire CC&V facility as described in the SPCC plan. Any spills or leaks that are found will be reported to the Supervisor or Carlton Security. They will, in turn notify Environmental Resources.

4.3 Spill Response Procedures and Countermeasures for Specific Types of Chemicals

A spill of chemicals or reagents subject to this SPCC plan will receive immediate and judicious action. This section outlines the step-by-step procedures to be followed in the event of an on-site accident or spill resulting in a release of materials subject to this SPCC plan.

4.4 Petroleum-Based Oils and Fuels

Petroleum-based oils or fuels stored at the ADR Facility is limited to generators with diesel fuel "belly" tanks, and electrical transformers, located outside on the east side of the building. The type and quantities of oil in these transformers is listed in Table A1. Occasionally small vehicles such as mine supervisor trucks and delivery trucks will be in the general vicinity of the ADR Facility. Such vehicles conceivably could have spills or tank ruptures nearby.

IN THE EVENT OF AN ACCIDENT INVOLVING A PETROLEUM-BASED FUEL / OIL SPILL OR LEAK, FOLLOW THESE STEPS:

- Attempt to stop or contain the flow of material.
- Notify immediate supervisor by radio. Supervisors are to immediately notify Environmental Resources. Environmental Resources will make the necessary external notifications or will authorize them to be made by others.
- In the case of an injury to a person, ensure that Safety is notified. If qualified, and if necessary, administer first aid and medical treatment.
- Begin clean-up activities promptly. Spilled material should be pumped into approved containers. If pumping is not possible, sand, dirt, or absorbent material should be placed to absorb the oil or fuel. Once absorption is complete, contaminated material should be collected in barrels and disposed of in a manner and at a location specifically approved by Environment Resources for this material. Sorbent pads that have been used to remove petroleum products, including fuels, antifreeze, and oils, can be disposed of as a conventional solid waste and can be placed into the commercial solid waste containers (dumpsters) at various locations around the property, provided no solvents or other potentially hazardous wastes have been added. Sorbent materials that have been saturated with oil but are not dripping can be disposed as conventional solid waste.
- Complete an Internal Spill Report in the WMRS and turn in to a supervisor as soon as possible but in no case later than end of the shift.

4.4.1 Diesel Generators at ADR ("Adsorption Desorption Recovery Plant")

Six Caterpillar diesel generator units (4 Model 3516B's and one 3512) provide stand-by power to the ADR in the event of an electrical power outage at the facility. The four larger generator units are constructed with built-in secondary containment tanks (referred to as "rupture tanks"). The capacity of diesel on the larger units is 3,000 gallons each. The smaller unit has a 1,200 gallon diesel capacity but does not have the secondary containment of the larger units.

4.4.1.1 Storage and Use of Diesel at the ADR Generators

Diesel fuel is stored in the belly tanks as described above.

4.4.1.2 Quantities of Diesel Stored and Secondary Containment at the ADR Generators

A total of 13,200 gallons of diesel capacity exist in the belly tanks of the ADR generators. Secondary containment is provided by the "rupture tanks" described above and the ground surrounding the units. The larger units have 3,300 gallons of secondary containment; whereas spills from the 1,200-gallon unit can be partially contained by the surrounding soil and rock surface. Jersey barricades *do* provide collision protection and a limited amount of secondary containment for the smaller generator.

4.4.1.3 Spill Potential of Diesel at the ADR Generators

The spill potential from the ADR generator diesel tanks is rated as low, due to the fact that re-fueling is infrequent.

4.4.1.4 Spill Prevention and Control at the ADR Generators

The generators are situated on elevated concrete pads and are unlikely to be impacted by vehicular accidents. Tank rupture is a possibility but the units are new, modern, and secure structures that are inspected informally on a regular basis.

4.4.1.5 Spill Countermeasures (Clean-up Procedures) at the ADR Generators

Section 3.2 provides the **general spill response procedures** for use involving spills around the ADR generators. The following narrative provides additional detail on spill clean-up.

Clean-up of Spills Around the ADR Generators

Clean up of oil spills can be addressed with sorbent materials (pads, oil dry, "kitty litter", and/or sand) by placing these materials directly into the spilled pool of oil or grease. Sorbent pads that have been used to remove petroleum products, including antifreeze, greases and oils, can be disposed of as a conventional solid waste and can be placed into the commercial solid waste containers (dumpsters) at various locations around the property, provided no solvents or other potentially hazardous wastes have been added. Sorbent materials that have been saturated with oil but are not dripping can be disposed as conventional solid waste.

Leaks or spills of petroleum products during transport or during product transfer will create an oil stain on the ground surface. CC&V's clean-up policy is as follows: If the majority (>50%) of the area consisting of 9 square feet (3 feet by 3 feet) is affected (stained), then the affected area will be removed (i.e., the soil and oil mixture) and placed in the blast hole stemming material pile or as directed by Environmental Resources.

Free liquids with an oily sheen that are collected during mobile servicing in the field will be pumped or gravity fed into appropriate containers. Oils mixed with water will be hauled to the oil skimmer sump located at the Truck Shop Wash Bay or shipped off site for recycle.

4.4.1.6 Inspections and Tank Integrity Testing at the ADR Generators

The ADR Generator diesel tanks will be inspected on a monthly basis and the form in Table A1 will be used to document the inspection. Records of these inspections will be kept on file in Environmental Resources.

Tank integrity testing will be performed according to the plan provided in Appendix G.

4.4.1.7 Conformance with Regulations at the ADR Generators

Applicable state and local guidelines are assumed to be the same as the Federal Regulations at 40 CFR Part 112, and therefore, under 40 CFR Part 112 the oil storage containers and secondary containment at the Fuel Farm Facility meet the intent of the oil pollution prevention regulations.

4.4.2 Storage and Use of Petroleum Products in Electrical Gear

Oil is used in transformers to prevent overheating. Various sizes of transformer units require different amounts of oil, as indicated in Table A1.

4.4.2.1 Quantities of Material Stored and Secondary Containment for Electrical Gear

See the inventory table in Table A1.

4.4.2.2 Spill Potential of Materials Contained in Electrical Gear

The overall spill potential for electrical transformers is low. The units are new, modern installations, and are mounted on concrete slabs.

4.4.2.3 Spill Prevention and Control for Electrical Gear

In the Preamble to 40 CFR Part 112 as given in the Federal Register, July 17, 2002, pages 47054-5, it states: "Facilities that use oil operationally include *electrical substations*, **facilities containing electrical transformers, and certain hydraulic or manufacturing equipment. The requirements for bulk storage containers may not always apply to these facilities.** *Facilities with equipment containing oil for ancillary purposes are not required to provide the secondary containment required for bulk storage facilities (§112.8(c)).*" **Based on the preceding regulatory discussion, secondary containment is not required for electrical transformers. However, the transformers sit on concrete pads, and are labeled with signs, and are located in highly visible areas. In the unlikely event that a transformer should completely rupture, the oil inside could conceivably land on the concrete pads, or the ground surrounding the units. The most likely amount spilled is expected to be less than 10 gallons. Refer to the CC&V Facility SRP and SPCC plan for spill contingency plan operations.**

4.4.2.4 Spill Countermeasures (Clean-up Procedures) for Electrical Gear

Clean up of oil spills can be addressed with sorbent materials (pads, oil dry, "kitty litter", and/or sand) by placing these materials directly into the spilled pool of oil or grease. Sorbent pads that have been used to remove petroleum products, including antifreeze, greases and oils, can be disposed of as a conventional solid waste and can be placed into the commercial solid waste containers (dumpsters) at various locations around the property, provided there is no free oil, and that no solvents or other potentially hazardous wastes have been added. Sorbent materials that have been saturated with oil but are not dripping can be disposed as conventional solid waste.

Leaks or spills of petroleum products during transport or during product transfer will create an oil stain on the ground surface. CC&V's clean-up policy is as follows: If the majority (>50%) of the area consisting of 9

square feet (3 feet by 3 feet) is affected (stained), then the affected area will be removed (i.e., the soil and oil mixture) and placed in the blast hole stemming material pile or as directed by Environmental Resources..

Free liquids with an oily sheen that are collected during mobile servicing in the field will be pumped or gravity fed into appropriate containers. Oils mixed with water will be hauled to the oil skimmer sump located at the Truck Shop Wash Bay or shipped off site for recycle.

4.4.2.5 Inspections and Tank Integrity Testing for Electrical Gear

Monthly visual inspections of electrical transformers will be conducted and documented on the form in Table A1. Electrical gear will not be subject to the tank integrity testing protocols.

4.4.2.6 Conformance with Regulations for Electrical Gear

Applicable state and local guidelines are assumed to be the same as the Federal Regulations at 40 CFR Part 112, and therefore, under §112.7(j) the electrical transformer facilities discussed in this section are *in conformance* with applicable requirements.

4.5 Liquids at the ADR Plant – Cyanide Solutions, Sodium Hydroxide, and Hydrochloric Acid

IN THE EVENT OF AN ACCIDENT INVOLVING A SPILL OR LEAK OF REAGENTS OR CHEMICALS AT THE ADR PLANT, FOLLOW THESE STEPS:
(If you are not familiar with the chemicals and the appropriate responses do not attempt to respond but call immediately for help).

General Procedure for Liquids at the ADR Plant

- Determine the nature and extent of the problem. DO NOT take any action until the proper course of action can be determined based on the nature and extent of the accident, spill, or leak.
- Notify immediate supervisor by radio. Supervisors are to immediately notify Safety and Environmental Resources
- Check the safety data sheet (SDS) for the material in question to make sure you know the hazards involved.
- Put on proper body and face protective gear, and breathing apparatus, if necessary. Check the safety data sheet (SDS) for proper PPE.
- In the case of an accident involving personal injury, ensure that Safety Department is notified and, if qualified, administer first aid and medical treatment.
- Attempt to stop or contain the flow of material.
- Begin clean-up activities. Spilled material should be pumped into approved containers. If pumping is not possible, sand, dirt, or absorbent material should be placed to absorb the spilled matrial. Once absorption is complete, contaminated material should be collected in barrels and disposed of in a manner and at a location specifically approved by Environment Resources for this material. Sorbent pads that have been used to remove liquids can be disposed of as a conventional solid waste and can be placed into the commercial solid waste containers (dumpsters) at various locations around the property, provided no solvents or other potentially hazardous wastes have been added. Sorbent materials that have been saturated with liquid but are not dripping can be disposed as conventional solid waste.
- Implement spill and spill-path monitoring (see below), if necessary.
- Complete an Internal Spill Report form (WMRS Site) and turn in to a supervisor as soon as possible but in no case later than end of the shift.

Cyanide Solutions, Sodium Hydroxide, and Hydrochloric Acid

IN THE EVENT OF AN ACCIDENT INVOLVING A SPILL OR LEAK, FOLLOW THESE STEPS:
(*If you are not familiar* with the chemicals and the appropriate responses do not attempt to respond but call immediately for help).

- Determine the nature and extent of the problem. DO NOT take any action until the proper course of action can be determined based on the nature and extent of the accident, spill, or leak.
- Notify immediate supervisor by radio. Supervisors are to immediately notify Safety and Environmental Resources (phone numbers are listed in section 6). See Appendix D for neutralization of cyanide solution.
- Put on proper body and face protective gear, and breathing apparatus, if necessary.
- In the case of an accident, ensure that Safety is notified and, if qualified, administer first aid and medical treatment.
- Attempt to stop or contain the flow of material.
- **Do not use the following procedure for high concentration cyanide such as at the bulk delivery area.**

  Begin detoxification activities, if necessary. In the case of cyanide, if solution is released outside lined areas onto the ground, detoxification is required. If Calcium Hypochlorite is used for detoxification, it will be necessary to maintain elevated pH levels (8-11) for the reaction to occur. In addition, cyanogen chloride gas can be generated. This gas is highly toxic and the area should be well ventilated. Alkaline chlorination detoxification can be accomplished using beads or by making an aqueous solution. Monitoring of chlorine levels will occur during use of this method to ensure that solutions with potentially toxic chlorine levels are not released. The Reportable Quantity for Calcium Hypochlorite is 10 pounds as released to the ground.

- Begin clean-up activities.
- Implement spill and spill-path monitoring, if necessary (see section 5.3).
- Complete an Internal Spill Report form.

4.6 Spill Path Monitoring

If a spill or leak has the potential to migrate from the point of occurrence, spill monitoring will be implemented following clean up. Development of the monitoring plan will be determined by the nature and extent of the spill and the potential environmental hazards created by the spill.

The potential for spills of fuel, oil, liquid sodium hydroxide, or other chemical reagents to migrate from the point of occurrence is minimal. These materials will be quickly absorbed into soil material or can be contained and captured on concrete slabs or building floors. If a spill of these materials has the potential to migrate to surface water, a berm(s) will be placed upgradient of the potential point of entry to the water and surface water monitoring will be implemented downstream, if necessary.

Solids spilled at the ADR plant will generally not migrate far from the point of origin unless the materials are spilled outside of containment during a rainstorm or snow-melt event. Therefore the spill path monitoring effort should be relatively simple, as there will be little or no migration of materials.

Spill monitoring equipment is available on site. Soil along the spill pathway will be monitored and decontaminated and/or moved as necessary. If there is a potential for the spill to migrate off-site, samples will be obtained expeditiously from down-gradient, existing surface and groundwater stations and any additional water monitoring points deemed appropriate to monitor the potential migration pathways. The spilled material also may be tested to evaluate the effectiveness of mitigation.

5.0 External Spill Reporting Procedures

5.1 Information for External Agency Reporting

Spill reporting is one the most critical elements in this SPCC. It is CC&V's policy for the first responder to notify their Supervisor or contact Carlton Security on the radio as the first step in reporting. The next step is equally important and involves contacting Environmental Resources. The Environmental Manager is the Environmental Response Coordinator ("ERC") for CC&V under the auspices of this SPCC Plan. As ERC, one of the Environmental Manager's duties is to make sure the external reporting is done in a timely manner in compliance with all permits and environmental regulations. The ERC or his designee will then follow through by contacting the appropriate agencies and any additional CC&V contacts or corporate contacts. In some instances, it may be appropriate for the ERC to contact people or governmental entities.

5.2 Personnel Training in Spill Procedures

Training for general spill prevention, control, countermeasures, and clean-up procedures will be conducted for all CC&V employees during annual Mine Health and Safety Administration ("MSHA") training held onsite or in Cripple Creek every April. Training Records will include the names of trainees, dates of training, and a list of spill prevention control and countermeasures that were covered in the training. The instructor's name will also be a part of the training record. An equivalent MSHA training record is sufficient to satisfy this requirement, providing that spill training is, in fact, covered in the Annual Refresher training held in April. See Appendix F for a sample training record.

The spill response program also includes specific training in clean up and detoxification for selected team members. At least one of the specially trained Team Members will be on site 24 hours/day, 7 days/week. In the event of a spill, these specially trained Team Members will be immediately dispatched to the site to assist in clean up and detoxification efforts. Appropriate equipment will be available to detoxify solutions and to transport any spilled material for ultimate disposal in accordance with applicable laws and regulations.

In the event of a potentially hazardous material spill, the plan will be to contain, detoxify (if necessary), and clean up. Detoxifying agents for cyanide, acids, bases, and reagents will be kept available at the mine for use as needed.

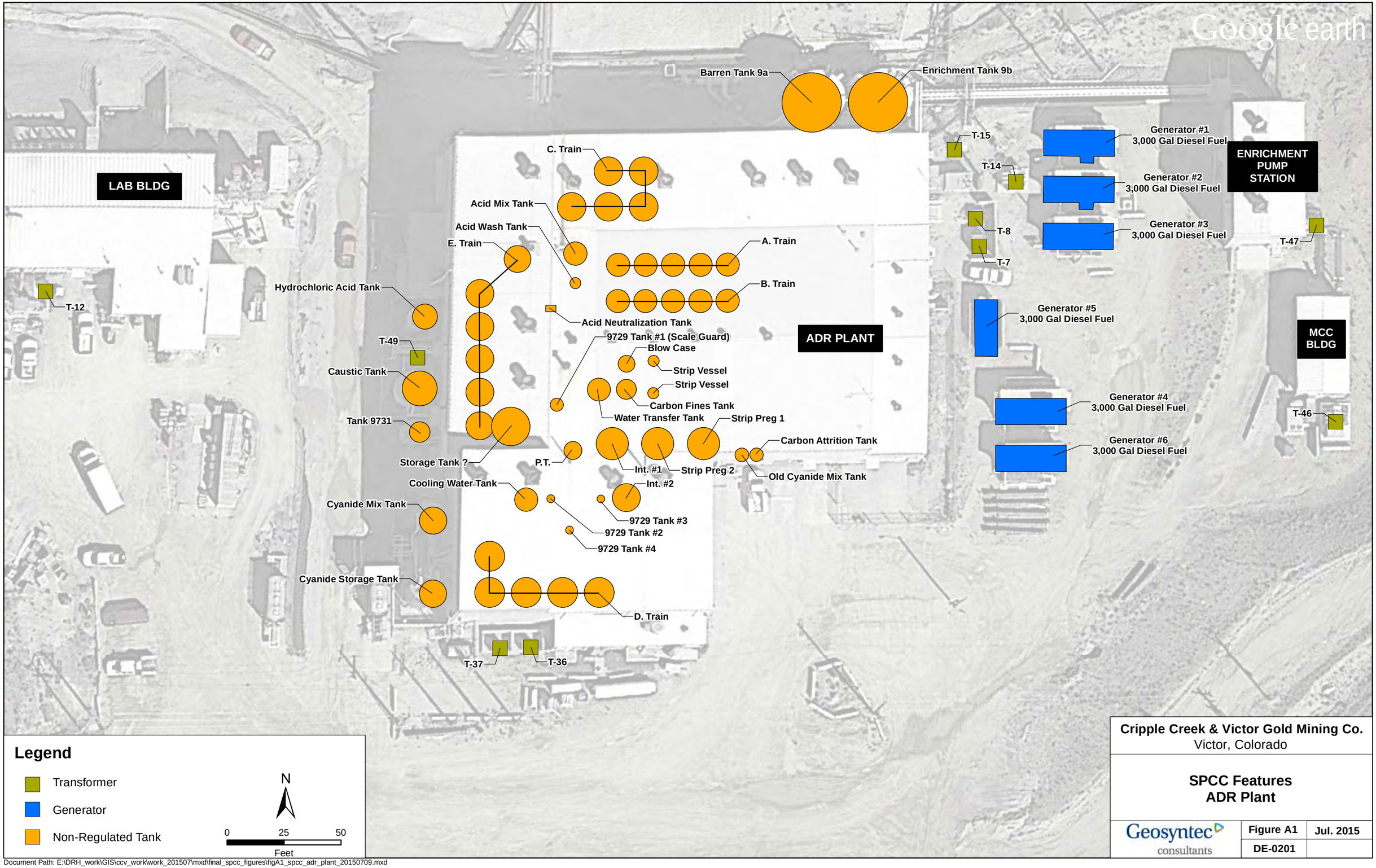
Clean-up personnel are trained in the proper detoxification procedures for each type of material. All employees are trained in the general procedures outlined in this SPCC plan and they are also trained to know where the plan can be accessed, where clean-up materials are located onsite, and how to deal with minor spills.

5.3 Team Member Safety

Operating areas of the mine are subject to the Mine Safety and Health Administration ("MSHA") regulations and practices. MSHA requires mining companies to comply with the comprehensive law governing the health and safety of employees. In addition to MSHA regulations and inspections, CC&V has a Safety Department that provides safety training courses to employees. This department also has the responsibility for the day-to-day inspection and correction of worker performance. Prior to an employee performing assigned duties, the person is trained to understand safety measures. In emergency situations, the rescuer can become a victim because the proper precautions have not been taken before attempting a rescue. With adequate training and knowledge of safety measures, most accidents can be avoided.

Safety conducts training for appropriate individuals concerning safe handling, clean up, and emergency medical treatment for the various materials used at the project. New employees are instructed upon hiring. Periodic refresher courses are given.

In case of a medical emergency, Team Members are trained to announce a "Code 90" on the mine radio. Safety, supervisors, and the Mine Rescue Team are trained in appropriate response procedures.



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Cripple Creek & Victor Gold Mining Co.
Victor, Colorado

SPCC Features
ADR Plant

Geosyntec consultants	Figure A1	Jul. 2015
	DE-0201	

Table A1 - ADR Facility Tank Inventory/Monthly Inspection Form

Name: _____ **Date:** _____ **Time:** _____ **Weather:** _____

Tank No. or Container	Tank / Container Material	Volume Tank	Units	Contents of Tank or Container	Location	Containment Type	Containment Volume (gallons)	Product Contained?	Follow-up Required?	Required Action	When Completed	Containment OK?	Comments
Adsorption Desorption Recovery Plant and Valley Leach Facility (VLF) Processing Chemicals													
ADRP-1	Above Ground Steel Tank	20,000	gal	Sodium Hydroxide ("Caustic")	ADR Building	Concrete containment cell w/underlying liner		Y N	Y N			Y N	
ADRP-2	Abv Ground Composite Tank	8,200	gal	Hydrochloric Acid	ADR Building	Concrete Building Sump & Underlying Synthetic Liner		Y N	Y N			Y N	
ADRP-3	Insulated Poly (Plastic) Tank	6,000	gal	Antiscalant	ADR Building			Y N	Y N			Y N	
ADRP-4	Abv Ground Composite Tank	7,000	gal	Hydrochloric Acid mix	ADR Building			Y N	Y N			Y N	
ADRP-5	Abv Ground Composite Tank	8,000	gal	Hydrochloric Acid wash	ADR Building			Y N	Y N			Y N	
ADRP-6	Above Ground Steel Tank	20,000	gal	Strip Pregnant Sol'n	ADR Building			Y N	Y N			Y N	
ADRP-7	Above Ground Steel Tank	20,000	gal	Strip Pregnant Sol'n	ADR Building			Y N	Y N			Y N	
ADRP-8	Above Ground Steel Tank	20,000	gal	Intermediate Sol'n	ADR Building			Y N	Y N			Y N	
ADRP-9a&b	Above Ground Steel Tanks	40,000	gal	Cyanide Barren Solution	ADR Building			Y N	Y N			Y N	
ADRP-10	Above Ground Steel Tank	4,500	gal	Pre-Treatment Solution	ADR Building			Y N	Y N			Y N	
ADRP-11	Above Ground Steel Tank	1,500	gal	Transfer Water	ADR Building			Y N	Y N			Y N	
ADRP-13	Above Ground Steel Tank	80,000	gal	Preg Solution (hill above plant)	ADR Building			Y N	Y N			Y N	
ADRP-16	Above Ground Steel Tank	20,000	gal	Pregnant Solution	ADR Building	VLF Liner	~232 acre VLF	Y N	Y N			Y N	
ADRP-18a,b	Two Poly Plastic 1200 gal Tanks	2,400	gal	Scale Guard 9729	ADR Building	ADR Building Sump and Concrete Liner		Y N	Y N			Y N	
ADRP-19	Poly Plastic Tank	600	gal	Scale Guard 9729	ADR Building	ADR Building Sump and Concrete Liner		Y N	Y N			Y N	
ADRP-21	Carbon Attrition Abv Grd Tank	1,500	gal	Carbon Slurry Solution	ADR Building	ADR Building Sump and Concrete Liner		Y N	Y N			Y N	
ADRP-22	Old Cyanide Mix Abv Grd Tank	1,500	gal	Cyanide Soln (Not in Service)	ADR Building	ADR Building Sump and Concrete Liner		Y N	Y N			Y N	
ADRP-24	Acid Neutralizing (Polyester Tank)	9,300	gal	Caustic Solution	ADR Building	ADR Building Sump and Concrete Liner		Y N	Y N			Y N	
ADR-HW1	Paint Residue Drum	55	gal	Residues from Aerosol Cans	W-Wall ADR	ADR Building Sump and Concrete Liner		Y N	Y N			Y N	
VLF-1	Two Insulated Poly (Plastic) Tanks	8,000	gal	Scale Guard 9731	VLF Ph 1 & 5	VLF Synthetic Liner		Y N	Y N			Y N	
VLF-2	Insulated Poly (Plastic) Tank	5,200	gal	Scale Guard 9731	VLF Ph 2 Preg Pumps	VLF Synthetic Liner		Y N	Y N			Y N	
VLF-4	Insulated Poly (Plastic) Tank	4,700	gal	Scale Guard 9731	VLF Ph 4 Preg Pumps	VLF Synthetic Liner		Y N	Y N			Y N	
VLF-5	Insulated Poly (Plastic) Tank	4,200	gal	Scale Guard 9731	VLF Ph 5 Preg Pumps	VLF Synthetic Liner		Y N	Y N			Y N	
Adsorption Desorption Recovery Plant Generators													
ADRG-1	Steel Rectangular Belly Tanks on Generator Units (4 @ 3,000)	12,000	gal	Diesel Fuel	East of ADR	Double Walled	3,300 (for each tank)	Y N	Y N			Y N	
ADRG-2	Steel Rectangular Belly Tank on Generator 3512 (1 @ 1200)	1,200	gal	Diesel Fuel	East of ADR	See text		Y N	Y N			Y N	
Adsorption Desorption Recovery Plant Transformers													
T-7	Steel Transformer	591	gal	Transformer Oil	Located East of ADR Building	Concrete Slab[1]	Not Required[2]	Y N	Y N			Y N	
T-8	Steel Transformer	258	gal	Transformer Oil	Located East of ADR Building	Concrete Slab[2]	Not Required[3]	Y N	Y N			Y N	
T-12	Steel Transformer	135	gal	Transformer Oil	Located South of Lab Building	Concrete Slab[3]	Not Required[4]	Y N	Y N			Y N	
T-14	Steel Transformer	1,344	gal	Transformer Oil	Located East of ADR Building	Concrete Slab[4]	Not Required[5]	Y N	Y N			Y N	
T-15	Steel Transformer	220	gal	Transformer Oil	Located East of ADR Building	Concrete Slab[5]	Not Required[6]	Y N	Y N			Y N	
T-36	Steel Transformer	200	gal	Transformer Oil	Located South of ADR Building	Concrete Slab[6]	Not Required[7]	Y N	Y N			Y N	
T-37	Steel Transformer	230	gal	Transformer Oil	Located South of ADR Building	Concrete Slab[7]	Not Required[8]	Y N	Y N			Y N	
T-46	Steel Transformer	631	gal	Transformer Oil	FR3 Fluid Enrichment Pump Bldg MCC	Concrete Slab[8]	Not Required[9]	Y N	Y N			Y N	
T-47	Steel Transformer	159	gal	Transformer Oil	FR3 Fluid Enrichment Pump Bldg MCC	Concrete Slab[9]	Not Required[10]	Y N	Y N			Y N	
T-49	Steel Transformer	227	gal	Transformer Oil	FR3 Fluid E-Train MCC (at ADR Facility)	Concrete Slab[10]	Not Required[11]	Y N	Y N			Y N	

[1]Most transformers are situated on concrete slabs or cribbing that provides some secondary containment in the event of a spill although it is not required (see also footnote 2).

[2]On page 47141 of the Federal Register dated July 17, 2002, it states that "oil filled electrical, operating, or manufacturing equipment is not a bulk oil storage container." On page 47055 it states:

"Facilities with equipment containing oil for ancillary purposes are not required to provide secondary containment required for bulk storage facilities."

ATTACHMENT B

PSES SPCC PLAN

SPILL PREVENTION CONTROL AND COUNTERMEASURES PLAN for PROCESS SOLUTION ENHANCEMENT SYSTEM FACILITY at the CRESSON PROJECT

Cripple Creek & Victor Gold Mining Company
near Victor, Colorado

Prepared for:
Cripple Creek & Victor Gold Mining Company
P.O. Box 191
100 North 3rd Street
Victor, Colorado 80860

Prepared by:
Geosyntec Consultants

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SPILL PREVENTION CONTROL and COUNTERMEASURES PLAN and MATERIALS CONTAINMENT PLAN for the PROCESS SOLUTION ENHANCEMENT SYSTEM FACILITY at CRIPPLE CREEK & VICTOR GOLD MINING COMPANY'S CRESSON PROJECT

NEAR VICTOR, COLORADO in TELLER COUNTY, COLORADO

1.0 Purpose and Scope

This Spill Prevention Control and Countermeasures Plan ("SPCC") for the Process Solution Enhancement System ("PSES") is to be used by CC&V Team Members (all employees) of the Cripple Creek & Victor Gold Mining Company at the Cresson Project Operations, located in the Cripple Creek Mining District of Colorado. This Plan is intended to be used alongside the main SPCC plan for the CC&V Cresson Project, but contains additional information such as materials, procedures and processes specific to the PSES facility. Even though the PSES Facility's total oil storage is below the SPCC threshold of 1,320 gallons, this plan is still intended to be utilized to manage oil products and other chemicals and reagents stored at the facility. The procedures and policies described herein apply to the activities of all CC&V Team Members and to other persons on site under CC&V supervision or contract. Distribution of this Plan is to be restricted to CC&V employees, contractors, and applicable government agencies/organizations.

It is CC&V's policy to prevent releases to the environment of petroleum products and hazardous substances that may pose a threat to human health and/or the environment. Any releases that do occur and which are not in compliance with applicable Federal and State requirements expressed in site-specific permits or applicable regulations must be appropriately contained, remediated, recorded and reported.

This SPCC is a combined plan that also serves to meet the requirements of the Colorado Division of Reclamation, Mining, and Safety ("DRMS") for a Materials Containment Plan. The specific requirements of the SPCC regulations at 40 CFR Part 112 pertain mainly to oil products and used oil, and this plan is crafted in the spirit of those regulations. For example, engineered secondary containment, periodic inspections, security, training, agency reporting in the event of a spill, record-keeping, and spill clean-up measures are integral parts of this plan.

1.1 Management Commitment of Resources

The CC&V facility management is committed to provide the necessary manpower, equipment, and materials to control and remove any quantity of oil discharged as outlined in this Spill Response Plan and Spill Prevention Control Countermeasures Plan per §112.7(d)(2) of 40 CFR Part 112.

Signed: _____ Title: General Manager

Printed Name: Jack Henris Date: 12/15/15

1.2 Engineer's Statement and Certification

I, Ryan A. Wymore, P.E., hereby attest that I am familiar with the CC&V PSES facility and I also understand the Rules and Regulations promulgated under 40 CFR Part 112 Oil Pollution Prevention and how they apply. On July 17, 2002, EPA published a final rule that amended the SPCC regulations *(67 FR 47042)*, which became effective on August 16, 2002. The final rule included compliance dates in §112.3 for preparing, amending, and implementing SPCC Plans. The original compliance dates were amended on January 9, 2003 (68 FR 1348), again on April 17, 2003 (68 FR 18890), a third time on August 11, 2004 (69 FR 48794), a fourth time on February 17, 2006 (71 FR 8462), and a fifth time on May 16, 2007 (72 FR 27443). These extensions provided additional time for the regulated community to understand the 2002 SPCC amendments (67 FR 47042), the clarifications developed by EPA during the course of litigation settlement proceedings (69 FR 29728), and alleviated the need for individual extension requests. On June 19, 2009, EPA published in the *Federal Register* a SPCC compliance date extension for all facilities until November 10, 2010. Facilities must amend or prepare, and implement SPCC Plans by the compliance date in accordance with revisions to the SPCC rule promulgated since 2002. This SPCC document was written to comply with the spirit of applicable requirements (as amended) by the November 10, 2010 deadline.

I personally visited the site on March 9th, 2015 for the purposes of gathering information in order to prepare the PSES SPCC plan. Although this facility does not meet the criteria to be covered by an SPCC plan (greater than 1,320 gallons oil storage), this plan is intended to provide certification that the intended practices carried out at the PSES Plant follow SPCC regulations.

The SPCC Plan has been prepared in accordance with good engineering practice, including considerations given for applicable industry standards as well as the requirements of 40 CFR Part 112. Procedures for inspecting the tanks and containers have been established and are herein incorporated. Based on my professional engineering judgment, this SPCC Plan is adequate for the PSES facility.

This certification in no way relieves the owner or operator of the facility of his/her duty to prepare and fully implement this SPCC plan in accordance with the requirements of 40 CFR Part 112. This plan is valid only to the extent that the facility owner or operator maintains, tests, and inspects equipment, containment, and other devices as prescribed in this Plan.

Ryan A. Wymore, P.E. (Colorado P.E. Registration Number 39602)

Date: 07/09/2015

Seal:

2.0 Chemicals & Reagents at CC&V's Process Solution Enhancement System Facility ("PSES")

Chemical (water treatment) reagents include coagulants, flocculants, polymers, diatomaceous earth, and magnetite. The Process Solution Enhancement System ("PSES") uses chemicals and reagents to treat and condition process water. The location of the PSES facility is identified on Figure 2 in the main plan.

2.1 Bulk Storage of Water Treatment Chemicals & Reagents

Figure B1 shows a site plan for PSES. Table B1 lists the products contained in bulk/solution tanks or other equipment at the PSES.

3.0 Description of PSES Facility and Chemical Reagents Used

3.1 Overview of PSES Operation

The PSES Plant is sized to treat the entire volume of process solution at CC&V in a two-stage process. The basic treatment steps consist of:

- Combining the incoming pregnant solutions in a large tank/clarifier allowing solids precipitation to occur ahead of the existing gold recovery plant.
- Recovering the nascent precipitates along with any carbon fines present in recovery plant effluent using a coagulation/sedimentation process.

Clarified effluent from the treatment plant is returned to the Arequa Gulch Valley Leach Facility ("AGVLF") through existing pumping/irrigation networks; solids are filter-pressed and bagged for transport and sale to a refiner to recover the contained gold associated with the fine carbon. Capture and sale of product solids prevents carbon from returning to the AGVLF where it can rob gold from pregnant leach solutions.

The system consists of three separate processes: (1) a Pregnant Solution ("PS") Stabilization Process to equilibrate the chemistry of the pregnant solutions prior to the Adsorption Desorption Recovery Plant ("ADR"); (2) a process solution enhancement system to remove solids from the barren solution before pumping it back to the AGVLF; and (3) a process to dewater the solids removed from the process solution. These processes are discussed in more detail below.

Pregnant Solution Stabilization: The PSES process provides the reaction conditions needed to help stabilize the PS prior to the ADR. The PS from AGVLF Phases 1, 2 and 5 flow to the PS Stabilization Tank. The PS from AGVLF Phase 4 flows to the Enrichment Tank, but could be directed to the stabilization tank if desired. The PS Stabilization Tank provides time for the precipitation reactions to come to completion and settles some of the precipitated solids. These solids are re-circulated to enhance the precipitation process. The system has the ability to periodically feed soda ash to aid the precipitation. The PS pump station transfers the PS to the ADR.

Barren Solution Enhancement: The system directs the Barren Solution ("BS") from ADR Plant Trains A, B, C, D and E to a CoMag process for suspended solids removal. CoMag uses chemical coagulation, flocculation and ballasted sedimentation to remove activated carbon fines, precipitates and other solids. The resulting enhanced barren ("EB") solution increases the operating life of the drip emitters on the AGVLF. The EB solution pump station transfers the EB solution to the barren tank.

Product Solids Recovery: An important benefit of the enhancement process is recovery of fine activated carbon solids from the BS. Additional gold recovery is expected from these solids as well.

3.2 Bulk Chemicals and Reagents Delivery, Storage, and Handling

The facilities for unloading, mixing, and storage of chemicals and reagents are located within the security perimeter of the mine—physically distant (2-5 miles) from any dwellings or communities. Figure B1 shows a site plan. In addition, **the PSES building and storage areas are constructed entirely upon the Arequa Gulch Valley Leach Facility ("AGVLF") liner system**. Therefore, impacts to public health and safety from delivery, storage and handling of chemicals at the PSES should be minimal.

Any spills will be contained inside of the PSES building itself, or within the AGVLF lined system.

Delivery trucks are staged on a concrete pad south of the plant. This unloading and storage area is protected by bollards to prevent accidental collisions between trucks and storage tanks.

Mixing of chemicals takes place either inside the PSES plant or within the clarifiers, thickeners, and stabilization tanks located outside the building on the west and north sides (see Figure B1).

Storage of chemicals and reagents in the quantities shown in Table B1 are within the chemical storage area, within operating systems, and within pipes, pumps, and other appurtenances as described in the following narrative:

PS Stabilization Tank – pregnant solution and stabilization; located outside plant, uncovered; made of concrete; 850,000 gallon capacity (95 ft dia. X 23 ft high).

CoMag Clarifier – solids separation; located outside plant, uncovered; made of concrete; 660,000 gallon capacity; (70 ft dia. X 23 ft high).

Gravity Thickener – temporary solids storage ahead of the filter press; located outside plant, uncovered; made of concrete; 285,000 gallons capacity; (50 ft dia. 26 ft high).

Coagulant Storage Tank – coagulant storage; located outside plant, covered; made of fiberglass; 20,000 gallon capacity (12 ft dia x 24 ft high).

Precoat Silo – storage of diatomaceous earth for use in filter press; located outside plant, covered; made of steel; 28,800 gallon capacity (14 ft dia. 40 ft high).

CoMag Train Process Tanks (eight tanks) – solids separation; located inside the plant, uncovered; made of concrete; 34,000 gallon capacity; (17.25 ft X 15.5 ft X 17 ft).

Wet Wells (two wells) – solution transfer pump feed; located inside plant, uncovered; made of concrete; 92,000 gallon capacity (32 ft X 16 ft X 24 ft).

Soda Ash Mix Tank – solution make-up; inside plant, covered; made of steel; 3,000 gallon capacity; (8 ft dia. X 8 ft high).

Precoat Mix Tank – Diatomaceous earth slurry make-up; inside plant, covered; made of steel; 1,260 gallon capacity; (6 ft dia. X 6 ft high).

PSE Thickener Polymer Mix Tank – polymer addition and solids conditioning; located inside plant, covered; made of steel; 2,590 gallon capacity (7 ft dia X 9 ft high).

PSE Conditioning Tank - polymer addition and solids conditioning; located inside plant, covered; made of steel; 1,690 gallon capacity (6 ft dia X 8 ft high).

Polymer Storage Tank – storing mixed polymer for process dosing; located inside plant, covered; made of steel; 20,000 gallon capacity (12 ft dia. X 24 ft high).

Magnetite Silo – storing magnetite ballast for CoMag Circuit; inside plant, covered; made of steel; 3,000 gallon capacity (8 ft dia. X 8 ft high).

Sodium Hydroxide Storage Containers (three totes) – storing a 40-50% concentration of NaOH; outside plant, covered, containers made of plastic; approximately 350 gallon capacity each.

Any spills or releases of materials from the tanks / containers located outside of the PSE Plant would be contained by the liner and would report to the AGVLF. Spills or releases from the tanks inside the plant would be captured within the building itself.

4.0 Spill Prevention and Spill Response Procedures

This section summarizes the routine operating procedures that must be followed to prevent releases of chemicals or reagents subject to control under this SPCC plan. This Section also provides procedures to follow in the event of a specific type of chemical spill and procedures to monitor the potential migration of spilled materials. These procedures are the subject of training sessions for CC&V Team Members, and they apply to any activities conducted by CC&V at the Cresson Project.

4.1 General Spill Prevention Procedures

The following procedures primarily relate to on-site movement and use of chemicals. Team Members involved in chemical handling (including oils) will receive instruction on safe handling of storage containers and materials handling during product transfers:

- Storage Containers: (1) Driving vehicles (trucks and forklifts) carefully and in accordance with conditions to avoid collisions or ruptures of storage containers; and (2) constructing adequate berms and barriers to protect storage containers.

- Storage Containers: Making certain that there is adequate clearance when positioning a truck or equipment adjacent to storage areas or distribution points and ensuring that the operator has examined the surroundings to identify where a spill would go and how they would control it.

- Storage Containers: Checking to make sure containers are securely placed to prevent tipping and spilling and in a manner that prevents collisions with mobile equipment.

- Transfer of Materials: Examining fittings and transfer lines or hoses to be assured of tight-fits that will not come apart during transfer.

- Transfer of Materials: Examining fittings to assure they are in proper working order and do not leak or lose fluid during transfer.

- Transfer of Materials: Ensuring that valves are closed and transfer pipes are drained or contained prior to disconnect.

- Transfer of Materials: Examining the "weak spots" of any transfer procedure and visualizing where the substances would go and what control measures would be used should a transfer line break or leak. Taking a second look at these "weak points" to see if anything can be done to further prevent a release.

Inspection of storage facilities is completed routinely (Table B1). The PSES Plant storage facilities are checked during routine operations by Process Department personnel to identify and repair leaks and to maintain containment. Inspections include checking for visible signs of leakage, checking containers and piping for any sign of weakness, tearing or rupturing, and checking for cracks or breaks in containment berms, as well as for any significant reduction in the capacity of the containment. Any observed problem will be immediately reported to a supervisor and repaired. Spillage will be cleaned up as appropriate for the substance involved. Inspections are recorded and the records retained onsite in the CC&V ER Department.

Labels on storage containers are also part of the chemical spill prevention program and are posted at all material storage areas. These labels identify the contents of the permanent storage vessels and applicable sections of the fire code. These labels are posted to remind team members of the nature of the material, to promote safe practices, and to provide clear direction about the spill prevention and control procedures to be employed.

4.2 Security

The PSES is surrounded by a fence, well lit during night hours, and is manned 24/7. There is additional security for the entire CC&V facility as described in the Main SPCC site plan. Any spills or leaks that are found will be reported to the Supervisor or Carlton Security. They will, in turn notify Environmental Resources.

4.3 Spill Response Procedures and Countermeasures for Specific Types of Chemicals

A spill of chemicals or reagents subject to this SPCC plan will receive immediate and judicious action. This section outlines the step-by-step procedures to be followed in the event of an on-site accident or spill resulting in a release of materials subject to this SPCC plan.

4.3.1 Petroleum-Based Oils and Fuels

Petroleum-based oils or fuels stored at the PSES Facility is limited to two electrical transformers, located outside on the northeast side of the building. The type and quantities of oil in these transformers is listed in Table B1. Occasionally small vehicles such as mine supervisor trucks and delivery trucks will be in the general vicinity of the PSES Plant. Such vehicles conceivably could have spills or tank ruptures nearby.

IN THE EVENT OF AN ACCIDENT INVOLVING A PETROLEUM-BASED FUEL / OIL SPILL OR LEAK, FOLLOW THESE STEPS:

- Attempt to stop or contain the flow of material.
- Notify immediate supervisor by radio. Supervisors are to immediately notify Environmental Resources. Environmental Resources will make the necessary external notifications or will authorize them to be made by others.
- In the case of an injury to a person, ensure that Safety is notified. If qualified, and if necessary, administer first aid and medical treatment.
- Begin clean-up activities promptly. Spilled material should be pumped into approved containers. If pumping is not possible, sand, dirt, or absorbent material should be placed to absorb the oil or fuel. Once absorption is complete, contaminated material should be collected in barrels and disposed of in a manner and at a location specifically approved by Environment Resources for this material. Sorbent pads that have been used to remove petroleum products, including fuels, antifreeze, and oils, can be disposed of as a conventional solid waste and can be placed into the commercial solid waste containers (dumpsters) at various locations around the property, provided no solvents or other potentially hazardous wastes have been added. Sorbent materials that have been saturated with oil but are not dripping can be disposed as conventional solid waste.
- Complete an Internal Spill Report in the WMRS in no case later than end of the shift.

4.3.1.1 Storage and Use of Petroleum Products in Electrical Gear

Oil is used in transformers to prevent overheating. Various sizes of transformer units require different amounts of oil, as indicated in Table B1.

4.3.1.2 Quantities of Material Stored and Secondary Containment for Electrical Gear

See the inventory table in Table B1.

4.3.1.3 Spill Potential of Materials Contained in Electrical Gear

The overall spill potential for electrical transformers is low. The units are new, modern installations, and are mounted on concrete slabs.

4.3.1.4 Spill Prevention and Control for Electrical Gear

In the Preamble to 40 CFR Part 112 as given in the Federal Register, July 17, 2002, pages 47054-5, it states: "Facilities that use oil operationally include *electrical substations***, facilities containing electrical transformers, and certain hydraulic or manufacturing equipment. The requirements for bulk storage containers may not always apply to these facilities.** *Facilities with equipment containing oil for ancillary purposes are not required to provide the secondary containment required for bulk storage facilities (§112.8(c)).*" **Based on the preceding regulatory discussion, secondary containment is not required for electrical transformers. However, the transformers sit on concrete pads, and are labeled with signs, and are located in highly visible areas. In the unlikely event that a transformer should completely rupture, the oil inside could conceivably land on the concrete pads, or the ground surrounding the units. The most likely amount spilled is expected to be less than 10 gallons. Refer to the CC&V Facility SRP and SPCC plan for spill contingency plan operations.**

4.3.1.5 Spill Countermeasures (Clean-up Procedures) for Electrical Gear

Clean up of oil spills can be addressed with sorbent materials (pads, oil dry, "kitty litter", and/or sand) by placing these materials directly into the spilled pool of oil or grease. Sorbent pads that have been used to remove petroleum products, including antifreeze, greases and oils, can be disposed of as a conventional solid waste and can be placed into the commercial solid waste containers (dumpsters) at various locations around the property, provided there is not free oil, and that no solvents or other potentially hazardous wastes have been added. Sorbent materials that have been saturated with oil but are not dripping can be disposed as conventional solid waste.

Leaks or spills of petroleum products during transport or during product transfer will create an oil stain on the ground surface. CC&V's clean-up policy is as follows: If the majority (>50%) of the area consisting of 9 square feet (3 feet by 3 feet) is affected (stained), then the affected area will be removed (i.e., the soil and oil mixture) and placed in the blast hole stemming material pile or as directed by Environmental Resources..

Free liquids with an oily sheen that are collected during mobile servicing in the field will be pumped or gravity fed into appropriate containers. Oils mixed with water will be hauled to the oil skimmer sump located at the Truck Shop Wash Bay or shipped off site for recycle.

4.3.1.6 Inspections and Tank Integrity Testing for Electrical Gear

Monthly visual inspections of electrical transformers will be conducted and documented on the form in Table B1. Electrical gear will not be subject to the tank integrity testing protocols.

4.3.1.7 Conformance with Regulations for Electrical Gear

Applicable state and local guidelines are assumed to be the same as the Federal Regulations at 40 CFR Part 112, and therefore, under §112.7(j) the electrical transformer facilities discussed in this section are *in conformance* with applicable requirements.

4.3.2 Liquids at the PSES Plant - Sodium Hydroxide and Aries 2607 (Coagulant)

IN THE EVENT OF AN ACCIDENT INVOLVING A SPILL OR LEAK OF REAGENTS OR CHEMICALS AT THE PSES PLANT, FOLLOW THESE STEPS: (If you are not familiar with the chemicals and the appropriate responses do not attempt to respond but call immediately for help)

General Procedure for Liquids at the PSES Plant

- Determine the nature and extent of the problem. DO NOT take any action until the proper course of action can be determined based on the nature and extent of the accident, spill, or leak.
- Notify immediate supervisor by radio. Supervisors are to immediately notify Safety and Environmental Resources
- Check the safety data sheet (SDS) for the material in question to make sure you know the hazards involved.
- Put on proper body and face protective gear, and breathing apparatus, if necessary. Check the safety data sheet (SDS) for proper PPE.
- In the case of an accident involving personal injury, ensure that Safety Department is notified and, if qualified, administer first aid and medical treatment.
- Attempt to stop or contain the flow of material.
- Begin clean-up activities. Spilled material should be pumped into approved containers. If pumping is not possible, sand, dirt, or absorbent material should be placed to absorb the spilled material. Once absorption is complete, contaminated material should be collected in barrels and disposed of in a manner and at a location specifically approved by Environment Resources for this material. Sorbent pads that have been used to remove liquids can be disposed of as a conventional solid waste and can be placed into the commercial solid waste containers (dumpsters) at various locations around the property, provided no solvents or other potentially hazardous wastes have been added. Sorbent materials that have been saturated with liquid but are not dripping can be disposed as conventional solid waste.
- Implement spill and spill-path monitoring (see below), if necessary.
- Complete an Internal Spill Report in the WMRS in no case later than end of the shift.

Sodium Hydroxide

The proper procedures for responding to the spill of sodium hydroxide (NaOH) is as follows:

- Check the safety data sheet (SDS) for sodium hydroxide to make sure you know the hazards involved.
- If the caustic soda (sodium hydroxide) is dry, shovel up any spill and dispose of the solid in a 55 gallon drum or other clean container for offsite disposal or recycling.
- If the caustic is in solution then use absorbent socks to contain the spill and add large amounts of water. After the water has been added, neutralize the solution with a dilute acid solution. Used, absorbent socks should be disposed of in a sealable bucket and the mop and bucket used in the cleanup should be completely rinsed and disposed of in an appropriate manner that complies with State and Federal Regulations.

4.3.2 Solids at the PSES Plant – Soda Ash, Aries 1668 (Coagulant), Magnetite Ballast, and Diatomaceous Earth

- If the materials are dry, shovel up any spill and dispose of the solid in a 55 gallon drum or other clean container for offsite disposal or recycling.
- Wear a chemical resistant suit (e.g. rubber apron, and complete protective equipment including rubber shoes, rubber over-boots, eye protection, face shield, rubber elbow length gloves and a respirator with appropriate filtering protection).
- If the materials are dry, shovel up any spill and dispose of the solid in a 55 gallon drum or other clean container for offsite disposal or recycling.
- Complete an Internal Spill Report in the WMRS in no case later than end of the shift.

4.3.3 Spill Path Monitoring

If a spill or leak has the potential to migrate from the point of occurrence, spill monitoring will be implemented following clean up. Development of the monitoring plan will be determined by the nature and extent of the spill and the potential environmental hazards created by the spill.

The potential for spills of fuel, oil, liquid coagulants, or liquid sodium hydroxide to migrate from the point of occurrence is minimal. These materials will be quickly absorbed into soil material or can be contained and captured on concrete slabs or building floors. If a spill of these materials has the potential to migrate to surface water, a berm(s) will be placed upgradient of the potential point of entry to the water and surface water monitoring will be implemented downstream, if necessary.

Solids spilled at the PSES plant will generally not migrate far from the point of origin unless the materials are spilled outside of containment during a rainstorm or snow-melt event. Therefore the spill path monitoring effort should be relatively simple, as there will be little or no migration of materials.

Spill monitoring equipment is available on site. Soil along the spill pathway will be monitored and decontaminated and/or moved as necessary. If there is a potential for the spill to migrate off-site, samples will be obtained expeditiously from down-gradient, existing surface and groundwater stations and any additional water monitoring points deemed appropriate to monitor the potential migration pathways. The spilled material also may be tested to evaluate the effectiveness of mitigation.

5.0 External Spill Reporting Procedures

5.1 Information for External Agency Reporting

Spill reporting is one the most critical elements in this SPCC. It is CC&V's policy for the first responder to notify their Supervisor or contact Carlton Security on the radio as the first step in reporting. The next step is equally important and involves contacting Environmental Resources. The Environmental Manager is the Environmental Response Coordinator ("ERC") for CC&V under the auspices of this SPCC Plan. As ERC, one of the Environmental Manager's duties is to make sure the external reporting is done in a timely manner in compliance with all permits and environmental regulations. The ERC or his designee will then follow through by contacting the appropriate agencies and any additional CC&V contacts or corporate contacts. In some instances, it may be appropriate for the ERC to contact people or governmental entities.

5.2 Personnel Training in Spill Procedures

Training for general spill prevention, control, countermeasures, and clean-up procedures will be conducted for all CC&V employees during annual Mine Health and Safety Administration ("MSHA") training held onsite or in Cripple Creek every April. Training Records will include the names of trainees, dates of training, and a list of spill prevention control and countermeasures that were covered in the training. The instructor's name will also be a part of the training record. An equivalent MSHA training record is sufficient to satisfy this requirement, providing that spill training is, in fact, covered in the Annual Refresher training held in April. See Appendix F for a sample training record.

The spill response program also includes specific training in clean up and detoxification for selected team members. At least one of the specially trained Team Members will be on site 24 hours/day, 7 days/week. In the event of a spill, these specially trained Team Members will be immediately dispatched to the site to assist in clean up and detoxification efforts. Appropriate equipment will be available to detoxify solutions and to transport any spilled material for ultimate disposal in accordance with applicable laws and regulations.

In the event of a potentially hazardous material spill, the plan will be to contain, detoxify (if necessary), and clean up. Detoxifying agents for cyanide, acids, bases, and reagents will be kept available at the mine for use as needed.

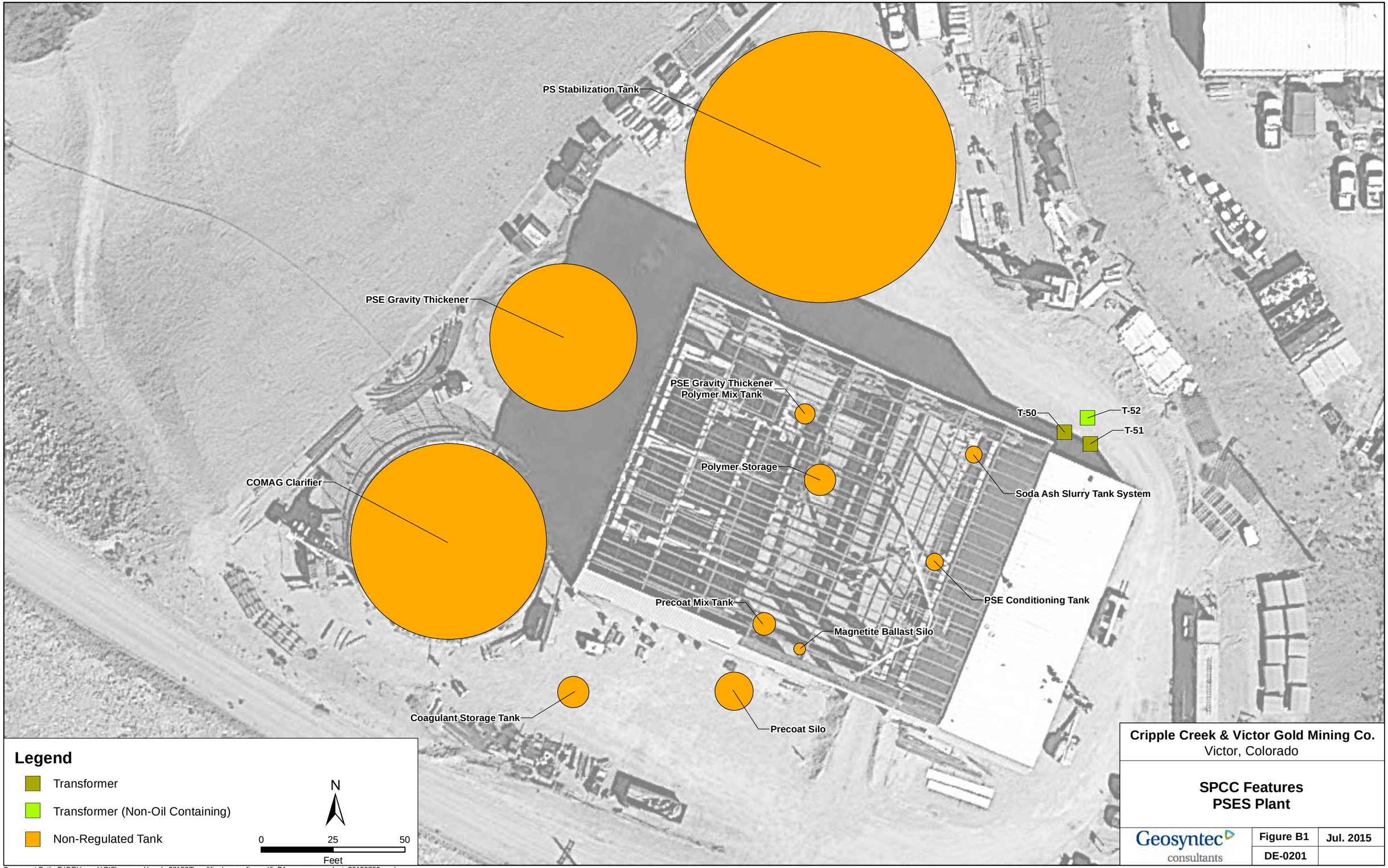
Clean-up personnel are trained in the proper detoxification procedures for each type of material. All employees are trained in the general procedures outlined in this SPCC plan and they are also trained to know where the plan can be accessed, where clean-up materials are located onsite, and how to deal with minor spills.

5.3 Team Member Safety

Operating areas of the mine are subject to the Mine Safety and Health Administration ("MSHA") regulations and practices. MSHA requires mining companies to comply with the comprehensive law governing the health and safety of employees. In addition to MSHA regulations and inspections, CC&V has a Safety Department that provides safety training courses to employees. This department also has the responsibility for the day-to-day inspection and correction of worker performance. Prior to an employee performing assigned duties, the person is trained to understand safety measures. In emergency situations, the rescuer can become a victim because the proper precautions have not been taken before attempting a rescue. With adequate training and knowledge of safety measures, most accidents can be avoided.

Safety conducts training for appropriate individuals concerning safe handling, clean up, and emergency medical treatment for the various materials used at the project. New employees are instructed upon hiring. Periodic refresher courses are given.

In case of a medical emergency, Team Members are trained to announce a "Code 90" on the mine radio. Safety, supervisors, and the Mine Rescue Team are trained in appropriate response procedures.



Cripple Creek & Victor Gold Mining Co.
Victor, Colorado

SPCC Features
PSES Plant

Geosyntec consultants

Figure B1	Jul. 2015
DE-0201	

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TABLE B1: PSES Tank Inventory/Monthly Inspection Form

Name: **Date:** **Time:** **Weather:**

Tank No. container	Tank / Container Material	Volume Tank	Contents of Tank or Container	Location	Containment Type	Containment Volume (gallons)	Product Contained?	Follow-up Req'd?	Required Action	When Completed	Containment Okay?
Tanks and Containers at the PSES Facility											
PSE-1	Cylindrical Single Wall Concrete Tank 95 ft dia X 23 ft high Outside Plant	850,000 gal	Pregnant Solution (PS Stabilization Tank)	North Side Bldg	PSES Site Subsurface Liner		Y N	Y N			Y N
PSE-2	Cylindrical Single Wall Concrete Tank 70 ft dia X 23 ft high Outside Plant	660,000 gal	CoMag Solution (CoMag Clarifier)	SW Side Bldg	PSES Site Subsurface Liner		Y N	Y N			Y N
PSE-3	Cylindrical Single Wall Concrete Tank 50 ft dia X 26 ft high	285,000 gal	Solids in Solution (Gravity Thickener)	West Side Bldg	PSES Site Subsurface Liner		Y N	Y N			Y N
PSE-4	Cylindrical Single Wall Fiberglass Tank 12 ft dia X 24 ft high	20,000 gal	Coagulant Solution (Coagulant Storage)	SW Side Bldg	PSES Site Subsurface Liner		Y N	Y N			Y N
PSE-5	Cylindrical Single Wall Steel Tank 14 ft dia X 40 ft high	28,800 gal	Diatomaceous Earth (Precoat Silo)	SW Side Bldg	PSES Site Subsurface Liner		Y N	Y N			Y N
PSE-6	Rectangular Single Wall Concrete Tanks (8) - (17.25 ft X 15.5 ft X 17 ft)	34,000 gal	CoMag Solution (CoMag Train Process Tanks)	Inside Plant	PSES Building and Site Subsurface Liner		Y N	Y N			Y N
PSE-7	Rectangular Single Wall Concrete Wells (2) - (32 ft X 16 ft X 24 ft)	92,000 gal	Reagent Solutions (Wet Wells)	Inside Plant	PSES Building and Site Subsurface Liner		Y N	Y N			Y N
PSE-8	Cylindrical Single Wall Steel Tank 8 ft dia X 8 ft high	3,000 gal	Soda Ash Solution (Soa Ash Mix Tank)	Inside Plant	PSES Building and Site Subsurface Liner		Y N	Y N			Y N
PSE-9	Cylindrical Single Wall Steel Tank 6 ft dia X 6 ft high	1,260 gal	Diatomaceous Earth Slurry (Precoat Mix Tank)	Inside Plant	PSES Building and Site Subsurface Liner		Y N	Y N			Y N
PSE-10	Cylindrical Single Wall Steel Tank 7 ft dia X 9 ft high	2,590 gal	Polymer Solution (PSE Thickener Mix Tank)	Inside Plant	PSES Building and Site Subsurface Liner		Y N	Y N			Y N
PSE-11	Cylindrical Single Wall Steel Tank 6 ft dia X 8 ft high	1,690 gal	Polymer Solution (Polymer Conditioning)	Inside Plant (Polymer Condition)	PSES Building and Site Subsurface Liner		Y N	Y N			Y N
PSE-12	Cylindrical Single Wall Steel Tank 12 ft dia X 24 ft high	20,000 gal	Polymer Solution (Polymer Storage)	Inside Plant (Polymer Tank)	PSES Building and Site Subsurface Liner		Y N	Y N			Y N
PSE-13	Cylindrical Single Wall Steel Tank 8 ft dia X 8 ft high	3,000 gal	Magnetite Ballast (Magnetite Silo)	Inside Plant (Masgnetite Silo)	PSES Building and Site Subsurface Liner		Y N	Y N			Y N
PSE-14	Plastic Totes (3)	350 gal	50% Sodium Hydroxide Solution (Caustic Storage Totes)	SW Side Bldg	PSES Site Subsurface Liner		Y N	Y N			Y N
T-50	Steel Transformer	445 gal	Transformer Oil	NE Side of Building	Concrete Slab[1]	Not Required[2]	Y N	Y N			N/A
T-51	Steel Transformer	520 gal	Transformer Oil	NE Side of Building	Concrete Slab[1]	Not Required[2]	Y N	Y N			N/A

[1]Most transformers are situated on concrete slabs or cribbing that provides some secondary containment in the event of a spill although it is not required (see also footnote 2).

[2]On page 47141 of the Federal Register dated July 17, 2002, it states that "oil filled electrical, operating, or manufacturing equipment is not a bulk oil storage container." On page 47055 it states: "Facilities with equipment containing oil for ancillary purposes are not required to provide secondary containment required for bulk storage facilities."

Evaluate the overall condition of containers during this inspection: (circle one and provide narrative) → Good Needs Work

Written Comments:

Be sure to check all drain valves to make sure locks are in-place and functional

Check all containment aprons and berms.

Check to make sure all fill hoses are inside containment when not in use filling vehicles

Is there a spill kit nearby?

Are bollards in good condition?

Are all signs and markers legible and in good condition?

ATTACHMENT C

HIGH GRADE MILL SPCC PLAN

SPILL PREVENTION CONTROL AND COUNTERMEASURES PLAN and MATERIALS CONTAINMENT PLAN for the HIGH GRADE MILL FACILITY at the CRESSON PROJECT

Cripple Creek & Victor Gold Mining Company
near Victor, Colorado

Prepared for:
Cripple Creek & Victor Gold Mining Company
P.O. Box 191
100 North 3rd Street
Victor, Colorado 80860

Prepared by:
Geosyntec Consultants

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SPILL PREVENTION CONTROL and COUNTERMEASURES PLAN and MATERIALS CONTAINMENT PLAN for the HIGH GRADE MILL FACILITY at CRIPPLE CREEK & VICTOR GOLD MINING COMPANY'S CRESSON PROJECT

NEAR VICTOR, COLORADO in TELLER COUNTY, COLORADO

1.0 Purpose and Scope

This Spill Prevention Control and Countermeasures Plan ("SPCC") for the High Grade Mill Facility is to be used by CC&V Team Members (all employees) of the Cripple Creek & Victor Gold Mining Company at the Cresson Project Operations, located in the Cripple Creek Mining District of Colorado. This Plan is intended to be used alongside the main SPCC plan for the CC&V Cresson Project, but contains additional information such as materials, procedures and processes specific to the High Grade Mill facility. The procedures and policies described herein apply to the activities of all CC&V Team Members and to other persons on site under CC&V supervision or contract. Distribution of this Plan is to be restricted to CC&V employees, contractors, and applicable government agencies/organizations.

It is CC&V's policy to prevent releases to the environment of petroleum products and hazardous substances that may pose a threat to human health and/or the environment. Any releases that do occur and which are not in compliance with applicable Federal and State requirements expressed in site-specific permits or applicable regulations must be appropriately contained, remediated, recorded and reported.

This SPCC is a combined plan that also serves to meet the requirements of the Colorado Division of Reclamation, Mining, and Safety ("DRMS") for a Materials Containment Plan. The specific requirements of the SPCC regulations at 40 CFR Part 112 pertain mainly to oil products and used oil, and this plan is crafted in the spirit of those regulations. For example, engineered secondary containment, periodic inspections, security, training, agency reporting in the event of a spill, record-keeping, and spill clean-up measures are integral parts of this plan.

1.1 Management Commitment of Resources

The CC&V facility management is committed to provide the necessary manpower, equipment, and materials to control and remove any quantity of oil discharged as outlined in this Spill Response Plan and Spill Prevention Control Countermeasures Plan per §112.7(d)(2) of 40 CFR Part 112.

Signed: _____ Title: General Manager

Printed Name: Jack Henris Date: 12/15/15

1.2 Engineer's Statement and Certification

I, James B. Cowart, P.E., hereby attest that I am familiar with the CC&V High Grade Mill facility and I also understand the Rules and Regulations promulgated under 40 CFR Part 112 Oil Pollution Prevention and how they apply. On July 17, 2002, EPA published a final rule that amended the SPCC regulations *(67 FR 47042)*, which became effective on August 16, 2002. The final rule included compliance dates in §112.3 for preparing, amending, and implementing SPCC Plans. The original compliance dates were amended on January 9, 2003 (68 FR 1348), again on April 17, 2003 (68 FR 18890), a third time on August 11, 2004 (69 FR 48794), a fourth time on February 17, 2006 (71 FR 8462), and a fifth time on May 16, 2007 (72 FR 27443). These extensions provided additional time for the regulated community to understand the 2002 SPCC amendments (67 FR 47042), the clarifications developed by EPA during the course of litigation settlement proceedings (69 FR 29728), and alleviated the need for individual extension requests. On June 19, 2009, EPA published in the *Federal Register* a SPCC compliance date extension for all facilities until November 10, 2010. Facilities must amend or prepare, and implement SPCC Plans by the compliance date in accordance with revisions to the SPCC rule promulgated since 2002. This SPCC document was written to comply with the spirit of applicable requirements (as amended) by the November 10, 2010 deadline.

My agent personally visited the site on September 9th, 2015 for the purposes of gathering information in order to prepare the High Grade Mill SPCC plan.

The SPCC Plan has been prepared in accordance with good engineering practice, including considerations given for applicable industry standards as well as the requirements of 40 CFR Part 112. Procedures for inspecting the tanks and containers have been established and are herein incorporated. Based on my professional engineering judgment, this SPCC Plan is adequate for the High Grade Mill facility.

This certification in no way relieves the owner or operator of the facility of his/her duty to prepare and fully implement this SPCC plan in accordance with the requirements of 40 CFR Part 112. This plan is valid only to the extent that the facility owner or operator maintains, tests, and inspects equipment, containment, and other devices as prescribed in this Plan.

James B. Cowart, P.E. (Colorado P.E. Registration Number 28938)

Date: 12/10/2015

Seal:

2.0 Chemicals & Reagents at CC&V's High Grade Mill

Chemical reagents include caustic, and cyanide solutions. The High Grade Mill uses chemicals and reagents to recover precious metals from ore processed at the CC&V mine. The location of the High Grade Mill facility is identified on Figure 2 in the main plan.

2.1 Bulk Storage of Water Treatment Chemicals & Reagents

High Grade Mill Facility – See Figure C1 for a site plan.

Table C1 lists the products contained in bulk/solution tanks or other equipment at the High Grade Mill.

3.0 Description of High Grade Mill Facility and Chemical Reagents Used

3.1 Overview of High Grade Mill Facility

The High Grade Mill facility is located in the western portion of CC&V's Cresson Project, approximately 4 miles north of the town of Victor, CO. The High Grade Mill uses process (minerals beneficiation) reagents to recover precious metals from the ore. Diluted cyanide leach solution (typically 0.01% to 0.02% or 100 – 200 ppm) is directed to and from the Valley Leach Facility (VLF) through an HDPE/steel piping system. Pregnant lines are steel and barren lines are steel/HDPE depending on location.

The High Grade Mill building and storage areas are constructed entirely upon a self-contained liner system. This liner system will contain any spills that occur on-site. The High Grade Mill Facility is also bermed on the North, West, and South portions of the site and contained on the east side by existing slopes. These berms will prevent any stormwater from migrating off-site in the event that a storm occurs at the same time as a spill, and any impacted stormwater that enters the subsurface will be contained by the liner that underlies the location. This liner drains via sumps located to the south into catchment ponds located in the VLF. Valley Leach Facilities ("VLFs") and internal ponds containing cyanide solutions are double and triple lined with the incorporation of leak detection systems. The VLF, is double-lined in areas where solution is not stored and triple lined where solution is collected and temporarily stored. The VLF systems are designed to contain the normal operating solution level, total drain-down, "wet season" precipitation, and the 100-year, 24-hour storm event. The VLFs are "non-discharging" (zero-discharge) facilities. Therefore, impacts to public health and safety from delivery, storage and handling of chemicals at the High Grade Mill should be minimal.

3.2 Bulk Chemicals and Reagents Delivery, Storage, and Handling

The facilities for unloading, mixing, and storage of chemicals and reagents are located within the security perimeter of the mine—physically distant (1-2 miles) from any dwellings or communities. See Figure C1 for a site plan. Any spills will be contained inside of the High Grade Mill building itself, or within the VLF lined system.

Delivery trucks are staged on a concrete pad west of the plant. This unloading and storage area are protected by bollards to prevent accidental collisions between trucks and storage tanks.

Mixing of chemicals takes place either inside the High Grade Mill or within the tanks located outside the building on the east and west sides. See Figure C1.

Storage of chemicals and reagents in the quantities shown in Table C1 are within the chemical storage area, within operating systems, and within pipes, pumps, and other appurtenances as further described below:

Sodium Hydroxide - NaOH liquid is stored in totes both in the grind circuit next to the "gold room" and in the CIP circuit. The totes are located within concrete secondary containment and within the tertiary containment of the lined area of the facility. The concrete containment sump is equipped with a float-activated pump that would return fluid to the plant circuit in the event of a release. A release outside the concrete containment would remain on the VLF liner and migrate north toward the main liner system.

Antiscalant - Antiscalant liquid is not a hazardous chemical. It is stored in the southeast corner of the High Grade Mill in one tank. The High Grade Mill is located on a liner that drains to the VLF.

Release of Antiscalant should be controlled, even though the residue is not hazardous. Complete removal of impacted soils is not required. Contaminated soils may be placed on the VLF if desired.

Secondary and Tertiary Containment at the High Grade Mill Facility - Several redundant containment features exist at the High Grade Mill including: (1) liner extends under the building itself forming a continuous barrier to guard against spills reaching the ground water; (2) the High Grade Mill building has a concrete

floor and curbing that provides secondary containment for spills from reagent tanks; and (3) some of the tanks are double walled construction.

Any spills or releases of materials from the tanks / containers located outside of the High Grade Mill would be contained by the liner and would report to the VLF. Spills or releases from the tanks inside the plant would be captured within the building itself.

4.0 Spill Prevention and Spill Response Procedures

This section summarizes the routine operating procedures that must be followed to prevent releases of chemicals or reagents subject to control under this SPCC plan. This Section also provides procedures to follow in the event of a specific type of chemical spill and procedures to monitor the potential migration of spilled materials. These procedures are the subject of training sessions for CC&V Team Members, and they apply to any activities conducted by CC&V at the Cresson Project.

4.1 General Spill Prevention Procedures

The following procedures primarily relate to on-site movement and use of chemicals. Team Members involved in chemical handling (including oils) will receive instruction on safe handling of storage containers and materials handling during product transfers:

- Storage Containers: (1) Driving vehicles (trucks and forklifts) carefully and in accordance with conditions to avoid collisions or ruptures of storage containers; and (2) constructing adequate berms and barriers to protect storage containers.

- Storage Containers: Making certain that there is adequate clearance when positioning a truck or equipment adjacent to storage areas or distribution points and ensuring that the operator has examined the surroundings to identify where a spill would go and how they would control it.

- Storage Containers: Checking to make sure containers are securely placed to prevent tipping and spilling and in a manner that prevents collisions with mobile equipment.

- Transfer of Materials: Examining fittings and transfer lines or hoses to be assured of tight-fits that will not come apart during transfer.

- Transfer of Materials: Examining fittings to assure they are in proper working order and do not leak or lose fluid during transfer.

- Transfer of Materials: Ensuring that valves are closed and transfer pipes are drained or contained prior to disconnect.

- Transfer of Materials: Examining the "weak spots" of any transfer procedure and visualizing where the substances would go and what control measures would be used should a transfer line break or leak. Taking a second look at these "weak points" to see if anything can be done to further prevent a release. "Cleaning up" spills.

Inspection of storage facilities is completed routinely (Appendix C). The High Grade Mill storage facilities are checked during routine operations by facility personnel to identify and repair leaks and to maintain containment. Inspections include checking for visible signs of leakage, checking containers and piping for any sign of weakness, tearing or rupturing, and checking for cracks or breaks in containment berms, as well as for any significant reduction in the capacity of the containment. Any observed problem will be immediately reported to a supervisor and repaired. Spillage will be cleaned up as appropriate for the substance involved. Inspections are recorded and the records retained onsite in the CC&V ER Department.

Labels on storage containers are also part of the chemical spill prevention program and are posted at all material storage areas. These labels identify the contents of the permanent storage vessels and applicable sections of the fire code. These labels are posted to remind team members of the nature of the material, to promote safe practices, and to provide clear direction about the spill prevention and control procedures to be employed.

4.2 Security

The High Grade Mill is surrounded by a fence, well-lit during night hours, and is manned 24/7. There is additional security for the entire CC&V facility as described in the SPCC plan. Any spills or leaks that are found will be reported to the Supervisor or Carlton Security. They will, in turn notify Environmental Resources.

4.3 Spill Response Procedures and Countermeasures for Specific Types of Chemicals

A spill of chemicals or reagents subject to this SPCC plan will receive immediate and judicious action. This section outlines the step-by-step procedures to be followed in the event of an on-site accident or spill resulting in a release of materials subject to this SPCC plan.

4.4 Petroleum-Based Oils and Fuels

Petroleum-based oils or fuels stored at the High Grade Mill Facility is limited to generators with diesel fuel "belly" tanks, 55 gallon lube oil drums at various locations on-site, and electrical transformers, located outside on the west side of the building. The type and quantities of oil in these transformers is listed in Table 1. Occasionally small vehicles such as mine supervisor trucks and delivery trucks will be in the general vicinity of the High Grade Mill Facility. Such vehicles conceivably could have spills or tank ruptures nearby.

IN THE EVENT OF AN ACCIDENT INVOLVING A PETROLEUM-BASED FUEL / OIL SPILL OR LEAK, FOLLOW THESE STEPS:

- Attempt to stop or contain the flow of material.
- Notify immediate supervisor by radio. Supervisors are to immediately notify Environmental Resources. Environmental Resources will make the necessary external notifications or will authorize them to be made by others.
- In the case of an injury to a person, ensure that Safety is notified. If qualified, and if necessary, administer first aid and medical treatment.
- Begin clean-up activities promptly. Spilled material should be pumped into approved containers. If pumping is not possible, sand, dirt, or absorbent material should be placed to absorb the oil or fuel. Once absorption is complete, contaminated material should be collected in barrels and disposed of in a manner and at a location specifically approved by Environment Resources for this material. Sorbent pads that have been used to remove petroleum products, including fuels, antifreeze, and oils, can be disposed of as a conventional solid waste and can be placed into the commercial solid waste containers (dumpsters) at various locations around the property, provided no solvents or other potentially hazardous wastes have been added. Sorbent materials that have been saturated with oil but are not dripping can be disposed as conventional solid waste.
- Complete an Internal Spill Report in Cintellate and turn in to a supervisor as soon as possible but in no case later than end of the shift.

4.4.1 Diesel Generator at High Grade Mill

One Caterpillar diesel generator unit Generator #8 (Model 3512) provides stand-by power to the High Grade Mill in the event of an electrical power outage at the facility. The generator unit is constructed with a built-in secondary containment tank (referred to as a "rupture tank"). The capacity of diesel on the larger units is 2,612 gallons.

4.4.1.1 Storage and Use of Diesel at the High Grade Mill Generator

Diesel fuel is stored in the belly tanks as described above.

4.4.1.2 Quantities of Diesel Stored and Secondary Containment at the High Grade Mill Generator

A total of 2,612 gallons of diesel capacity exist in the belly tanks of the High Grade MIll generator. Secondary containment is provided by the "rupture tank" described above and the ground surrounding the units. The rupture tank has 3,637 gallons of secondary containment. Jersey barricades *do* provide collision protection and a limited amount of secondary containment for the generator.

4.4.1.3 Spill Potential of Diesel at the High Grade Mill Generator

The spill potential from the High Grade Mill generator diesel tank is rated as low, due to the fact that re-fueling is infrequent.

4.4.1.4 Spill Prevention and Control at the High Grade Mill Generator

The generator is situated on elevated concrete pads and are unlikely to be impacted by vehicular accidents. Tank rupture is a possibility but the units are new, modern, and secure structures that are inspected informally on a regular basis.

4.4.1.5 Spill Countermeasures (Clean-up Procedures) at the High Grade Mill Generator

Section 4.4 provides the **general spill response procedures** for use involving spills around the High Grade Mill generator. The following narrative provides additional detail on spill clean-up.

Clean-up of Spills Around the High Grade Mill Generator

Clean up of oil spills can be addressed with sorbent materials (pads, oil dry, "kitty litter", and/or sand) by placing these materials directly into the spilled pool of oil or grease. Sorbent pads that have been used to remove petroleum products, including antifreeze, greases and oils, can be disposed of as a conventional solid waste and can be placed into the commercial solid waste containers (dumpsters) at various locations around the property, provided no solvents or other potentially hazardous wastes have been added. Sorbent materials that have been saturated with oil but are not dripping can be disposed as conventional solid waste.

Leaks or spills of petroleum products during transport or during product transfer will create an oil stain on the ground surface. CC&V's clean-up policy is as follows: If the majority (>50%) of the area consisting of 9 square feet (3 feet by 3 feet) is affected (stained), then the affected area will be removed (i.e., the soil and oil mixture) and placed in the blast hole stemming material pile or as directed by Environmental Resources.

Free liquids with an oily sheen that are collected during mobile servicing in the field will be pumped or gravity fed into appropriate containers. Oils mixed with water will be hauled to the oil skimmer sump located at the Truck Shop Wash Bay or shipped off site for recycle.

4.4.1.6 Inspections and Tank Integrity Testing at the High Grade Mill Generator

The High Grade Mill Generator diesel tank will be inspected on a monthly basis and the form in Appendix G will be used to document the inspection. Records of these inspections will be kept on file in Environmental Resources.

Tank integrity testing will be performed according to the plan provided in Appendix J.

4.4.1.7 Conformance with Regulations at the High Grade Mill Generator

Applicable state and local guidelines are assumed to be the same as the Federal Regulations at 40 CFR Part 112, and therefore, under 40 CFR Part 112 the oil storage containers and secondary containment at the Fuel Farm Facility meet the intent of the oil pollution prevention regulations.

4.4.2 Storage and Use of Petroleum Products in Electrical Gear

Oil is used in transformers to prevent overheating. Various sizes of transformer units require different amounts of oil, as indicated in Table C1.

4.4.2.1 Quantities of Material Stored and Secondary Containment for Electrical Gear

See the inventory table in Table C1.

4.4.2.2 Spill Potential of Materials Contained in Electrical Gear

The overall spill potential for electrical transformers is low. The units are new, modern installations, and are mounted on concrete slabs.

4.4.2.3 Spill Prevention and Control for Electrical Gear

In the Preamble to 40 CFR Part 112 as given in the Federal Register, July 17, 2002, pages 47054-5, it states: "Facilities that use oil operationally include *electrical substations*, **facilities containing electrical transformers, and certain hydraulic or manufacturing equipment. The requirements for bulk storage containers may not always apply to these facilities.** *Facilities with equipment containing oil for ancillary purposes are not required to provide the secondary containment required for bulk storage facilities (§112.8(c))."* **Based on the preceding regulatory discussion, secondary containment is not required for electrical transformers. However, the transformers sit on concrete pads, and are labeled with signs, and are located in highly visible areas. In the unlikely event that a transformer should completely rupture, the oil inside could conceivably land on the concrete pads, or the ground surrounding the units. The most likely amount spilled is expected to be less than 10 gallons. Refer to the CC&V Facility SRP and SPCC plan for spill contingency plan operations.**

4.4.2.4 Spill Countermeasures (Clean-up Procedures) for Electrical Gear

Clean up of oil spills can be addressed with sorbent materials (pads, oil dry, "kitty litter", and/or sand) by placing these materials directly into the spilled pool of oil or grease. Sorbent pads that have been used to remove petroleum products, including antifreeze, greases and oils, can be disposed of as a conventional solid waste and can be placed into the commercial solid waste containers (dumpsters) at various locations around the property, provided there is no free oil, and that no solvents or other potentially hazardous wastes have been added. Sorbent materials that have been saturated with oil but are not dripping can be disposed as conventional solid waste.

Leaks or spills of petroleum products during transport or during product transfer will create an oil stain on the ground surface. CC&V's clean-up policy is as follows: If the majority (>50%) of the area consisting of 9

square feet (3 feet by 3 feet) is affected (stained), then the affected area will be removed (i.e., the soil and oil mixture) and placed in the blast hole stemming material pile or as directed by Environmental Resources..

Free liquids with an oily sheen that are collected during mobile servicing in the field will be pumped or gravity fed into appropriate containers. Oils mixed with water will be hauled to the oil skimmer sump located at the Truck Shop Wash Bay or shipped off site for recycle.

4.4.2.5 Inspections and Tank Integrity Testing for Electrical Gear

Monthly visual inspections of electrical transformers will be conducted and documented on the form in Appendix G. Electrical gear will not be subject to the tank integrity testing protocols.

4.4.2.6 Conformance with Regulations for Electrical Gear

Applicable state and local guidelines are assumed to be the same as the Federal Regulations at 40 CFR Part 112, and therefore, under §112.7(j) the electrical transformer facilities discussed in this section are *in conformance* with applicable requirements.

4.5 Liquids at the High Grade Mill – Cyanide Solutions, and Sodium Hydroxide

IN THE EVENT OF AN ACCIDENT INVOLVING A SPILL OR LEAK OF REAGENTS OR CHEMICALS AT THE High Grade Mill, FOLLOW THESE STEPS:
(If you are not familiar with the chemicals and the appropriate responses do not attempt to respond but call immediately for help).

General Procedure for Liquids at the High Grade Mill

- Determine the nature and extent of the problem. DO NOT take any action until the proper course of action can be determined based on the nature and extent of the accident, spill, or leak.
- Notify immediate supervisor by radio. Supervisors are to immediately notify Safety and Environmental Resources
- Check the safety data sheet (SDS) for the material in question to make sure you know the hazards involved.
- Put on proper body and face protective gear, and breathing apparatus, if necessary. Check the safety data sheet (SDS) for proper PPE.
- In the case of an accident involving personal injury, ensure that Safety Department is notified and, if qualified, administer first aid and medical treatment.
- Attempt to stop or contain the flow of material.
- Begin clean-up activities. Spilled material should be pumped into approved containers. If pumping is not possible, sand, dirt, or absorbent material should be placed to absorb the spilled material. Once absorption is complete, contaminated material should be collected in barrels and disposed of in a manner and at a location specifically approved by Environment Resources for this material. Sorbent pads that have been used to remove liquids can be disposed of as a conventional solid waste and can be placed into the commercial solid waste containers (dumpsters) at various locations around the property, provided no solvents or other potentially hazardous wastes have been added. Sorbent materials that have been saturated with liquid but are not dripping can be disposed as conventional solid waste.
- Implement spill and spill-path monitoring (see below), if necessary.
- Complete an Internal Spill Report form in Cintellate and turn in to a supervisor as soon as possible but in no case later than end of the shift.

Cyanide Solutions, Sodium Hydroxide,

IN THE EVENT OF AN ACCIDENT INVOLVING A SPILL OR LEAK, FOLLOW THESE STEPS:
(*If you are not familiar* with the chemicals and the appropriate responses do not attempt to respond but call immediately for help).

- Determine the nature and extent of the problem. DO NOT take any action until the proper course of action can be determined based on the nature and extent of the accident, spill, or leak.
- Notify immediate supervisor by radio. Supervisors are to immediately notify Safety and Environmental Resources (phone numbers are listed in section 6). See Appendix E for computation of cyanide solution.
- Put on proper body and face protective gear, and breathing apparatus, if necessary.
- In the case of an accident, ensure that Safety is notified and, if qualified, administer first aid and medical treatment.
- Attempt to stop or contain the flow of material.
- **Do not use the following procedure for high concentration cyanide such as at the bulk delivery area.**

  Begin detoxification activities, if necessary. In the case of cyanide, if solution is released outside lined areas onto the ground, detoxification is required. If Calcium Hypochlorite is used for detoxification, it will be necessary to maintain elevated pH levels (8-11) for the reaction to occur. In addition, cyanogen chloride gas can be generated. This gas is highly toxic and the area should be well ventilated. Alkaline chlorination detoxification can be accomplished using beads or by making an aqueous solution. Monitoring of chlorine levels will occur during use of this method to ensure that solutions with potentially toxic chlorine levels are not released. The Reportable Quantity for Calcium Hypochlorite is 10 pounds as released to the ground.

- Begin clean-up activities.
- Implement spill and spill-path monitoring, if necessary (see section 5.3).
- Complete an Internal Spill Report form.in Cintellate

4.6 Spill Path Monitoring

If a spill or leak has the potential to migrate from the point of occurrence, spill monitoring will be implemented following clean up. Development of the monitoring plan will be determined by the nature and extent of the spill and the potential environmental hazards created by the spill.

The potential for spills of fuel, oil, liquid sodium hydroxide, or other chemical reagents to migrate from the point of occurrence is minimal. These materials will be quickly absorbed into soil material or can be contained and captured on concrete slabs or building floors. If a spill of these materials has the potential to migrate to surface water, a berm(s) will be placed upgradient of the potential point of entry to the water and surface water monitoring will be implemented downstream, if necessary.

Solids spilled at the High Grade Mill will generally not migrate far from the point of origin unless the materials are spilled outside of containment during a rainstorm or snow-melt event. Therefore the spill path monitoring effort should be relatively simple, as there will be little or no migration of materials.

Spill monitoring equipment is available on site. Soil along the spill pathway will be monitored and decontaminated and/or moved as necessary. If there is a potential for the spill to migrate off-site, samples will be obtained expeditiously from down-gradient, existing surface and groundwater stations and any additional water monitoring points deemed appropriate to monitor the potential migration pathways. The spilled material also may be tested to evaluate the effectiveness of mitigation.

5.0 External Spill Reporting Procedures

5.1 Information for External Agency Reporting

Spill reporting is one the most critical elements in this SPCC. It is CC&V's policy for the first responder to notify their Supervisor or contact Carlton Security on the radio as the first step in reporting. The next step is equally important and involves contacting Environmental Resources. Meg Burt, The Environmental Manager is the Environmental Response Coordinator ("ERC") for CC&V under the auspices of this SPCC Plan. As ERC, one of the Environmental Manager's duties is to make sure the external reporting is done in a timely manner in compliance with all permits and environmental regulations. The "External Agency Reporting Form" located in Appendix B will be filled out. The ERC or his designee will then follow through by contacting the appropriate agencies and any additional CC&V contacts or corporate contacts. In some instances, it may be appropriate for the ERC to contact people or governmental entities. A list of contacts for reporting spills is in the ERP under the CONTACTS tab.

5.2 Personnel Training in Spill Procedures

Training for general spill prevention, control, countermeasures, and clean-up procedures will be conducted for all CC&V employees during annual Mine Health and Safety Administration ("MSHA") training held onsite or in Cripple Creek every April. Training Records will include the names of trainees, dates of training, and a list of spill prevention control and countermeasures that were covered in the training. The instructor's name will also be a part of the training record. An equivalent MSHA training record is sufficient to satisfy this requirement, providing that spill training is, in fact, covered in the Annual Refresher training held in April. See Appendix D for a sample training record.

The spill response program also includes specific training in clean up and detoxification for selected team members. At least one of the specially trained Team Members will be on site 24 hours/day, 7 days/week. In the event of a spill, these specially trained Team Members will be immediately dispatched to the site to assist in clean up and detoxification efforts. Appropriate equipment will be available to detoxify solutions and to transport any spilled material for ultimate disposal in accordance with applicable laws and regulations.

In the event of a potentially hazardous material spill, the plan will be to contain, detoxify (if necessary), and clean up. Detoxifying agents for cyanide, bases, and reagents will be kept available at the mine for use as needed.

Clean-up personnel are trained in the proper detoxification procedures for each type of material. All employees are trained in the general procedures outlined in this SPCC plan and they are also trained to know where the plan can be accessed, where clean-up materials are located onsite, and how to deal with minor spills.

5.3 Team Member Safety

Operating areas of the mine are subject to the Mine Safety and Health Administration ("MSHA") regulations and practices. MSHA requires mining companies to comply with the comprehensive law governing the health and safety of employees. In addition to MSHA regulations and inspections, CC&V has a Safety Department that provides safety training courses to employees. This department also has the responsibility for the day-to-day inspection and correction of worker performance. Prior to an employee performing assigned duties, the person is trained to understand safety measures. In emergency situations, the rescuer can become a victim because the proper precautions have not been taken before attempting a rescue. With adequate training and knowledge of safety measures, most accidents can be avoided.

Safety conducts training for appropriate individuals concerning safe handling, clean up, and emergency medical treatment for the various materials used at the project. New employees are instructed upon hiring. Periodic refresher courses are given.

In case of a medical emergency, Team Members are trained to announce a "Code 90" on the mine radio. Safety, supervisors, and the Mine Rescue Team are trained in appropriate response procedures.

Table C1 - High Grade Mill Facility Tank Inventory and CC&V Monthly Inspection Form for the SRP/SPCC

Name: **Date:** **Time:** **Weather:**

Tank No. or Container	Tank / Container Material	Volume Tank	Units	Contents of Tank or Container	Location	Containment Type	Product Contained?		Follow-up Required?		Required Action	When Completed	Containment OK?	
High Grade Mill Processing Chemicals														
Concentrate Thickener overflow	Above Ground Steel Tank	3,548	gal	Concentrate	West of HGM Building	Concrete Containment	Y	N	Y	N			Y	N
Carbon Storage Tank	Above Ground Steel Tank	1,943	gal	Carbon Slurry Solution	Central portion of HGM Building	HGM Building	Y	N	Y	N			Y	N
Carbon Transfer Tank	Above Ground Steel Tank	646	gal	Carbon Slurry Solution	Central portion of HGM Building	HGM Building	Y	N	Y	N			Y	N
Carbon Fines Tank	Above Ground Steel Tank	1,603	gal	Carbon Slurry Solution	Central portion of HGM Building	HGM Building	Y	N	Y	N			Y	N
Flocculant Mix Tank	Above Ground Steel Tank	7,023	gal	Flocculant Solution	Central portion of HGM Building	HGM Building	Y	N	Y	N			Y	N
Flocculant Dry Tank	Above Ground Steel Tank	8,817	gal	Flocculant Solution	Central portion of HGM Building	HGM Building	Y	N	Y	N			Y	N
CIP Tank	Above Ground Steel Tank	11,406	gal	Carbon Slurry Solution	Central portion of HGM Building	HGM Building	Y	N	Y	N			Y	N
CIP Tanks 1-8	Above Ground Steel Tanks	11,406	gal	Carbon Slurry Solution	Central portion of HGM Building	HGM Building	Y	N	Y	N			Y	N
Processed Ore Thickener	Above Ground Concrete Tank	340,000	gal	Processed Ore Mixture	East of HGM Building	Concrete Containment	Y	N	Y	N			Y	N
Flotation Filter Feed Tank	Above Ground Steel Tank	36,000	gal	Processed Ore Mixture	Eastern portion of HGM Building	HGM Building	Y	N	Y	N			Y	N
CIP Filter Feed Tank	Above Ground Steel Tank	4,042	gal	Processed Ore Mixture	Eastern portion of HGM Building	HGM Building	Y	N	Y	N			Y	N
High pH Thickener	Above Ground Steel Tank	24,945	gal	Processed Ore Mixture	East of HGM Building	Concrete Containment	Y	N	Y	N			Y	N
Neutral pH Process Water Tank	Above Ground Steel Tank	400,000	gal	Process Water?	East of HGM Building	Engineered buried site liner with drainage sump	Y	N	Y	N			Y	N
Leach Tanks 1-8	Above Ground Steel Tank	177,000	gal	Leachate Solution	West of HGM Building	Concrete Containment	Y	N	Y	N			Y	N
High pH Filtrate Recycle Tank	Above Ground Steel Tank	4,606	gal	Process Water	Southern portion of HGM Building	HGM Building	Y	N	Y	N			Y	N
Neutral pH Filtrate Recycle Tank	Above Ground Steel Tank	28,550	gal	Process Water	Southern portion of HGM Building	HGM Building	Y	N	Y	N			Y	N
Antiscalant Tank	Above Ground Steel Tank	1,400	gal	Scale Guard 9731	Southeast portion of HGM Building	HGM Building	Y	N	Y	N			Y	N
Agglomerating Agent Accumulator Tank	Above Ground Steel Tank	227	gal	Fly Ash	Southeast portion of HGM Building	HGM Building	Y	N	Y	N			Y	N
Conditioner Tank	Above Ground Steel Tank	13,464	gal	Processed Ore Mixture	NW Corner of Flotation Circuit	HGM Building								
Adsorption Desorption Recovery Plant Generators														
HGM Generator	Steel Rectangular Belly Tanks on Generator Unit	2,612	gal	Diesel Fuel	North of HGM Building	Double-walled tank	Y	N	Y	N			Y	N
Adsorption Desorption Recovery Plant Transformers														
T-51	Steel Transformer	519	gal	Transformer Oil	West of HGM Building	Engineered buried site liner with drainage sump	Y	N	Y	N			Y	N
T-50	Steel Transformer	519	gal	Transformer Oil	West of HGM Building	Engineered buried site liner with drainage sump	Y	N	Y	N			Y	N
T-53	Steel Transformer	1,159	gal	Transformer Oil	West of HGM Building	Engineered buried site liner with drainage sump	Y	N	Y	N			Y	N
T-55	Steel Transformer	519	gal	Transformer Oil	West of HGM Building	Engineered buried site liner with drainage sump	Y	N	Y	N			Y	N
T-52	Steel Transformer	519	gal	Transformer Oil	West of HGM Building	Engineered buried site liner with drainage sump	Y	N	Y	N			Y	N
T-54	Steel Transformer	519	gal	Transformer Oil	West of HGM Building	Engineered buried site liner with drainage sump	Y	N	Y	N			Y	N
T-56	Steel Transformer	519	gal	Transformer Oil	West of HGM Building	Engineered buried site liner with drainage sump	Y	N	Y	N			Y	N
T-57	Steel Transformer	519	gal	Transformer Oil	West of HGM Building	Engineered buried site liner with drainage sump	Y	N	Y	N			Y	N

Background image taken September 2014 and provided by CC&V.

Legend

- Extent of Liner
- Building Footprint (approximate)
- Transformer
- Generator
- Non-Regulated Tank or Storage Area
- Other SPCC Regulated Storage Tank(s)

N

0 50 100

Feet

1,000 Gal. Propane Tank

Frother, Hyperfloc, Flomin, and PAX Drum and Tote Storage Area

OFFICE

Liner

Empty Tote Storage Area

New and Used Oil Storage, Approx. 25-50 Drums

Generator, 2612 Gal. Diesel Fuel, Double-Walled Tank

T-51

T-50

T-53

Small Container Oil Storage

Collector Building, & Lime Area

HIGH GRADE MILL

Concentrate Thickener

Carbon Storage Tank

Carbon Transfer Tank

CIP Tank

Carbon Fines Tank

Oil Drum Storage, 3-5 Drums

30 Gal. Lube Oil Drum

T-55

Flocculant Mix Tank

T-52

T-54

Flocculant Day Tank

T-56

T-57

Processed Ore Thickener

CIP Tanks 1-8

High pH Thickener

Leach Tanks 1-8

Neutral pH Process Water Tank

Filter and Agglomeration Area

Cyanide Area

Flotation Filter Feed Tank

High pH Filtrate Recycle Tank

Filter and Agglomeration Area

Antiscalant Tank

Agglomerating Agent Accumulator Tank

Cripple Creek & Victor Gold Mining Co.
Victor, Colorado

High Grade Mill

Geosyntec consultants

Figure C1	Dec. 2015
DE-0201	

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CRISIS COMMUNICATIONS PLAN

CRIPPLE CREEK & VICTOR GOLD MINING COMPANY

Approved by: _____ Date: 9/22/15

Jack Henris
Vice President & General Manager

- **The Emergency Response Procedures (ERP) and associated Plans are controlled documents. Updates, edits, or additions to the ERP or this Plan must be coordinated through the Safety Manager AND the Environmental Manager.**

- **Employee and Third Party Contact information can be found in the Emergency Response Procedures (ERP) under the CONTACTS tab. Contacts must be made in accordance with the ERP guidelines and ONLY by designated staff.**

CRISIS COMMUNICATIONS PLAN

CRIPPLE CREEK & VICTOR GOLD MINING COMPANY

ADMINISTRATION BUILDING

Main (719) 689-4220

Penny Roberts (719) 689-4022
100 North 3rd Street
PO Box 191
Victor, Colorado 80860

MAIN GATE AND SECURITY BUILDING

Main (719) 689-2977
Carlton Security Emergency (719) 689-3995
Carlton Security Main (719) 689-4220
1280 Highway 67
Victor, Colorado 80860

Between Victor and Cripple Creek, Colorado
(1 ¼ mile West of Victor Colorado and 2 miles Southeast of Cripple Creek)

IRONCLAD MAINTENANCE/WAREHOUSE/TRUCKSHOP

Ironclad Security (719) 689-4127
Maintenance Foreman (719) 689-4134
Teller County Road 82

North of Victor and Northeast of Cripple Creek

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Accessed from Hwy 67 North of Cripple Creek to Teller County Road 821 to Teller County Road 82, or accessed from Teller County Road 81 to Teller County Road 82

LOCATION COORDINATES

Legal Location: (Township, Range, Section, ¼ Section): NW1/4, Sec 31, T15S, R69W

Latitude and Longitude: Security Office - 38° 43'37" & 105° 09'27"

CRISIS COMMUNICATION PLAN

1 PURPOSE

The purpose of this Crisis Communications Plan (CCP) is to provide basic information to facilitate a management response to an emergency at the Cripple Creek & Victor Gold Mining Company (CC&V). The focus of the CCP is on internal and external communications and management roles and responsibilities during an incident.

External communications include communications to regulatory agencies, governmental entities, news media, employees and their families, the general public, investment community and shareholders and elected officials.

Internal communications include communications to the Denver corporate office executives. Denver executives are responsible for communications to South African headquarters.

2 DECLARATION OF AN EMERGENCY

An employee discovering an emergency situation should follow the procedure listed in the Emergency Response Plan (ERP). A Code 90 should be called if the employee is unable to safely mitigate the situation. Consistent with the ERP, the Mine Rescue Team will respond to the Code 90 call.

At the scene the MRT, the Safety Manager or a Supervisory level person may elevate the emergency to a Code 90 Red, at which time the Vice President/General Manager or designee is notified. It is the responsibility of the Vice President/General Manager to assess whether to declare a formal "Code 90 Red Emergency" and trigger the Crisis Communications Plan.

Note that any employee may call a Code 90 to initiate on site assistance in case of an emergency. However, **only the Vice President/General Manager or designee may declare a formal "Code 90 Red Emergency" and initiate the Crisis Communications Plan.**

3 EMERGENCY CALL OUT

Once the Vice President/General Manager or designee declares a formal Code 90 Red Emergency, Security will initiate the emergency Call-out Tree (See ERP – CONTACTS TAB) and make contact with key personnel, who will in turn initiate contacts to subsequent personnel until required contacts are made. If contact cannot be made with a key individual listed, contact of the next person on the Call-out Tree will be made.

Security will document who it contacts and advise each individual of:

- The general nature of the emergency;
- Who has been contacted to date;
- General response in progress;
- What command center will be used along with route to be used to access property; and
- The radio channel being used to respond to the emergency.

An emergency information form (Crisis Communication Fact Sheet) is included in the ERP under the FORMS tab for Security's use during the early stages of an emergency and during the call out of the management team.

4 SITE SECURITY DURING AN EMERGENCY

Once a formal Emergency has been declared, Security will secure and lock down the site. Gates will be closed and entrance and exit only allowed to Authorized Personnel. If gates are not in place at all locations, individuals will be posted at entrance roads to assure the facility is secure. The American Eagles Road will be closed and access locked or blocked.

Visitors (agency personnel, news media, family members and public) must be escorted away from Carlton Security to designated locations to allow security to focus on the emergency and to isolate emergency communications from the general public.

Security may need to have radio and phone communications available in an adjoining office to facilitate their priority response to the emergency while others are managing visitors arriving at the main gate and security office.

5 EMERGENCY COMMAND CENTER

To facilitate effective communication and dissemination of information during an emergency situation, an Emergency Command Center will be established. The location of the Emergency Command Center will vary depending on the location and nature of the emergency.

In general the Command Center:

- Is the location for dispersal of timely and accurate information and communications internal and external to the company?
- Is equipped with multiple phone jacks, fax, computers for e-mail and radios to effect efficient communications.
- Is equipped with a white board, poster paper, pens, tape and extra copies of the Crisis Communications Plan are available at each potential command center to track and record information.

The following lists the various Emergency Command Center locations depending upon the location and nature of the Emergency.

5.1 Mine Emergency – Command Center at Ajax Building

The command center for an emergency involving mining and mine maintenance operations will be placed at the Ajax Building. This location provides needed phones, radio and access, but is removed from the mine operations facilities including potential emergencies located at the Truck Shop, Bulk Emulsion Facility or Ironclad Shop/Warehouse facilities. If an emergency is located away from the Truck Shop or Ironclad Offices such that there is no threat to these facilities, then a command center may be placed at these locations for a mine emergency.

5.2 Process Emergency – Victor Administration Building

The Command Center for an emergency involving the Process Department (i.e., Valley Leach Facility, ADR Plant, Lab, Mill, Load-out Bin, Crusher or Conveyor) is the Victor Administration Building. This location provides needed phones, radio and access but is removed from the Process Operations.

5.3 Off-site Emergency – Victor Administration Building
The command center for an off site emergency will be the Victor Administration Building.

5.4 Victor Administration Emergency – Ajax Building
The command center for an emergency at the Victor Administration Office will be the Ajax Building.

5.5 Alternate Command Centers
Alternate command centers will be the Truck Shop, Ironclad Offices, or Carlton Security Bldg.

6 ROLES IN EMERGENCY RESPONSE
Once a formal Emergency is called and key personnel have been contacted by Security and have arrived on site, managers are assigned specific roles and responsibilities to facilitate effective communication and response during the emergency, as described below.

6.1 Emergency Commander (EC)
The Vice President/General Manager or designee will assume the role of Emergency Commander (EC). In the absence of the Vice President/General Manager, the Operations Manager will assume the role of Emergency Commander.

The role of the EC is not to physically respond to the emergency at hand, but rather provide executive level leadership, decision making and strategy development to coordinate the response, including internal and external communications.

The EC is responsible to delegate the following positions from the key personnel available:

- On-site Commander
- Safety Manager
- Environmental Manager
- Community Affairs Manager
- Human Resources Manager
- Scribe
- Communications Support

A Corporate Liaison may arrive at the site to assist, who also will report to EC.

A description of these roles and their associated responsibilities is provided below.

6.1.1 On-site Commander
The On-site Commander will be assigned by and report to the EC and is responsible for the physical response to the emergency. On site personnel and equipment will be available to the On-site Commander at their direction to form an Emergency Response Team.

6.1.2 Safety Manager

The Safety Manager will be assigned by and report to the EC. The Safety Manager will be stationed at the command center and is responsible for Safety Management and MSHA contacts and notifications. The Safety Manager will designate a qualified individual to serve in the role of On-site Safety Coordinator.

On-site Safety Coordinator for Physical Response

The On-site Safety Coordinator will be responsible for safety-related concerns during the physical response to the emergency. This individual takes direction from the On-site Commander.

6.1.3 Environmental Manager

The Environmental Manager will be assigned by and report to the EC. The Environmental Managers will be stationed at the command center and is responsible for directing responses to environmental incidents, for environmental and regulatory notifications, and for coordinating with corporate staff on regulatory issues. The Environmental Manager will designate a qualified individual to serve in the role of On-site Environmental Coordinator to coordinate with the On-Site Emergency Coordinator to address environmental incidents that may be associated with the Emergency.

On-site Environmental Coordinator for Physical Response

The On-site Environmental Coordinator will be responsible for providing on the ground assistance regarding environmental-related concerns at the scene.

6.1.4 Community Affairs Manager

The Community Affairs Manager will be assigned by and report to the EC. The role of this position is to manage incoming inquiries and external contacts with the news media and general public. This position, in concert with the Safety Manager and Environmental Manager, develops message points and press releases for approval for external use by the EC and the Corporate Office.

A key role of this position is to manage the media and assure that if there is direct media interface with employees, family members, or management personnel that it is prearranged and people are prepared in advance.

6.1.5 Human Resources Manager

The Human Resources Manager is assigned by and reports to the EC and is responsible for employee communications and attending to family members during the emergency. Note – family members are not allowed on site at any time during an emergency. The Human Resource Manager will delegate qualified individuals for roles of Family Member Attendants.

Family Member Attendants

Family Member Attendants are assigned by and report to the Human Resources Manager. These positions are responsible for attending to the needs of family members during the emergency. Of primary interest is locating family members where they are comfortable, but isolated from the media, public and the command center. Special attention must be given to providing current and

accurate information in a thoughtful manner as directed by the Human Resources Manager. Multiple attendants will likely be required. Depending upon the location of the emergency situation, family members should be staged in either the Victor Administration Building or Carleton Security.

6.1.6 Scribe

The scribe will be assigned by and report to the EC and is responsible for assisting Carlton Security with documenting incoming and outgoing information from the Command Center, including contacts, dates and times. The log will be completed on a white board or poster paper so it is easily reviewed and accessed by the Emergency Response Team at the Command Center. Participants at the Command Center are responsible for communicating the information they receive to the Scribe so relevant information is captured, recorded and accessible.

6.1.7 Communications Support

This position will be assigned by the EC and will provide communication support as needed (e.g., Radio, cell phone, phone, fax, e-mail, laptop, tablet, etc.)

7 ONSITE COMMUNICATIONS

A "Code 90" will be invoked upon confirmation of an emergency (see ERP flowsheets). Code 90 radio silence will apply to general operations until the emergency is declared complete. Radio silence will not apply to those individuals involved in response to the emergency. Specific radio channels may need to be assigned to assure immediate radio contact by Safety when needed. Refer to the ERP plan for general information on how to conduct on-site communications during an emergency.

8 COMMUNICATION WITH VISITORS/GENERAL PUBLIC (E.G., AGENCIES, PUBLIC, ELECTED OFFICIALS AND EMPLOYEE RELATIVES)

The following section describes the procedures to be followed when communicating with government agencies, the general public, visitors, elected officials and employee relatives during an Emergency situation.

8.1 Environmental Agency Contact

The Environmental Manager is responsible for contacting the appropriate state and/or federal regulatory agencies and for providing the necessary information as approved by the EC. Corrective actions will be coordinated with the appropriate state or federal regulatory agencies as appropriate.

Regulatory agency personnel taken on-site will be required to sign in, show identification and will be escorted by the assigned staff member or the security office to a designated location to be briefed by the Environmental Manager.

8.2 Safety Agency Contact

The Safety Manager will contact MSHA, as appropriate. MSHA personnel will be escorted to the Command Center by a company representative. The Safety Manager is responsible for briefing MSHA personnel. The Safety Manager or designee is responsible for escorting MSHA to the scene, as appropriate.

8.3 Elected Officials Contact

Elected officials (e.g., mayor, councilmen, commissioner, legislator etc.) will be escorted to the appropriate location by an assigned staff member and briefed by the Community Affairs Manager or an alternate individual designated by the EC.

8.4 Contact with the General Public

The EC or designee will refer inquiries from the public to the Community Affairs Manager, Environmental Manager, Safety Manager or a designated staff member.

8.5 Contact with Affected Employee Relatives

Relatives of affected employees will be escorted to a designated waiting area.

The Human Resource Manager or the designated Family Member Attendant will serve as a liaison with employee relatives. The liaison will be available to provide information to the relatives, and answer questions as directed by the EC or designee.

8.5.1 Notification of Relatives of an Employee - Injury or Entrapment

If, during the course of a major property emergency, an employee becomes seriously injured or entrapped, the Human Resource Manager and the Safety Manager, or designee, under the direction of the EC, will notify the employee's spouse or relative/s of the situation. The employee's spouse or relative/s should be as listed in the employee's records.

Notification may be made in person or by telephone. Information to be relayed to the relative may include:

- Hospital to which employee has been taken;
- Actions taken to rescue entrapped employee;

8.5.2 Telephone Inquiries by Employee's Relatives

If a telephone inquiry is received from an employee's relative regarding the status of the employee, the call will be returned by the Human Resource Manager, or designee.

The Human Resource Manager will talk with the relative and answer questions. The Human Resources Manager may confirm that the employee is safe, if verified by the EC. If the relative has not been previously notified, the Human Resource Manager may, if information is verified, inform the relative of the injury or entrapment of the employee.

8.5.3 Notification of Employee's Relatives of a Fatality

As soon as the death of an employee has been verified by the County Corner, the Human Resources Manager will contact a clergyman of the deceased's church (if a member of a church), or a close family friend, to be asked to accompany the Human Resources Manager and the Vice President/General Manager to the home of the deceased.

Under NO CIRCUMSTANCES is a notification of a fatality to be made by telephone.

9 MEDIA RELATIONS

It is important that representatives of the media be kept informed of the facts of an Emergency as they develop. The following procedure should be followed when communicating with the media.

9.1 Information Dissemination to News Media

In the event the news media contacts the operation concerning the emergency event prior to Corporate Officials having been notified, the EC or designee or the Community Affairs Manger will respond only as to the known facts. Responses should be brief and concise and, in most cases, should discuss the event with an assurance that additional information will be forthcoming subsequent to verification.

9.1.1 Press Releases and Media Contact

Prior to contacting the news media concerning the emergency event, the EC or designee and the Community Affairs Manager will prepare a draft press release for corporate approval.

Relevant facts will be made available so that adequate initial, interim (as necessary) and final press releases can be made available. Press releases should include:

- The nature of the incident;
- Timing and duration of incident;
- Cause, if known;
- Location;
- General description of injuries and property damage, if any;
- Agency notifications made, if any; and
- General description of remedial actions, if any.

Where appropriate and practical, Corporate Personnel will be contacted to assist and brief the EC and the Community Affairs Manager in the preparation of a press release and to assess the extent to which the information should be disseminated. At the site level, the Community Affairs Manager will be responsible for coordinating approval of the press release with the Corporate Office.

The Community Affairs Manager or designated spokesperson will provide timely and accurate information to the media and public as it develops, relative to the facts of the specific emergency event. Corporate personnel will be kept advised of information released to the media through briefings.

The Community Affairs Manager should not address subjects of a financial nature, other than information already publically available (i.e. Annual Report, Quarterly Report to Stockholders, etc.); subjects of a technical nature, for which they are not qualified to address; or release information of a speculative nature. Inquiries pertaining to this type of information will be referred to Corporate Personnel.

The Community Affairs Manager will handle dissemination of information to the news media, as appropriate. It must be understood that only the Community Affairs Manager and the EC, or

designee, are permitted to provide information to outside media contacts. This practice is necessary to ensure factual and timely information is provided.

A listing of appropriate media is included in the ERP under the CONTACTS tab. At a minimum, the following news media will receive the initial News Release if one is deemed necessary and only after proper management approval:

- Newspaper
- Television
- Radio

Concise statements about the Emergency situation should be made. Information relating to causes, effects, or speculation surrounding the emergency should be avoided. Only definite facts will be disclosed (i.e. injury, fatality, spill, etc.). Information regarding a fatality may only be released following confirmation by the Coroner, MSHA is on site and has verified that a fatality has occurred, and Corporate has approved the release of such information.

A glossary of industry terminology (e.g., "ADR", "VLF", "Arequa Gulch") will be made available during oral briefings with the media. A company spokesman may respond to direct media questions with accepted definitions for technical terminology.

As needed, information aids may be made available to the press:

- Organization chart;
- Employment information;
- Demographic information;
- Area maps;
- Tour Book (containing general property information)
- Emergency event fact sheets, as available.

A final news release will be issued upon successful completion of the Emergency Action Plan. The purpose of the remedial news release is to emphasize a successful response to the emergency and how similar emergencies will be prevented in the future.

9.1.2 Escorting the Media Onsite

The Community Affairs Manager is responsible for managing the media onsite and will provide a briefing on the emergency situation. Technical staff will be made available to accompany the Community Affairs Manager, as directed by the EC or designee.

If necessary and appropriate, the media will be invited to go to a designated area or briefing room where telephones, statistical data, and updates of the situation are available. The Community Affairs Manager, or designee, will escort the media to the briefing room.

If warranted and if dictated by the nature of the emergency, the news media may be permitted to meet with the EC or designee for an interview. The interview must be pre-arranged to allow the EC time to prepare, as appropriate. The interview should be conducted at a location away from the Command Center and removed from the location of the emergency so as not to impede

emergency response activities. A regular media-briefing schedule may be established, if warranted.

9.1.3 Formal Press Conference

Depending on the nature and scale of the incident, a formal press conference to address the media may be warranted. The Community Affairs Manager and the EC, or designee will generally conduct the press conferences at a designated area.

At the start of the press conference, the Community Affairs Manager will introduce himself/herself and the other participants from the company. The Community Affairs Manager will then establish the press conference ground rules, which may include:

- Questions and follow-up should be directed to the Community Affairs Manager, who will direct them to the appropriate personnel.
- An orderly method for soliciting questions will be established and adhered to.
- Replies to questions must be complete before new questions are asked.
- Failure to abide by established rules may result in the offending individual/s being asked to leave and/or the termination of the press conference.

The Community Affairs Manager will read a short statement summarizing the known facts about the emergency incident. Information handouts will be distributed, as appropriate. The Community Affairs Manager will then open the question and answer period.

At the end of the question and answer session, the Community Affairs Manager may choose to reiterate the known facts about the emergency including new information that may have become available during the course of the press conference.

The Community Affairs Manager will conclude the press conference by thanking the media representatives for their cooperation and by assuring them that they will be informed of further developments concerning the emergency incident.

10 INCIDENT REPORTING AND CLOSE-OUT

When the emergency has been resolved, individuals involved with the incident will meet at the Command Center for a de-briefing. Emphasis will be placed on documenting an accurate chronology for the event and ensuring that information is complete, accurate and consistent. Documentation of the event, telephone contacts, communications etc. will be copied and a copy provided to the scribe. Original records should be scanned for entry into the Workforce Management Reporting System (WMRS).

An incident review/investigation will be conducted using the AngloGold Ashanti Advanced Incident Investigation Process (AIIP) Protocols and/or the CC&V Corrective Action Procedure with a focus on continuous improvement and prevention. Documentation associated with the incident is entered into WMRS. Records of the incident will be maintained in WMRS.

11 REVISION HISTORY

Revision No	Revision Date	By Whom	Description
01	September 25,2006	P. Roberts	Initial release of document
02	January 8, 2008	P Roberts	Replace RWL w LN
03	July 1, 2009	P Roberts	Title chg & CAR-CCV-2008-002 update
04	August 17, 2010	P Roberts	Replace Guenther w Du Bois
05	April 27, 2011	P Roberts	Include Dispatch, and change to Channel 1 for on-site communications (IX)
06	August 31, 2012	P. Roberts	Transfer from EMS to HSMS
07	May 15, 2013	A.Vanoni	Replace Tish Allen with Penny Roberts Replaced Project Offices to the Ajax for the Command Center
08	June 23, 2014	L. Altenburg	Revise and update entire policy
09	July 9, 2015	C. Hanks	Update signatures

Cripple Creek & Victor Gold Mining Company
Managed by: Newmont Corp.

GEOTECHNICAL CODE 90

For The Cresson Project

Approved and Issued by _____ Date 9/24/15
Jack Henris
Vice President & General Manager

- **The Emergency Response Procedures (ERP) and all associated Plans are strictly controlled in order to avoid conflicting or duplicated information. Any updates, edits, or additions to the ERP or this Plan must be coordinated through the Safety Manager AND the Environmental Manager.**

- **Employee and Third Party Contact information can be found in the Emergency Response Procedures (ERP) under the CONTACTS tab. All contacts must be made in accordance with the ERP guidelines and ONLY by designated staff.**

SUBJECT

Cripple Creek & Victor Gold Mining Company Personnel Accounting Procedure for Highwall, Dump, and Leach Pad Failures or a Large Underground Void Opening.

PURPOSE

Current pit, dump, and leach pad designs develop the steepest slope angles possible while maintaining an acceptable level of personnel and equipment safety. However, there is always the potential for failure, no matter how carefully the infrastructure is designed. To ensure the safety of mine personnel, it is necessary to have an accounting procedure in place in the event of a failing highwall, dump, leach pad, or opening of a large underground void opening.

MINE PERSONNEL ACCOUNTING PROCEDURES

Any notification of the general public of the aforementioned events will be the responsibility of the Community Affairs Manager or the Vice President/General Manager to avoid any miscommunication. Employees and contractors must refrain from communication with outside contacts until the event is released and the facts are fully known. Restricted forms of communication include but are not limited to: cell phones, office phones, internet, and social media.

Broader emergency evacuation procedures that require public notification and environmental response are covered in the Crisis Communication Plan.

1. A Geotechnical Code 90 will be called, followed by specific information concerning the failure location. The Geotechnical Code 90 will apply to all mine personnel.
2. All activity on the mine site not directly related to the geotechnical code 90 must stop immediately. Equipment operators must ensure that they bring their equipment to a stop at the closest location that they can safely park the equipment out of the way of all hazards to include further geotechnical failures, and responding emergency personnel.
3. Personnel must carefully monitor the radio on Channel 1, Mine Operations. General radio communication will cease.
4. Carlton Security will play the Code 90 tone simultaneously on Channel 1, 3, 5, 9, and Ames. Carlton Security will monitor Channel 1.
5. Ironclad Security will announce the Geotechnical Code 90 over the IP phone system which will reach phones in the Ironclad, Carlton, Victor Administration, Victor Hotel, and AJAX locations.
6. The Ironclad, Carlton, and American Eagles gates will be secured so that no traffic can leave site with exception of visitors on the American Eagles. Mine personnel and permanent contractors will be allowed in the gates to ease the process of accounting for people.
7. The Mine Production Superintendent (M1) will act as the Incident Commander. If the Mine Production Superintendent is unavailable, the following will assume accountability as the Incident Commander:
    - M2 – Mine Production Load/Haul Supervisor
    - M7 – Mine Production Projects/Support Supervisor
    - J1 – Maintenance General Supervisor – Work Execution
    - J2 – Mine Maintenance Supervisor
8. The Process Production Manager (H0) will act as the Process Production Coordinator. The Process Production Coordinator will be accountable for accounting for all Process Production, Mill Production, and Laboratory Personnel. Once all Process Production Personnel have been accounted for, the Process Production Coordinator will call the Carlton Security reporting that information. In the event that the Process Production Manager is not available, the following will assume responsibility for the Process Production Coordinator:

- H1 – Process Production Superintendent
- H2 – Process Production Supervisor

9. The Process Maintenance Manager (L0) will act as the Process Maintenance Coordinator. The Process Maintenance Coordinator will be accountable for accounting for all Process Maintenance, and Mill Maintenance Personnel. Once all Process Maintenance Personnel have been accounted for, the Process Maintenance Coordinator will call the Carlton Security reporting that information. In the event that the Process Maintenance Manager is not available, the following will assume responsibility for the Process Maintenance Coordinator:

    - L1 – Process Maintenance Superintendent
    - L2 – Process Maintenance Supervisor

10. When the Geotechnical Code 90 is called, the Incident Commander will announce over Channel 1 that he or she is the designated Incident Commander for the incident.

11. The primary responsibility of the Incident Commander is to ensure all mine personnel are accounted for, secure the scene, and acquire necessary resources. Accounting for mine personnel will include, but is not limited to: Mine Production, Mine Maintenance, Process Production, Process Maintenance, Mill Production, Mill Maintenance, Exploration, Environmental, Technical Services, Projects, Warehouse, Security, HR, IT, Administration, and Contractors.

12. It is the responsibility of each department's manager, or their designee, to notify the respective assigned Security Location (Ironclad or Carlton) when all department personnel have been accounted for. An exception to this is when the Geotechnical Code 90 is called after normal operating hours. At that time, Carlton Security becomes responsible for accounting for AK Drilling, and Steve Homer (Elk Creek Gyro). The Exploration Department will supply Carlton Security with contact information for AK Drilling and Elk Creek Gyro. Carlton Security will contact AK Drilling and Elk Creek Gyro via cell phone for accountability. Please reference attached diagram that lists which personnel call the Ironclad or Carlton Security Locations.

13. The Incident Commander will call the Security Locations to insure that each department has been accounted for after accounting for personnel which are most likely in the affected area.

14. In the event that a particular department or person has not been reported to the Incident Commander, the Incident Commander will call the specific department to account for their personnel.

15. The Ironclad Dry will be the assembly point for the Mine Technical Services Department, Ironclad based IT, HR, and production personnel that are not in the field. At the time of the incident, the Ironclad Security Guard will designate a representative to account for all Ironclad office personnel and provide an accounting report to the Incident Commander.

16. Mine Maintenance, Light Vehicle Mechanics, Welders, and Mine Maintenance contractor personnel will assemble in the New Truck Shop so that personnel can more easily be accounted for. The Mine Maintenance Supervisor will be responsible for accounting for all Mine Maintenance Personnel as well as calling into Ironclad Security with an accounting report.

17. The Mine Production Load/Haul Supervisor (M2), the Mine Production Projects/Support Supervisor (M7), and the Dispatcher are responsible for accounting for all pit personnel.

18. The Dispatcher will account for all equipment with Modular installed via the Dispatch system. Accounting for Modular equipment will be reported to the Incident Commander when they call dispatch. If needed, the Dispatcher will route any equipment as per instructions from the Incident Commander.

19. M2 or M7 will account for all non-Modular equipment via Radio when the Incident Commander gives the radio over for pit personnel accounting.

20. The Ironclad Security Guard will check the sign-in book at Security to determine what contractors/deliveries are on site and need to be accounted for. This information will be communicated to the Incident Commander when requested.
21. The Mine Rescue Team (MRT) Members will assemble at the Mine Rescue parking location on the east side of the New Truck Shop and await further instruction.
22. If the MRT is needed, they will be activated by the Incident Commander and guided to the site by either M2 or M7. MRT vehicles will have the right-of-way in this situation so that they can gain entry into the hazard area as quickly and safely as possible.
23. When all personnel and equipment have been accounted for, the Incident Commander will conduct a final pit inspection to ensure that no one remains in the hazard area.
24. After all personnel have been accounted for, the Incident Commander will announce an 'all personnel have been accounted for' for the Geotechnical Code 90.
25. The failed area will remain closed until the failure has stabilized, and determined as safe to re-enter. This assessment will be made by the Incident Commander, and the Chief Geologist and/or Geotechnical Engineer. Depending on the severity of the incident, an MSHA inspection and/or geotechnical consultation may be needed before normal operations can resume.

REVISION HISTORY

Revision No	Revision Date	By Whom	Description
01	September 25,2006	P. Roberts	Initial release of document
02	9/10/2007	J. Roberts	updates as a result of drill
03	1/8/2008	P. Roberts	replace RWL w LN
04	6/11/2009	J. Gage	Plan Updates
05	7/1/2009	P. Roberts	replace Newcomer w/ Guenther
06	10/6/2009	L. Snyder	Safety Dept. Updates
07	03/22/2010	W. Stephens	Geotechnical Department Updates
08	8/17/2010	P. Roberts	Replace Guenther w/ DuBois
09	4/26/2011	W. Stephens/E. Munroe	Geotechnical Department Updates including Dispatch responsibilities
10	11/8/2011	E. Munroe/G. Gibson/ C. Stephens	Geotechnical and Safety Department Updates and responsibilities
11	8/31/2012	P. Roberts	Transfer from EMS to HSMS
12	01/07/2014	E. Munroe/ C. Stephens	Updates as result of drills
13	11/05/14	E. Munroe/G. Gibson	Mill personnel updates
14	9/24/15	C. Sparkman	Replace VP& GM Billingsley to Henris

Cripple Creek & Victor Gold Mining Company
Managed by: Newmont Mining Corporation.

CYANIDE EMERGENCY RESPONSE PLAN (CERP)

For The Cresson Project

The Emergency Response Procedures (ERP) and associated Plans are controlled documents. Updates, edits, or additions to the ERP or this Plan must be coordinated through the Safety Manager AND the Environmental Manager.

Employee and Third Party Contact information can be found in the Emergency Response Procedures (ERP) under the CONTACTS tab. All contacts must be made in accordance with the ERP guidelines and ONLY by designated staff.

Cripple Creek & Victor Gold Mining Company
Cyanide Emergency Response Plan

I. Introduction

This Cyanide Emergency Response Plan (CERP) describes Cripple Creek & Victor Gold Mining Company's (CC&V) emergency procedures in the event of an unplanned release of cyanide from its operations. While CC&V has a general Emergency Response Plan (ERP) and Crisis Communications Plan (CCP), this plan is specific to cyanide. The ERP and CCP may be used as appropriate during responses to cyanide-related emergencies.

CC&V has designed and constructed its facilities, developed its Standard Operating Practices (SOP's) and trained its employees to minimize the potential for release of and exposure to cyanide. However, given the toxicity of cyanide, it is prudent to prepare for possible releases and exposures so that if a release or exposure were to occur, adverse environmental or health impacts can be prevented or appropriately mitigated.

The CERP identifies potential release scenarios and specific example response actions to stop or contain a cyanide release. Emergency Response Coordinators and Responders are identified along with necessary contact information under the CONTACTS tab in the ERP. The location of equipment that may be used for response and remediation is provided, and monitoring and clean-up procedures are described. Internal and external spill notifications and follow-up actions are also discussed.

In general terms, CC&V's plan for emergency response to cyanide releases and exposures includes the following elements:

- Upon discovery of a cyanide release or exposure, personnel are to notify CC&V management.
- Personnel shall attempt to stop or contain a release if this can be accomplished safely.
- CC&V's designated Emergency Response Coordinator will direct the Emergency Response Team, as necessary, to stop the release and contain released cyanide.
- CC&V management will notify regulatory agencies, outside responders, the International Cyanide Management Institute (ICMI), and other stakeholders, as necessary.
- Released cyanide will be recovered, treated and cleaned up, and contaminated material properly disposed of in accordance with regulations.
- CC&V will investigate the cause of the release and implement measures designed to prevent its re-occurrence.
- CC&V will evaluate its response to the release and modify the CERP and/or its response training, as necessary, to prevent recurrence of the release and to ensure effective response to future releases should they occur.

II. Plan Development

CC&V has developed this CERP with input from key employees. Potential release scenarios were identified in part by Process Department personnel. CC&V consults with its employees periodically to assure that the CERP addresses current conditions and risks.

III. Emergency Response Scenarios

CC&V has evaluated the potential for releases of cyanide at its operations and subsequent exposures. Based on this evaluation, CC&V determined that some potential, whether an occurrence is probable or not, may exist for the following release and exposure scenarios to occur under extreme upset conditions:

1. Release of hydrogen cyanide gas from cyanide storage or process facilities;
2. Transportation accidents occurring on-site;
3. Releases during unloading cyanide;
4. Releases during mixing of cyanide;
5. Releases due to fires and/or explosions in cyanide storage or process facilities;
6. Ruptures or leaks in pipes, valves, and/or tanks containing cyanide solution;
7. Overtopping of the internal cyanide solution reservoirs in the valley leach facility (VLFs);
8. Power outages including failure of backup generator power;
9. Pump failures;
10. Monitored Leakage Control Features of the VLFs;
11. Failure of the emergency cyanide treatment system for the External Storage Pond;
12. Structural failure of the VLFs;
13. Solution release to potential flow paths.

Each of these release potentials is discussed in additional detail below:

1. <u>Release of hydrogen cyanide gas from cyanide storage or process facilities</u>

A significant release of hydrogen cyanide gas could result from mixing cyanide reagent or process solution with acidic solution.

Such a release is considered to be unlikely as the facility is designed to ensure the physical separation of acids and cyanide solution, and relevant personnel are trained to operate the facility to avoid mixing of cyanide and acids.

CC&V's procedures for regular inspections and preventative maintenance of cyanide management facilities and employee training in the proper operating procedures for off loading and use of acids and cyanide minimize the risk of an incident. Further, separate secondary containment is provided for acid and cyanide storage including delivery pumps and piping.

2. <u>Transportation accidents occurring on-site</u>

Transportation accidents on-site could occur between the guard gate and the off-loading area at the High Grade Mill (HG Mill) and or the ADR facility. Cyanide is shipped as dry product and

in high strength trailers designed to withstand highway level impacts. An on-site accident, should one occur, would reasonably be at low speed given the area of cyanide delivery truck operation and posted speed limits on the site. Since product is shipped dry, should a release occur, dry clean up procedures would be used.

3. Releases during unloading cyanide

Potential releases during cyanide unloading are possible but are minimized through design of the off loading facility including a curbed concrete containment pad provided for truck parking, containment for the off load piping and tankage, and synthetic liner underlying these facilities and immediately adjacent areas. Additionally, the synthetic liner is tied into the VLF for containment purposes. Facility design also includes appropriate interlocks for valves and piping. Specific off loading procedures are written and followed. Should a release occur, it would: 1) be within secondary containment, or 2) if it exceeded containment, the surrounding area is relatively flat, and there are additional pond structures downgradient of the off loading facility that would function as unlined containment structures to minimize or eliminate a release to streams or offsite, but not preventing release to soils.

4. Releases during mixing of cyanide

Potential releases during mixing of cyanide are possible but minimized through implementation of procedures and by facility design. Mixing of cyanide occurs during the off loading process as alkaline solution is circulated through the dry product in the delivery truck and the resulting solution is pumped to storage tanks within secondary containment. Written procedures are in place and followed for cyanide off loading and mixing. Controls are in place to assure that the mixing solution is of appropriate alkaline pH (pH of 10.0 or greater). Mixing occurs on and within the containment areas described under the "Releases during unloading cyanide" section above.

5. Releases due to fires and/or explosions in the process plant

Risk of fire in the ADR facility and the HG Mill is minimal but could possibly occur due to maintenance activities such as welding or electrical fires. The ADR and HG Mill are equipped with fire suppression systems in the Motor Control Center areas and portable fire extinguishers are placed throughout these facilities in appropriate locations. Such fire suppression systems are routinely inspected, thus assuring proper function should a fire occur. If a fire were to occur, it is unlikely that it would be catastrophic, resulting in the release of cyanide solution, but would likely be confined to a particular section of the facility. Both the HG Mill and the ADR have a concrete floor, metal exterior sides, and contain primarily steel piping and vessels. The presence of combustible materials is minimized. In addition to on site fire suppression capabilities, including large water trucks, a fire response agreement is in place with Cripple Creek to provide additional resources if needed. Moreover, both the HG Mill and the ADR facility is tied to the VLF thus flow from the fire suppression system would be directed towards containment.

6. Ruptures or leaks in pipes, valves, and/or tanks containing cyanide solution

Rupture or leaks in pipes, valves, and/or tanks containing cyanide solution is possible but would likely be contained by facility design. Both the HG Mill and ADR are designed for solution containment through floor gradients, curbing, passive overflow outlets to the VLF, and by the

underlying liner attached to the foundation perimeter. Overflows are largely handled passively through gravity drainage to the VLF, except for pumping of the lined area beneath the concrete floor.

Piping and pumping systems are inspected regularly and a preventative maintenance system is in place to assure proper repair and proper function.

Ruptures or leaks in barren solution piping on the VLF can occur although headers are constructed of steel piping to reduce the risk of ruptures and/or leaks. Additionally, the cyanide pumping system is equipped with pressure loss or flow increase alarm systems that automatically shut down the pumping system should a rapid change in pressure or flow occur. Procedures are in place for restarting the pumping system once an alarm has been triggered and the pumps have been automatically shut down. These systems are disabled when necessary to make piping changes on the VLF. It is recognized that additional risk is incurred during the time periods when the system is disabled or overridden for operational reasons.

7. Overtopping of the internal solution reservoirs in the VLF

The VLF Pregnant Solution Storage Areas (PSSA) are managed and monitored daily to assure appropriate solution levels. The PSSA capacity is designed using a probabilistic water balance model to contain normal operating solution levels, 12-hour VLF drain down, precipitation resulting from a 100–year, 24-hour storm, and additional precipitation based upon seasonal variability.

Solution volumes and fresh water addition are managed through a computer model to predict future operating levels of the PSSAs given time of year and probability of precipitation, fresh water addition to the system, and ore stacking plans. An external storage pond of approximately 20 million gallon capacity is in place to accept excess solution should a scenario occur that requires additional storage volume beyond that provided in the PSSAs internal to the VLF. Excess pumping capacity exists to ensure the ability to move solution from the PSSA to the top of the VLF. Backup generator power is in place to power the pumps in the event of failure of commercial power.

8. Power outages including failure of backup generator power

Commercial power loss can occur. In the event of loss of commercial power, CC&V has in place sufficient diesel generator capacity to power the primary systems to assure solution can be moved from the PSSAs to the ADR and to the VLF, thus preventing overtopping of the internal PSSAs. In the event of mechanical failure of one of the generators, use of available power would be prioritized to the appropriate PSSA pumps. Diesel fuel is stored on site. In the event of an extended power outage, additional diesel fuel would be delivered to the site via tanker truck. If truck delivery of additional diesel were a problem due to road closures or transportation issues, mine production could be curtailed to provide available diesel for emergency power generation.

9. Pump failures

Each PSSA is fitted with multiple pumps and excess pumping capacity to facilitate proper solution movement during a pump failure.

10. Monitored Leakage Control Features of the VLFs

The VLFs are monitored several times each week at underdrains, leak detection systems (once a week), and low volume solution collection systems. Possible VLF leakage is monitored through a leak detection system. Any potential leakage from the VLF liner system would report to the leak detection sumps via the leak detection trenches. Collected water can be pumped for sampling and characterization. The inflow rate can also be tracked. If leakage should occur, there should be sufficient warning through these leak detection systems for early identification and subsequent modification of VLF solution management to minimize uncontrolled seepage. Underdrains provide for conveyance of shallow underground flows. These flows report to pumpback facilities located downgradient of the SGVLF and AGVLF toe berms. Underdrain flows are pumped back to the VLF to ensure no captured shallow groundwater will move down gradient of the VLFs. The pump back system(s) are designed to manage up to 500 gpm at the Arequa facility and 50 gpm at the Squaw facility. The low volume systems collect any leakage from the upper geosynthetic liner and convey it to a sump, located in each pregnant solution storage area (PSSA). The level of each low volume sump is maintained with pumps at less than 2' of hydraulic head. This solution is pumped back to the surface of the PSSA in which the sump is located. Should seepage occur at other locations, portable pumps and excavated sumps would be used to contain and return solution to the VLF. Such pumps may be gasoline, diesel, or electric powered by portable generators. This equipment is on-site and can be deployed readily, as needed. Larger rental pumps and additional generators are also available in Colorado Springs and Denver.

11. Failure of the emergency cyanide treatment system for the External Storage Pond

Failure of the emergency cyanide treatment system for the external pond is possible. Should failure occur and solution needed to be moved into the pond at cyanide levels greater than 40 ppm, the cyanide solution would be moved into the pond and the pond treated as a batch with hydrogen peroxide or calcium hypochlorite.

The pond is outfitted with a bird hazing device which would be activated to minimize potential for wildlife exposure. Additional hazing techniques, including stationing personnel at the pond to haze birds until levels were reduced below the 40 ppm would be implemented, as needed.

12. Structural failure of the VLF

Major structural failure of the VLF could occur but is highly unlikely. Both the Phase II toe berm and the Squaw Gulch VLF toe berm are engineered structures certified by a competent third-party engineer. The berms are reviewed routinely by operating staff in the area and formally reviewed annually through CC&V's geotechnical inspection program. The site is in a low seismic region and the VLFs have been designed to take into account potential seismic activity.

Movement of ore material off liner could occur through slope failure since ore is stacked at the angle of repose between catch benches. Ore could also move off liner due to a break in a barren pipeline on the VLF, resulting in open flow sufficient to move stacked ore. Catch benches provide some containment for such an occurrence. Portions of the VLF also have a small catch

area between the liner edge berm and the stacked material. This particular type of event is recognized as an operational risk and is controlled by use of steel barren headers when headers are near the liners edge, through the automatic shut down system, through monitoring of the pad by process operations and by implementing a stacking plan assuring proper operational slopes, benches and setbacks from the liner edge.

13. Solution release potential flow paths

Potential solution release flow paths in the vicinity of the ADR and VLF are as follows:
The ADR and supporting facilities handling cyanide solution are located on liner that is either pumped to the VLF or flows passively to the VLF. A solution release off liner would likely flow back towards the VLF. Should sufficient solution be released to move solution off liner, additional unlined storm water catchment ponds are in place between the cyanide handling facilities and adjacent streams, thus providing additional storage of solution that would prevent surface water impacts off site.

The VLFs are valley fill with the pump back facilities located in the thalweg of the valleys downgradient of each VLF. As such, it is reasonable to expect that seepage volume would report to the underdrains leading to the pump back vault or to the surface at the foot of the toe berms through the broader filter drain such that flows could be routed into the pump back and returned to the VLFs.

Potential flows that may be seen at the leak detection trenches would likely be of low volume given that the trenches are in the foundation materials of the VLFs and beneath one foot of compacted clay. Leak detection trenches report to sumps where flows can be captured and pumped back to the VLFs.

IV. Response Actions

Initial Notification

Any employee identifying a release of cyanide off containment shall immediately notify his/her supervisor. The supervisor will then notify Carlton Security who will alert management, and safety.

Survey the Scene

The individual must STOP, survey the scene and determine his/her safety and the safety of others prior to proceeding with a response action.

Measures to Stop Release

Reasonable steps will be taken to stop the source of the release insofar as such actions can be done safely.

Measures to Contain Release

Reasonable steps will be taken to contain the release insofar as such actions can be done safely. These measures include use of equipment to build dikes, berms, sumps, or other containment structures.

Worker Health and Safety

Worker health and safety is paramount when responding to incidents involving cyanide. If in doubt about safe conditions, err on the safe side. The mine rescue team (MRT) has access to the appropriate equipment to respond to cyanide incidents including self contained breathing apparatus, vinyl raingear, face gear, monitoring equipment, and antidotes.

Antidotes

Antidotes are only available at the Carlton Security Building. The cyanide antidote is not to be administered by the MRT, but rather, will be provided to the ambulance and emergency medical technicians to accompany the patient to the hospital. The EMTs are qualified to administer the antidote, if needed.

Primary Emergency Response Coordinator

The Primary Response Coordinator is the Process Manager or his designee.

Alternate Emergency Response Coordinators

Alternate Emergency Response Coordinators if the Process Manager is unavailable are listed below:

General Manager
Operations Manager
Process Superintendent

Carlton Security upon request from a supervisor will immediately contact the Primary Emergency Response Coordinator in the event of a cyanide-related emergency. If the Primary Emergency Response Coordinator cannot be reached, the Alternate Emergency Response Coordinator shall immediately be contacted in descending order. The Emergency Response Coordinator (either the Primary or a designated Alternative) shall authorize the call-out of the MRT (Emergency Response Team) and is responsible for coordinating all on-site emergency response measures. Information regarding MRT call-out procedures and available, qualified personnel is included in the site-wide Emergency Response Plan. CC&V Mine Rescue Policies and Procedures include cyanide training, response capabilities to cyanide incidents, and specific response equipment available to the MRT. Specific procedures for first aid treatment of cyanide exposure, and transporting patients for follow-up treatment are included in the MRT Policies and Procedures. In addition, all employees are taught first aid treatment for cyanide exposures during New Miner Training and at Annual Refresher.

The Emergency Response Coordinators shall be thoroughly familiar with the Cyanide Emergency Response Plan, operations and activities at CC&V involving cyanide, the locations and characteristics of cyanide, cyanide solutions and cyanide facilities, the location of pertinent records, and the facility layout. The Emergency Response Coordinators have authority to commit the resources needed to carry out a cyanide related emergency response. CC&V has committed to periodically test our ability to respond to a cyanide-related incident and to implement appropriate first aid procedures.

Notification of Emergency Response Agencies or Outside Responders

A member of senior site management is responsible for determining if outside emergency assistance is required. The person making such a determination shall not be the Emergency Response Coordinator since that individual is responsible for resolving the cyanide emergency. Such non-Emergency Response Coordinator individuals include members of the management team such as the General Manager, the Operations Manager, Safety Manager, Environmental Manager, or Process Manager or other individual as designated by the Emergency Response Coordinator.

Evacuation of Process or Laboratory Facilities

Evacuation of the HG Mill, ADR, laboratory, or other process facilities would likely only be done in the event of either catastrophic failure, fire, or a release of HCN gas resulting from mixing of cyanide solution with acid. In the event of an evacuation, Carlton Security and adjoining offices also should be evacuated. Evacuation will be accomplished through personal contact, mine radio, telephone, or loudspeaker.

Evacuation of Affected Parties Off Site

This plan does not anticipate a scenario that would require evacuation of off site parties from residences or businesses other than in an unforeseen catastrophic event.

The portion of Highway 67 past the ADR could be closed if necessary to protect the public from potential exposure from a fire or other catastrophe at the ADR, HG Mill or Lab. Public Safety agencies (e.g., Sheriff, Police, and State Patrol) would be called to coordinate a road closure. Contact information for these agencies is located in the ERP under the CONTACTS tab.

If a catastrophic fire occurred at the HG Mill or ADR, and there is a potential for a smoke plume to impact Victor, Cripple Creek, or private residences in unincorporated areas, such areas would be notified to evacuate. The appropriate law enforcement, fire departments, and emergency response offices would be notified and appraised. Contact information for these agencies is located in the ERP under the CONTACTS tab.

If a catastrophic HCN gas release were to occur at the HG Mill or the ADR, Victor, Cripple Creek, and residences in unincorporated areas would be notified to evacuate as appropriate.

Evacuation will be effected through use of local emergency personnel as described above.

Notification of Affected Parties Off site

In the unlikely event of a catastrophic release of solution downstream in Arequa and Squaw Gulches, downstream water users would be notified by public emergency agencies of Teller and Fremont Counties. Contact information for these agencies is located in the ERP under the CONTACTS tab.

Notification of Outside Agencies

Notification of regulatory agencies will only be done by the General Manager, the Safety Manager (MSHA and Emergency Response Agencies), or the Environmental Manager

(Environmental Agencies), or the Designated Emergency Response Coordinator as described in Part VI.

Clean Up Procedures for Cyanide Solutions

Do not use the following procedure for high concentration cyanide such as at the bulk delivery area. Calcium Hypochlorite is not to be used with high concentrations cyanide solutions.

Begin detoxification activities, if necessary. In the case of cyanide, if solution is released outside lined areas onto the ground, complete excavation of the affected soil or detoxification is required. If Calcium Hypochlorite is used for detoxification, it will be necessary to maintain elevated pH levels (8-11) for the reaction to occur. In addition, cyanogen chloride gas can be generated. This gas is highly toxic and the area should be well ventilated. Alkaline chlorination detoxification can be accomplished using beads or by making an aqueous solution. Monitoring of chlorine levels will occur during use of this method to ensure that solutions with potentially toxic chlorine levels are not released. The Reportable Quantity for Calcium Hypochlorite is 10 pounds as released to the ground in any 24-hour period.

Begin clean-up activities and implement through completion as detailed In the CC&V Spill Prevention, Control and Countermeasures Plan (SPCC). The SPCC plan includes procedures for monitoring and reporting after the initial response.

Laboratory

The proper procedures for responding to a spill of cyanide in the lab:

- If water is present, a self-containing breathing apparatus may be necessary.
- For a dry spill, shovel the contents into a sealable bucket and label appropriately. Remove the contents to ADR for disposal to the VLF.
- For liquid spills, contain the area with the absorbent socks and flush the spill area with Calcium Hypochlorite and large amounts of water. Used absorbent socks should be disposed of in a labeled sealable bucket and the mop and bucket used in the cleanup should be completely rinsed and disposed of in an appropriate manner that complies with State and Federal Regulations (contact the Environmental Resources Department).

V. Response Equipment

CC&V maintains the equipment necessary to implement this CERP. In addition to the loaders and dozers that are in constant use as part of mining and related operations and inspected prior to each use, this equipment is routinely inspected to ensure that it is available in the event of an emergency. The warehouse has basic hand tools, Calcium Hypochlorite and dust respirators.

Self contained breathing apparatus and HCN monitoring equipment (draegers, monitox, toxipro, and multiple gas meters) are available for emergency use only. SCBA's must only be used by trained personnel.

VI. Notification

Notification should be done in accordance with the Emergency Response Procedures (ERP). Contact information for both internal and external contacts can be found in the ERP under the CONTACTS tab.

VII. Monitoring and Remediation

Releases to the Land

Releases of cyanide or cyanide solution to the land will be cleaned up as soon as practicable. Spills of solid cyanide will be picked up by shovel such that all visible cyanide is recovered.

Releases of cyanide solution shall be recovered if practicable, treated in place and contaminated soil shall be excavated. Ponded solution shall be recovered for use in the leaching process if possible. Remaining contamination on the soil surface shall be treated with sodium hypochlorite solution to oxidize the cyanide to less toxic cyanate.

Where ground conditions allow, the extent of contamination resulting from a release of cyanide solution will be determined visually. After treatment, solution spills will be over-excavated to remove all wet soil.

Where soil already was wet prior to the release or in other situations where the extent of potential contamination can not be determined visually, CC&V initially shall excavate soil believed to be contaminated.

Contaminated soil shall be placed on the VLF for recovery/use of any remaining reagent value or will be classified and disposed of in accordance with applicable regulations.
A report of the spill and its remediation shall be retained in the files of at Environmental Resources.

Releases to Surface Water

In the unlikely event that cyanide solution is released to Arequa or Squaw Gulch, CC&V shall sample the solution released (if possible), at established surface water sampling locations, and downstream from but as close to the point of entry of the release as is safely possible. Standard sampling, preservation, handling, and analytical methods shall be used and coordinated by a member of Environmental Resources.

In no case shall CC&V attempt to oxidize, neutralize, or otherwise treat cyanide once it has entered Arequa or Squaw Gulch. Since all cyanide treatment chemicals are themselves toxic to aquatic life, and in situ treatment is only marginally effective at best, efforts must focus on preventing releases to surface waters.

Releases to Ground Water

CC&V operates a VLF monitoring system and ground water monitoring wells to determine if releases are occurring from its leaching operations such that ground water quality may be impacted. Releases to ground water, should they occur, are generally not rapid or instantaneous, thus providing appropriate time for evaluation and remediation. CC&V is committed to a DRMS regulatory required response to an increase in certain water monitoring parameters that is contained in its current M-1980-0244 permit.

Spill Path Monitoring

If a spill or leak has the potential to migrate from the point of occurrence, spill monitoring will be implemented following clean up. Development of the monitoring plan will be determined by the nature and extent of the spill and the potential environmental effects created by the spill. All monitoring and sampling will be completed under the direction of the Environmental Resources Department.

The potential for spills to migrate from the point of occurrence is minimal. These materials will be quickly absorbed into soil material. If a spill of these materials has the potential to migrate to surface water, a berm(s) will be placed upgradient of the potential point of entry to the water and surface water monitoring will be implemented downstream, if necessary. All monitoring and sampling will be completed under the direction of Environmental Resources.

Spill monitoring equipment is available on site. Soil along the spill pathway will be monitored and decontaminated and/or moved as necessary. If there is a potential for the spill to migrate off-site, samples will be obtained expeditiously from down-gradient, existing surface and ground water stations and additional water monitoring points deemed appropriate to monitor the potential migration pathways. The spilled material also may be tested to evaluate the effectiveness of mitigation.

VIII. Review, Evaluation, and Revision of Response Procedures

Exposure and release incidents and accidents shall be evaluated to identify their cause and determine the measures to be implemented to prevent their reoccurrence. Such measures may include equipment changes, revised standard operating procedures, or new or enhanced worker training.

CC&V shall review and evaluate the CERP at a minimum of every other year and after an incident requiring its implementation. Based on these reviews, the CERP shall be revised as necessary to ensure that it remains current and effective. The date of the most recent review shall be noted in the footer of the document and in Section IX Review History.

CC&V conducts mock emergency drills and conducts table top safety discussions regarding safe handling and cyanide emergencies. Some of these drills may be specific to cyanide releases while others may simulate fires, explosions, releases of other hazardous chemicals, or other emergency situations. Documentation of these mock drills shall be retained in the Safety Department files.

IX. Review History

Revision No	*Revision Date*	*By Whom*	*Description*
01	September 25,2006	P. Roberts	Initial release of document
02	February 12, 2007	G. Goodrich	Plan Updates
03	January 8, 2008	P Roberts	Replace RWL w/LN
04	June 11, 2009	GWG	Plan Updates
05	July 1, 2009	P Roberts	Name and title changes
06	June 2, 2010	P Roberts	Antidote location update & chg Goodrich to Comer
07	August 17, 2010	P Roberts	Chg to pg 2 to add contact ICMI & Guenther to DuBois
08	August 31, 2012	P. Roberts	Transfer Control from EMS to HSMS
09	October 31, 2013	T. Comer	Update information about antidote kits and update names of responsible individuals.
10	September 2015	C Sparkman	Updated to include HG Mill and change in GM

Appendix I

CYANIDE SDS

Appendix II

FORMULAS FOR NEUTRALIZING CYANIDE

The destruction of cyanide with chlorine involves using 8 parts of CL2 to one part of NaCN. The calcium hypochlorite that is used contains 65% available CL2.

For a 1000 gallon spill containing 2 pounds per ton cyanide, use 51 pounds of calcium hypochlorite.

Some useful numbers:

One (1) gallon water weighs .00418 tons

One (1) ton water has 239.23 gallons

One (1) pound NaCN (not CN) requires:

3-1/4 gallons household bleach,

1-1/4 gallons commercial sodium hypochlorite, or

2-1/4 pounds dry calcium hypochlorite.

There are 100 pounds of calcium hypochlorite per container; therefore, one drum will treat 2000 gallons. Exact measurement is not necessary, however, it would be better to over estimate.

Solutions must be dilute solutions. Recommendation is to treat a maximum 1% NaCN solution with a maximum 1% hypochlorite solution, mixing slowly by adding 10% of hypochlorite every 1 to 3 minutes while stirring.

PH must be controlled to avoid cyanogen chloride release.

Appendix III

MONITORING RESPONSES

The information presented below incorporates updated criteria for responding to situations which demonstrate significant changes from previous results. The situations outlined below are those which require further action.

a) Underdrains: The 30-day running average of CN_{WAD}[1] for an underdrain exceeds 1.0 mg/1 and the 30-day running average pH value for the same underdrain for the same period exceeds 9.0;

b) LDS: The 30-day running average of CN_{WAD}[1] for a LDS exceeds 0.5 mg/1 and the 30-day running average pH value for the same LDS for the same period exceeds 9.0;

c) HVSCS: The average of the water level readings in the PSSAs exceeds 80 percent of the total capacity in a sustained manner;

d) LVSCS, LDCRS: The transducers in the LVSCS or LDCRS exceed two feet in a sustained manner;

e) OLS: The head above the Phase I and II OLS is sustained at greater than two feet on a sustained basis;

[1] CN_{WAD} concentrations must be accompanied by a commensurate level of CN_{Free}. In addition, the CN_{Free} concentration in any sample must exceed 0.2 mg/1.

The first response to any of the conditions listed above will be to verify that the measurements are accurate. This may involve re-sampling or revisiting the monitoring location to confirm the initial results. In the event that initial results are confirmed, verbal notice will be provided to the DRMS. Recommendations will be provided to the DRMS regarding further analysis of the situation and, if warranted, appropriate corrective actions. This may include, but not be limited to, providing a written plan to DRMS regarding proposed measures for addressing the situation, changing flow rates to the various portions of the VLF, discontinuing the addition of CN or make-up water, initiating detoxification operations, or other appropriate responses.

SUMMARY AUDIT REPORT

INTERNATIONAL CYANIDE MANAGEMENT CODE

GOLD MINING OPERATION RECERTIFICATION AUDIT

CRESSON PROJECT, COLORADO

Submitted to

INTERNATIONAL CYANIDE MANAGEMENT INSTITUTE

1400 I STREET, N.W., SUITE 500
WASHINGTON, D.C. 20005

and

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ANGLOGOLD ASHANTI (COLORADO) CORP.

CC&V

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UNITS OF MEASURE AND ABBREVIATIONS

ADR	Adsorption, Desorption and Recovery
AGR	Australian Gold Reagents Pty Ltd.
CC&V	Cripple Creek & Victor Gold Mining Company
CCEMS	Cripple Creek Emergency Medical Services
CDPHE	Colorado Department of Public Health and Environment
CERP	Cyanide Emergency Response Plan
Code	International Cyanide Management Code (the Code)
Cyanco	Cyanco Company, LLC
DRMS	Colorado Division of Reclamation Mining and Safety
DuPont	E.I. DuPont De Nemours and Company, Inc.
EMS	Environmental Management System
EPA	U.S. Environmental Protection Agency
ERP	CC&V Emergency Response Plan/Procedures

UNITS OF MEASURE AND ABBREVIATIONS (CONTINUED)

HCN	Hydrogen cyanide
HDPE	High-density polyethylene
HSMS	OHSAS 18001 Occupational Health and Safety Management System
ICMC	International Cyanide Management Code
ICMI	International Cyanide Management Institute
kW	Kilowatt
LEPC	Local Emergency Planning Committee
mg/L	milligrams per liter
MLE	Mine Life Extension
MSC	Mediterranean Shipping Company
MSDS	Material Safety Data Sheet(s)
MSHA	Mine Safety and Health Administration
PM	Preventative Maintenance
PPE	Personal protective equipment
ppm	Parts per million
PSSA	Process Solution Storage Area
PVC	Polyvinyl chloride
QA/QC	Quality Assurance and Quality Control
SCBA	Self contained breathing apparatus
SOP	Standard Operating Procedure
TransWood	TransWood Inc.
Trimac	Trimac Transportation Services Inc.
VLF	Valley Leach Facility
WAD	Weak-acid dissociable
WMRS	Workplace Management Reporting System

0.0 GENERAL

0.1 Operation Contact Information

Name of Mine:	Cresson Project
Name of Mine Owner:	AngloGold Ashanti (Colorado) Corp., Manager, Cripple Creek & Victor Gold Mining Company, a Colorado Joint Venture
Name of Mine Operator:	Cripple Creek & Victor Gold Mining Company
Name of Responsible Manager:	Mr. Raymond G. DuBois, Vice President and General Manager
Address and Contact Information:	Cripple Creek & Victor Gold Mining Company 100 North 3rd Street / PO Box 191 Victor, Colorado 80860 Telephone: +1 719.689.4022 Facsimile: +1 719.689.3254 Email: RDuBois@AngloGoldAshantiNA.com

0.2 Location and Description of Operation

Cripple Creek & Victor Gold Mining Company ("CC&V") is a joint venture managed by AngloGold Ashanti (Colorado) Corp. CC&V's joint venture partners are AngloGold Ashanti (Colorado) Corp. and GCGC, LLC.

The Cresson Project is located in a historical mining district located between the small towns of Cripple Creek and Victor, Colorado on State Highway 67, south-southwest of Pikes Peak (see Figure 1). The mine area and its immediate vicinity have been actively mined since the late 1800s, and contain many abandoned underground workings, head frames, waste rock piles, test pits, and other features associated with historical underground and open pit mining operations.

FIGURE 1- LOCATION MAP

The Cresson Project is currently a large open pit operation with a dedicated, synthetic-lined Valley Leach Facility ("VLF"). Pregnant solution from the VLF reports to an Adsorption, Desorption and Recovery ("ADR") Plant for recovery of gold. Gold is removed from solution by adsorption onto activated carbon, then stripped from the activated carbon to create a concentrated gold solution (desorption), and recovered in an electrowinning circuit, located within the refinery.

The Cresson Project was permitted initially in 1994, and has since undergone several phases of permitting to support mine expansions. In 2012, CC&V received all required approvals for the most recent Mine Life Extension ("MLE") of the Cresson Project, known as MLE2. Activities permitted under MLE2 are expected to carry operations to approximately 2025 with final reclamation and closure in 2032, and other potential developments are being evaluated, which may result in further extensions. Production rates are envisioned to remain relatively constant at roughly 27 million tons of ore mined annually. CC&V will implement MLE2 with approximately 150 additional employees, which will increase the existing approximate total employment at the Cresson Project to an anticipated 600 employees.

Under MLE2, processing and recovery of the additional gold reserves will be supplemented with the construction of a new milling facility (the High Grade Mill) for processing higher-grade ore via grinding, flotation, and Carbon-in-Pulp circuits with final gold recovery continuing to occur at the existing Arequa Gulch ADR Plant. Additionally, as part of this expansion, CC&V will construct a new VLF in Squaw Gulch (the Squaw Gulch VLF) with a new ADR plant (the Squaw Gulch ADR Plant). In addition to these MLE2 projects, at the time of this 2013 International Cyanide

Management Code ("ICMC" or "Code") recertification audit, CC&V was constructing the Process Solution Enhancement System, a new treatment plant (located near the existing Arequa Gulch ADR Plant) designed to improve gold recovery by removing a persistent accumulation of metal precipitate solids in the VLF process solution and allowing a more sustainable and even distribution of barren solution onto the VLF. Nonetheless, only the initial construction stages were underway for the new facilities proposed under MLE2, and construction of the Process Solution Enhancement System plant was not complete; therefore, this audit does not consider nor discuss these facilities further.

Subsequent to the 2010 ICMC recertification audit, CC&V expanded the Phase 5 portion of the Arequa Gulch VLF ore storage area and constructed the E-Train and Enrichment Pump Station facilities at the Arequa Gulch ADR Plant. The existing Arequa Gulch ADR Plant building was expanded to the west to accommodate the new E-Train carbon column circuit, which consists of five new columns. The Enrichment Pump Station building was constructed to the east of the Arequa Gulch ADR Plant, and houses five large, vertical turbine pumps for returning enriched process solution to the Phase 5 VLF area. CC&V upgraded the solution enrichment circuit to allow the option of routing pregnant solutions from the Phase 1 through Phase 4 VLF areas directly to the Phase 5 VLF area to further enrich gold concentrations in the solutions prior to being sent to the Arequa Gulch ADR carbon trains.

Now complete, Phase 5 provides an additional six million square feet of lined area, located adjacent to and northeast of Phase 4, and a new dedicated Process Solution Storage Area ("PSSA"). As part of the Phase 5 extension, CC&V plans to increase the maximum depth of stacked ore to 800 feet above the lined surface on Phase 1 through Phase 4 areas. Ore stacked within the Phase 5 area will have a maximum depth of 590 feet.

0.3 Cyanide Facilities

The active cyanide facilities at the Cresson Project consist of the following:

- Cyanide Offload/Storage Facility (includes Cyanide Mix Tank and Cyanide Storage Tank);
- Arequa Gulch VLF – Phases 1 through 5 (includes pump stations at Phases 1, 2, 4 and 5);
- External Storage Pond;
- Pregnant Solution Distribution Tank;
- Arequa Gulch ADR Plant (includes Carbon Trains A through E, associated wash/strip circuits and process tanks/vessels);
- Barren Solution Tank;
- Enrichment Solution Tank;
- Enrichment Pump Station; and
- Associated concrete and lined secondary containment structures, process solution transfer pipes, valves, and pumps.

The Cyanide Offload/Storage Facility is located adjacent to the Arequa Gulch ADR Plant building, on its west side. The facility consists of a curbed, concrete loading apron for staging the cyanide delivery trucks/trailers and an

adjacent concrete containment area occupying the Cyanide Mix Tank and the Cyanide Storage Tank. The cyanide tanks are designed to work interchangeably; i.e., either tank can be used for mixing or storage.

The Arequa Gulch VLF is comprised of a synthetic-lined leach pad with multiple PSSAs. The active portion of the Arequa Gulch VLF has been constructed in five contiguous phases (Phases 1 through 5) over the period 1994 through 2012 (including all expansions and modifications). With the exception of the Phase 3 pad area, each Phase of the Arequa Gulch VLF has a dedicated, internal PSSA (i.e., a pregnant solution pond located within the heap). The PSSAs are constructed with a composite liner system comprised of a double synthetic-liner underlain by a soil liner. Pregnant solution from the Phase 3 pad area reports to the Phase 2 PSSA via the Drain Cover Fill material and piping system located above the primary synthetic liner. The Phase 3 pregnant solution flows through a small external solution equalization pond (a.k.a. "Bird Ball Pond") located on the south side of the Arequa Gulch VLF prior to reporting to the Phase 2 PSSA.

A 22-million gallon External Storage Pond is located at the southern (downgradient) side of the Arequa Gulch VLF. With the addition of the Phase 5 PSSA, the excess capacity provided by the External Storage Pond is no longer required for emergency storage of process solution (based on modeled contingency flows and regulatory design criteria), and the pond now serves as a fresh/makeup water storage pond. However, CC&V continues to maintain the pond as a cyanide facility in case the pond is ever needed for emergency storage during an extreme upset condition. This pond does not continually or routinely store process solution and contains only enough precipitation/freshwater to help maintain the pond bottom liner.

Pregnant solution collected in the four active PSSAs (Phase 1, Phase 2, Phase 4, and Phase 5), which each service a particular area of the Arequa Gulch VLF, is pumped to the Pregnant Solution Distribution Tank located on the first lift of the Phase 1 VLF area. The pregnant solution collected in the tank flows via gravity to the carbon adsorption trains in the Arequa Gulch ADR Plant for recovery of gold. A portion of the pregnant solution from the Phase 1 through Phase 4 PSSAs is routed to the Enrichment Solution Tank (located outside, on the north side of the Arequa Gulch ADR Plant building) where it is blended with barren solution and returned to the Phase 5 portion of the Arequa Gulch VLF as enrichment solution, via the Enrichment Pump Station, to further enrich gold concentrations in the solutions prior to being sent to the Arequa Gulch ADR carbon trains.

The Arequa Gulch ADR Plant consists of five active carbon trains (Carbon Trains A through E), an acid wash circuit, a carbon strip and regeneration circuit, and an electrowinning circuit and refinery. The electrowinning cells are located inside the refinery. Barren solution from the recovery circuit reports to the Barren Solution Tank located outside, on the north side of the Arequa Gulch ADR Plant building. Reagent grade cyanide from the Cyanide Storage Tank is injected directly into header pipes adjacent to the Barren Solution Tank and the Enrichment Solution Tank, which convey barren solution to the Arequa Gulch VLF.

The Enrichment Pump Station is a standalone building, located on the east side of the Arequa Gulch ADR Plant building. The pump station houses five large, vertical turbine pumps. No process tanks are located at this facility.

0.4 Auditor Information

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Audit Team Leader:	Mark A. Montoya, PE, CEA
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Audit Dates: September 16 – 20, 2013

I attest that I meet the criteria for knowledge, experience and conflict of interest for Code Verification Audit Team Leader, established by the International Cyanide Management Institute ("ICMI") and that all members of the audit team meet the applicable criteria established by the ICMI for ICMC Verification Auditors. I further attest that this Detailed Audit Findings Report accurately describes the findings of the verification audit conducted for the Cresson Project located in Teller County, Colorado and that the verification audit was conducted in a professional manner in accordance with the ICMC Verification Protocol for Gold Mine Operations (dated October 2009) and using standard and accepted practices for health, safety and environmental audits.

FOR VISUS CONSULTING GROUP, INC.

Mark A. Montoya, PE, CEA
President / Principal
Lead Auditor and Gold Mining Technical Expert Auditor

0.5 Audit Findings

The operation is in ☒ **Full Compliance** / ☐ **Substantial Compliance** / ☐ **Non-Compliance** **with the International Cyanide Management Code.**

During the previous three-year audit cycle, CC&V has experienced cyanide releases (i.e., minor releases of cyanide-bearing solutions to soil) and one worker exposure to cyanide incident, which are subject to listing under Question 3 of the ICMC Standard of Practice 9.3. These incidents have not been *"significant cyanide incidents"* subject to the notification requirements under Item 6 of the ICMC signatory application and do not affect the compliance

status. As detailed under ICMC Standards of Practice 1.1 and 2.2 of this findings report, the operation used non-certified cyanide (i.e., cyanide produced and transported by a facility and transportation chain not certified under the ICMC) during a period following the previous ICMC audit conducted in June 2010. The audit findings reflect this circumstance.

0.6 Summary of ICMC Principles and Standards of Practice

For easy reference, **Table 1** below provides a summary of the ICMC Principles and associated Standards of Practice.

Table 1
Summary of ICMC Principles and Standards of Practice for Gold Mining Operations

PRINCIPLE	STANDARDS OF PRACTICE
1. PRODUCTION: Encourage responsible cyanide manufacturing by purchasing from manufacturers who operate in a safe and environmentally protective manner.	1.1 Purchase cyanide from manufacturers employing appropriate practices and procedures to limit exposure of their workforce to cyanide and to prevent releases of cyanide to the environment.
2. TRANSPORTATION: Protect communities and the environment during cyanide transport.	2.1 Establish clear lines of responsibility for safety, security, release prevention, training and emergency response in written agreements with producers, distributors and transporters. 2.2 Require that cyanide transporters implement appropriate emergency response plans and capabilities, and employ adequate measures for cyanide management.
3. HANDLING AND STORAGE: Protect workers and the environment during cyanide handling and storage.	3.1 Design and construct unloading, storage and mixing facilities consistent with sound, accepted engineering practices and quality control and quality assurance procedures, spill prevention and spill containment measures. 3.2 Operate unloading, storage and mixing facilities using inspections, preventive maintenance and contingency plans to prevent or contain releases and control and respond to worker exposures.
4. OPERATIONS: Manage cyanide process solutions and waste streams to protect human health and the environment.	4.1 Implement management and operating systems designed to protect human health and the environment including contingency planning and inspection and preventive maintenance procedures. 4.2 Introduce management and operating systems to minimize cyanide use, thereby limiting concentrations of cyanide in mill tailings. 4.3 Implement a comprehensive water management program to protect against unintentional releases. 4.4 Implement measures to protect birds, other wildlife and livestock from adverse effects of cyanide process solutions. 4.5 Implement measures to protect fish and wildlife from direct and indirect discharges of cyanide process solutions to surface water. 4.6 Implement measures designed to manage seepage from cyanide facilities to protect the beneficial uses of ground water. 4.7 Provide spill prevention or containment measures for process tanks and pipelines. 4.8 Implement quality control/quality assurance procedures to confirm that cyanide facilities are constructed according to accepted engineering standards and specifications. 4.9 Implement monitoring programs to evaluate the effects of cyanide use on wildlife, surface and ground water quality.

Table 1 (continued)
Summary of ICMC Principles and Standards of Practice for Gold Mining Operations

PRINCIPLE	STANDARDS OF PRACTICE
5. DECOMMISSIONING: Protect communities and the environment from cyanide through development and implementation of decommissioning plans for cyanide facilities.	5.1 Plan and implement procedures for effective decommissioning of cyanide facilities to protect human health, wildlife and livestock. 5.2 Establish an assurance mechanism capable of fully funding cyanide-related decommissioning activities.
6. WORKER SAFETY: Protect workers' health and safety from exposure to cyanide.	6.1 Identify potential cyanide exposure scenarios and take measures as necessary to eliminate, reduce and control them. 6.2 Operate and monitor cyanide facilities to protect worker health and safety and periodically evaluate the effectiveness of health and safety measures. 6.3 Develop and implement emergency response plans and procedures to respond to worker exposure to cyanide.
7. EMERGENCY RESPONSE: Protect communities and the environment through the development of emergency response strategies and capabilities.	7.1 Prepare detailed emergency response plans for potential cyanide releases. 7.2 Involve site personnel and stakeholders in the planning process. 7.3 Designate appropriate personnel and commit necessary equipment and resources for emergency response. 7.4 Develop procedures for internal and external emergency notification and reporting. 7.5 Incorporate into response plans monitoring elements and remediation measures that account for the additional hazards of using cyanide treatment chemicals. 7.6 Periodically evaluate response procedures and capabilities and revise them as needed.
8. TRAINING: Train workers and emergency response personnel to manage cyanide in a safe and environmentally protective manner.	8.1 Train workers to understand the hazards associated with cyanide use. 8.2 Train appropriate personnel to operate the facility according to systems and procedures that protect human health, the community and the environment. 8.3 Train appropriate workers and personnel to respond to worker exposures and environmental releases of cyanide.
9. DIALOGUE: Engage in public consultation and disclosure.	9.1 Provide stakeholders the opportunity to communicate issues of concern. 9.2 Initiate dialogue describing cyanide management procedures and responsively address identified concerns. 9.3 Make appropriate operational and environmental information regarding cyanide available to stakeholders.

1.0 PRODUCTION

Encourage responsible cyanide manufacturing by purchasing from manufacturers who operate in a safe and environmentally protective manner.

Standard of Practice 1.1

Purchase cyanide from manufacturers employing appropriate practices and procedures to limit exposure of their workforce to cyanide and to prevent releases of cyanide to the environment.

The operation is in	☒ **Full Compliance** ☐ **Substantial Compliance** ☐ **Non-Compliance**	**with Standard of Practice 1.1.**

Discussion of the basis for this Finding and any Identified Deficiencies:

Over the period following the June 2010 ICMC recertification audit to date, CC&V has maintained in good standing its contract with Cyanco Company, LLC ("Cyanco") for the supply of sodium cyanide (i.e., Cyanide Master Purchase and Sale Agreement, dated September 1, 2002). The current contract expiration date is December 31, 2014. Under the contract, both parties (Cyanco and CC&V) agree to maintain compliance with the most current version of the ICMC at all times. The most current version of the ICMC is attached as Exhibit B to the contract and is made part of the agreement.

CC&V originally contracted to CyPlus for cyanide supply and delivery services. CyPlus subcontracted to E.I. DuPont de Nemours and Company ("DuPont") for the solid sodium cyanide necessary to fulfill its contract with CC&V. DuPont manufactured the sodium cyanide at its Memphis, Tennessee facility. In 2008, CyPlus divested its gold mining supply operations in Canada and the United States, and Cyanco assumed ownership and responsibility for the CC&V supply contract as part of its acquisition of the CyPlus North American assets, and continued the subcontract arrangement with DuPont until approximately April 2011. In a letter dated 21 October 2009, DuPont provided Cyanco with notice of termination of its Sodium Cyanide Supply Agreement with Cyanco, and agreed to supply Cyanco with sodium cyanide until April 2011. CC&V is not privy to the agreement between Cyanco and DuPont; therefore, Cyanco did not provide CC&V with an explanation as to why the agreement was terminated.

Consequently, Cyanco also subcontracted to Australian Gold Reagents Pty Ltd. ("AGR") to fulfill its contract with CC&V, and over the period December 2010 to approximately April 2011, CC&V received cyanide produced by both DuPont and AGR to facilitate the transition. According to documentation provided by Cyanco, DuPont supplied solid cyanide briquettes to Cyanco through April 30, 2011. The agreement between Cyanco and AGR established that AGR would supply solid sodium cyanide briquettes to Cyanco over the period October 1, 2010 to October 1, 2012 at a specified monthly volume.

On October 22, 2012, Cyanco began supplying cyanide produced at its newly commissioned facility in Alvin, Texas. Cyanco confirmed it had enough supply on hand from AGR to maintain supply to CC&V during the 22-day period following the expiration date of the AGR agreement and prior to Cyanco's first shipment of cyanide produced at its Alvin, Texas facility to CC&V. Subsequent to October 22, 2012, Cyanco has been supplying cyanide to CC&V from its Alvin, Texas facility exclusively, with the exception of a brief period in June 2013 when supply was temporarily disrupted due to flooding in the Houston area and a resulting power outage. During the supply disruption, Cyanco provided CC&V with four loads of liquid sodium cyanide (30 percent aqueous solution) produced at its Winnemucca, Nevada facility.

Although the above-mentioned manufacturing facilities were ICMC-certified at the time of this 2013 ICMC recertification audit (as evidenced by the Summary Audit Reports posted on the ICMC website), cyanide received from the Cyanco Sodium Cyanide Solution Production Operations located in Alvin, Texas was not ICMC-certified over the entire delivery period. Cyanco's Alvin, Texas production facility was conditionally certified under the ICMC pre-operational verification protocol on March 6, 2013 and fully certified on November 5, 2013 following an ICMC confirmation audit conducted on January 30 – 31 and April 29 – 30, 2013. The Cresson Project received its first shipment of cyanide produced at the Alvin, Texas plant on October 22, 2012 prior to the March 6, 2013 conditional certification date for that facility. Thus, cyanide that CC&V received from Cyanco's Alvin, Texas plant, produced at that facility prior to March 6, 2013, was not ICMC compliant.

Consequently, prior to submittal of the final version of this report, CC&V developed and implemented procedures for periodically assessing and ensuring that cyanide purchased for use at the Cresson Project is ICMC certified, including provisions to:

- perform necessary due diligence to determine the ICMC certification status of the cyanide producers and transporters, including pertinent production facilities and transportation chains, subcontracted to Cyanco;
- document causes of supply disruptions in certified cyanide (i.e., cyanide produced and transported by an ICMC-certified production facility and transportation chain), including reasons for using a non-certified cyanide supply and the time anticipated until a certified supply can be re-established; and
- notify the ICMI, in accordance with the ICMC Signatory Application, if CC&V can no longer receive certified cyanide and is forced to arrange for an alternate supply not certified in compliance with the ICMC.

On February 27, 2014, CC&V provided a final copy of the new procedure along with written documentation demonstrating that CC&V has implemented the procedure, including the associated training records for responsible personnel. Additionally, CC&V added periodic review of its cyanide purchasing records to the scope of its Internal Audit Procedures. Based on review of this additional objective evidence, in the auditor's professional judgment, CC&V has satisfactorily met the requirements of this Standard of Practice.

The DuPont Sodium Cyanide Production & Packaging Operations located in Memphis, Tennessee were originally certified in 2006, recertified in 2009, and most recently recertified on April 30, 2013. The Cyanco Sodium Cyanide Solution Production Operations located in Winnemucca, Nevada were originally certified in 2006, recertified in

early 2010, and most recently recertified on July 12, 2013. The AGR Australian Kwinana Production Facility located in Kwinana, Western Australia was originally certified in 2007 and recertified on November 24, 2010.

Because Cyanco's Alvin, Texas facility was audited under the ICMC pre-operational verification protocol on February 6-7 and March 22, 2012, and recommended for certification (full compliance) prior to its commissioning and production of cyanide, no immediate or substantial risk to health, safety or the environment was deemed to exist during the period that CC&V was receiving uncertified cyanide or during implementation of the new procedures stated above. Nonetheless, it should be noted that under the terms of the ICMC Signatory Application, the Applicant agrees to notify ICMI if any of its certified gold mining operations can no longer receive "certified cyanide", and must arrange for an alternate supply that is not certified in compliance with the ICMC. CC&V was unaware that the cyanide received from Cyanco's Alvin, Texas Plant between October 22, 2012 and March 6, 2013 was not ICMC compliant; therefore CC&V did not provide such notice to ICMI.

Based on conversations with CC&V personnel and review of all evidence, in the auditor's professional judgment, CC&V made a good-faith effort to comply with this ICMC Standard of Practice. CC&V explained that, based on its interpretation of the ICMC, it understood the cyanide produced at Cyanco's Alvin, Texas facility to be ICMC compliant as of May 22, 2012; the date that the independent, third party auditor recommended conditional certification of that facility on the basis of full compliance following the pre-operational audit conducted February 6-7, 2012 and March 22, 2012. For that reason, CC&V did not take further action to purchase cyanide from another certified producer nor notify ICMI that it could no longer receive certified cyanide as stipulated by the terms of the ICMC Signatory Application. Furthermore, CC&V relied upon Cyanco to deliver certified cyanide under the terms of its contract, and (according to information provided to the auditor) in neither case described above did Cyanco inform CC&V that the cyanide delivered was not ICMC compliant, presumably because Cyanco also understood the cyanide to be compliant. CC&V demonstrated that the supply disruption was due to forces beyond its control and has verified the period that it received uncertified cyanide (i.e., approximately 4½ months, from October 22, 2012 to March 6, 2013).

2.0 TRANSPORTATION

Protect communities and the environment during cyanide transport.

Standard of Practice 2.1

Establish clear lines of responsibility for safety, security, release prevention, training and emergency response in written agreements with producers, distributors and transporters.

The operation is in	☒ Full Compliance ☐ Substantial Compliance ☐ Non-Compliance	with Standard of Practice 2.1.

Discussion of the basis for this Finding and any Identified Deficiencies:

CC&V's contract with Cyanco to supply and transport cyanide to the Cresson Project has not changed since the June 2010 ICMC recertification audit. Nonetheless, the contractual relationships between Cyanco and its supply and transportation subcontractors have changed in the interim. These changes include DuPont terminating its supply of sodium cyanide to Cyanco as of April 30, 2011 and AGR becoming an additional supply subcontractor to Cyanco over the period October 1, 2010 to October 1, 2012 (see Section 1.1 above), which also affected the cyanide transportation supply chain. Even so, Cyanco remains contractually assigned to all responsibilities for cyanide supply and delivery.

Title to, responsibility for, and risk of loss of the cyanide (including spillage and leakage) passes from Cyanco to CC&V upon delivery of the product into the storage tank on the mine site and after the delivery hose has been disconnected from the storage tank. Additionally, Cyanco remains responsible for any product stored (for backup purposes or otherwise) at CC&V's facilities in bulk form such as tanker trailers until such time as Cyanco offloads the product into CC&V's storage tanks. The contract specifies the delivery route and affirms that Cyanco has established and shall maintain, throughout the term of the agreement, an emergency response plan and health and safety work plan that applies to its provision and supply of cyanide until delivery is completed. After delivery, Cyanco has no obligation or responsibility under its response and safety plan or otherwise to CC&V with regard to environmental matters related to the product.

As previously discussed in Section 1.1 above, under the contract, both parties (Cyanco and CC&V) agree to maintain compliance with the most current version of the ICMC at all times, including but not limited to the requirements for third party audits of the seller's manufacturing plants and transportation/handing systems (including audits of third party transportation companies, procedures, routes, etc.) and third party audits of CC&V's facilities and handling procedures.

Standard of Practice 2.2

Require that cyanide transporters implement appropriate emergency response plans and capabilities, and employ adequate measures for cyanide management.

The operation is in	☒ Full Compliance	
	☐ Substantial Compliance	with Standard of Practice 2.2.
	☐ Non-Compliance	

Discussion of the basis for this Finding and any Identified Deficiencies:

Cyanco is contractually assigned to all responsibilities for the supply and delivery of cyanide to the Cresson Project. Please refer to Section 1.1 above for an explanation of the subcontract suppliers (i.e., DuPont and AGR) that Cyanco utilized over the period following the June 2010 ICMC recertification audit to fulfill its supply contract with CC&V.

The following supply chains have been utilized since the June 2010 ICMC recertification audit:

- Solid sodium cyanide shipped from DuPont's Memphis, Tennessee facility to the Cresson Project;
- Solid sodium cyanide shipped from AGR's Kwinana facility in Western Australia to the Cresson Project;
- Solid sodium cyanide shipped from Cyanco's Alvin, Texas facility to the Cresson Project; and
- Liquid sodium cyanide solution shipped from Cyanco's Winnemucca, Nevada facility to the Cresson Project.

Solid cyanide produced at DuPont's Memphis, Tennessee plant was distributed via rail and truck. The results of the DuPont Consignor Certification Audit and the related due diligence reviews indicate that DuPont and all portions of its US/Canada Road cyanide supply chain have continued to be in full compliance with ICMC requirements. The results of the DuPont U.S. / Canada Rail and Barge Transportation Supply Chain Certification Audit and the related due diligence investigations indicate that DuPont and all portions of its U.S. / Canada Rail & Barge Supply Chain are in full compliance with ICMC requirements.

AGR produces solid sodium cyanide at its Kwinana facility located in Western Australia and trucks the product to Fremantle Port. The AGR Western Supply Chain Certification Audit, which covers this transport leg, was originally certified in 2006, recertified in 2010, and most recently recertified on June 13, 2013. Once the cyanide is unloaded onto ocean vessels, the Cyanco supply chain takes over.

Cyanco has identified the Mediterranean Shipping Company ("MSC") as its ocean transporter in its supply chain. Under the Port of Houston Supply Chain, MSC is the overseas transporter, which ships the overseas containers from the overseas port of departure (in this case Fremantle Port in Australia) to the Port of Houston, located in the United States (i.e., Texas). According to the ICMC website, this supply chain was initially certified on March 6, 2013 based on an ICMC third party audit conducted on February 10, 2012 and April 26, 2012 and was therefore not yet

certified during the period that CC&V was receiving cyanide produced at AGR's Kwinana facility; i.e., between October 2010 and October 2012 (see Section 1.1 above). Under the full supply chain, cyanide is transported from an international production plant to the Port of Houston port. Once received at the Port of Houston, the cyanide is forwarded by truck to the IsoChem transloading terminal located at the port. At the transloading terminal, boxed solid cyanide inside the shipping containers is transferred to ISO tank containers and then forwarded by truck [in this case by Trimac Transportation Services Inc. ("Trimac")] to Cyanco customers (e.g. CC&V). Cyanco's Global Ocean Supply Chain also lists MSC as a carrier; however this supply chain is for transport by road from Cyanco's Alvin, Texas facility to the Port of Houston and then overseas via ship to end users abroad. Additionally, this supply chain was initially certified on March 6, 2013 based on an ICMC third party audit conducted during May and August 2012 and was therefore not yet certified during the period that CC&V was receiving cyanide produced at AGR's Kwinana facility.

Consequently, prior to submittal of the final version of this report, CC&V developed and implemented procedures for periodically assessing and ensuring that cyanide purchased for use at the Cresson Project is ICMC certified, including provisions to:

- perform necessary due diligence to determine the ICMC certification status of the cyanide producers and transporters, including pertinent production facilities and transportation chains, subcontracted to Cyanco;
- document causes of supply disruptions in certified cyanide (i.e., cyanide produced and transported by an ICMC-certified production facility and transportation chain), including reasons for using a non-certified cyanide supply and the time anticipated until a certified supply can be re-established; and
- notify the ICMI, in accordance with the ICMC Signatory Application, if CC&V can no longer receive certified cyanide and is forced to arrange for an alternate supply not certified in compliance with the ICMC.

On February 27, 2014, CC&V provided a final copy of the new procedure along with written documentation demonstrating that CC&V has implemented the procedure, including the associated training records for responsible personnel. Additionally, CC&V added periodic review of its cyanide purchasing records to the scope of its Internal Audit Procedures. Based on review of this additional objective evidence, in the auditor's professional judgment, CC&V has satisfactorily met the requirements of this Standard of Practice.

Over the period between the CC&V June 2010 ICMC recertification audit and this 2013 recertification audit, Cyanco used Trimac almost exclusively to transport cyanide from the Port of Houston (i.e., the IsoChem transloading terminal) and from Cyanco's Alvin, Texas facility to the Cresson Project via truck. Trimac is signatory to the ICMC and has remained certified in full compliance; originally certified on September 16, 2010. During a brief supply disruption at Cyanco's Alvin, Texas facility in June 2013 (see Section 1.1 above), Cyanco provided CC&V with four loads of liquid sodium cyanide solution produced at its Winnemucca, Nevada facility. TransWood Inc. ("TransWood") transported the product from the Cyanco plant to the Cresson Project via truck. TransWood is signatory to the ICMC and has remained certified in full compliance; originally certified in 2006, recertified in 2010, and most recently recertified on July 12, 2013.

Based on conversations with CC&V personnel and review of all evidence, in the auditor's professional judgment, CC&V made a good-faith effort to comply with this ICMC Standard of Practice. The Port of Houston Supply Chain was initially certified on March 6, 2013 and CC&V is not currently receiving cyanide produced by AGR; therefore, no immediate or substantial risk to health, safety or the environment was deemed to exist during the period that CC&V was receiving uncertified cyanide or during implementation of the new procedures stated above. Nonetheless, it should be noted that under the terms of the ICMC Signatory Application, the Applicant agrees to notify ICMI if any of its certified gold mining operations can no longer receive "certified cyanide", and must arrange for an alternate supply that is not certified in compliance with the ICMC. CC&V was unaware that the supply chain from Fremantle Port to the Port of Houston was not yet certified during the period that CC&V was receiving cyanide produced at AGR's Kwinana facility; therefore, CC&V did not provide such notice to ICMI. Additionally, CC&V relied upon Cyanco to deliver certified cyanide under the terms of its contract, and (according to information provided to the auditor) Cyanco did not inform CC&V that the overseas transportation leg was not certified during that period. CC&V demonstrated that the supply disruption was due to forces beyond its control and has verified the period that it received uncertified cyanide.

3.0 HANDLING AND STORAGE

Protect workers and the environment during cyanide handling and storage.

Standard of Practice 3.1

Design and construct unloading, storage and mixing facilities consistent with sound, accepted engineering practices, quality control/quality assurance procedures, spill prevention and spill containment measures.

The operation is in	☒ Full Compliance ☐ Substantial Compliance ☐ Non-Compliance	with Standard of Practice 3.1.

Discussion of the basis for this Finding and any Identified Deficiencies:

The facilities for mixing, unloading, and storage of cyanide have been designed and constructed in accordance with cyanide producers' guidelines, applicable jurisdictional rules and sound and accepted engineering practices for these facilities. Typically, solid sodium cyanide (briquettes) is delivered in single, dedicated, stainless steel ISO Containers for a Solid to Liquid System. CC&V employs a cyanide producer-designed dissolution system; i.e., *"Solid-to-Liquid System"*. These facilities are located outside, within the security perimeter of the mine, physically distant from any dwellings or communities and with minimal potential for hydrogen cyanide ("HCN") gas build-up. No incompatible materials were being stored with cyanide solution.

The Cyanide Offload/Storage Facility consists of a curbed, concrete loading apron for staging the delivery trucks/trailers containing the ISO tanks. The concrete apron drains to the adjacent concrete containment area occupying the Cyanide Mix Tank and the Cyanide Storage Tank. The two tank foundations are solid mass, concrete pads. Additionally, a high-density polyethylene ("HDPE") liner, sloped to drain to the Arequa Gulch VLF liner system, underlies the entire Cyanide Offload/Storage Facility and the Arequa Gulch ADR Plant. CC&V monitors the continued integrity of the tertiary containment via the Arequa Gulch VLF leak detection systems.

The Cyanide Mix Tank and the Cyanide Storage Tank are both fitted with audible high-level alarms, and tank levels are monitored at the offload area and remotely by Process Operators in the Arequa Gulch ADR Plant control room. During this recertification audit, the auditor determined that CC&V does not perform routine Preventative Maintenance ("PM") on the tank level instrumentation, only corrective maintenance if problems occur. The Instruction Manual for the instrumentation states that it requires no maintenance other than periodic checks and cleaning. The auditor recommended that CC&V implement a formal PM task to perform the checks and cleaning annually.

Standard of Practice 3.2

Operate unloading, storage and mixing facilities using inspections, preventive maintenance and contingency plans to prevent or contain releases and control and respond to worker exposures.

The operation is in	☒ Full Compliance	
	☐ Substantial Compliance	with Standard of Practice 3.2.
	☐ Non-Compliance	

Discussion of the basis for this Finding and any Identified Deficiencies:

CC&V receives solid cyanide transported to the site in dedicated, reusable, stainless steel ISO containers and can also accept liquid cyanide delivered in tanker trucks, if necessary. The ISO containers are used only for the delivery and mixing of cyanide using the *"Solid-to-Liquid System";* thus, there are no empty cyanide containers that require treatment or disposal. Typically, two ISO tanks remain on site (i.e., one parked on the offload apron and one parked next to the Cyanide Offload/Storage Facility within the HDPE-lined area). When Trimac delivers a new cyanide shipment, the drivers offload (mix) the ISO tank parked on the offload apron. Following the mix, Trimac parks the newly delivered ISO tank trailer on the offload apron and returns the empty back to the manufacturing facility. If Trimac is unable to be on site when the process circuit requires fresh cyanide, CC&V operators mix the ISO tank parked on the offload apron.

After mixing and following triple rinsing, the access port on top of the tank is opened and visually inspected to ensure that all tank contents have been dissolved. The port is then secured and the tank washed as necessary prior to its return to the production facility. Additionally, CC&V conducts a thorough inspection of the top and sides of the trailer ensure that spillage or leaks did not occur during unloading and disconnecting.

CC&V implements Standard Operating Procedures ("SOPs") associated with unloading and mixing operations, which provide instructions regarding operation of the *"Solid-to-Liquid System"* and unloading/mixing the ISO container contents. The SOPs provide detailed instructions for the safe operation of valves and couplings and address response and remediation measures for cyanide spills. The delivery drivers are primarily responsible for operation of the system and CC&V personnel provide oversight at the beginning and end of each mix, and monitor tank volumes remotely from the Arequa Gulch ADR control room. As discussed in Section 1.1 above, in June 2013 Cyanco provided CC&V with four loads of liquid sodium cyanide produced at its Winnemucca, Nevada facility when supply from its Alvin, Texas facility was temporarily disrupted. CC&V provided documentation verifying that it took proper actions to prepare for the delivery of liquid cyanide, including a modified procedure and verification of proper fittings and personal protective equipment ("PPE").

CC&V personnel provide oversight at the beginning and end of each mix, and monitor tank volumes remotely from the Arequa Gulch ADR control room. The procedure requires use of the "buddy-system" during connection and disconnection of the ISO tank. During the transfer process, the CC&V operator may leave the unloading area, but

must ensure that the driver is equipped with an operating handheld radio. Additionally, the procedure requires use of prescribed PPE including the requirement for use of portable HCN detectors.

4.0 OPERATIONS

Manage cyanide process solutions and waste streams to protect human health and the environment.

Standard of Practice 4.1

Implement management and operating systems designed to protect human health and the environment including contingency planning and inspection and preventive maintenance procedures.

The operation is in	☒ Full Compliance ☐ Substantial Compliance ☐ Non-Compliance	with Standard of Practice 4.1.

Discussion of the basis for this Finding and any Identified Deficiencies:

CC&V has developed, implemented and maintained written management and operating plans and procedures for its cyanide facilities, which include cyanide management contingency procedures, and evidence indicates that the procedures have been in effect over the past three years between ICMC audits. CC&V manages the operating procedures specific to the cyanide facilities as part of its certified ISO 14001 Environmental Management System ("EMS") and certified OHSAS 18001 Health and Safety Management System ("HSMS"). These written procedural documents cover the CC&V cyanide facilities and provide measures for managing cyanide in a manner that prevents or controls releases to the environment and exposures to workers and the community. The SOPs identify required PPE and the risks involved with the operating tasks, and adequately describe safe work practices. Additionally, the regulatory permits for the Cresson Project stipulate operating requirements for the process facilities.

The regulatory operating permits for the Arequa Gulch VLF and ADR Plant identify the assumptions and parameters on which the facility designs are based and the design reports incorporate the regulatory criteria required by these operating permits. The Mining and Reclamation Permit application includes the design and operational criteria for the Arequa Gulch VLF and ADR Plant. The Wildlife Protection Plan provides preventative measures for protecting wildlife mine wide. The plan also outlines inspection and reporting procedures.

CC&V procedures provide routine inspection and maintenance programs and address proper management of process solutions at the Arequa Gulch VLF to retain the design storage capacities. Additionally, these inspections cover process tanks, secondary containments, leak detection systems, pipelines, pumps, and valves for structural integrity and signs of corrosion and leakage. Principally, the Mining and Reclamation Permit serves as the operating manual for the Arequa Gulch VLF and process facilities to ensure protection of water quality, and not only establishes operating parameters, but also provides inspection and monitoring requirements. In accordance with the permit, CC&V monitors surface water, groundwater, leak detection systems, solution collection systems,

underdrain systems, and the PSSAs and External Storage Pond. The environmental and operational inspection programs involve inspections conducted each shift, daily, three times each week, weekly, monthly, quarterly and annually. The PM program also ensures that the cyanide facilities are operating within the design parameters. CC&V conducts weekly inspections to ensure that preventative measures (i.e., deterrent systems) are in place to protect wildlife. CC&V Environmental personnel interviewed during this onsite recertification audit described the wildlife mortality inspection frequency as daily, at minimum.

Agency inspections include monthly inspections by the Colorado Division of Reclamation Mining and Safety ("DRMS") in accordance with the Mining and Reclamation Permit, annual inspections by the Water Quality Control Division of the Colorado Department of Public Health and Environment ("CDPHE") in accordance with the discharge and stormwater permits, and arbitrary multimedia inspections by the U.S. Environmental Protection Agency ("EPA"). Agency inspections may occur more frequently, such as during construction activities or as otherwise warranted. CC&V also conducts/receives several audits or reviews to ensure the safe and environmentally sound operation of its facilities.

Inspection forms and checklists document the nature of deficiencies and in most cases reference the corrective maintenance work order issued, as necessary. Records of inspection forms and checklists were available for review during this recertification audit. CC&V had retained records of the noted inspection checklists and forms over the three-year period following the 2010 ICMC recertification audit, with the exception of the *"VLF Operational Walk-Thru and Safety Work Area Inspection"* forms, which were missing for the year 2012.

Consequently, to correct the record management and record retention issue and to prevent recurrence of this issue in the future, following the field component of this audit, CC&V issued a site-wide corrective action pursuant to its EMS regarding record management. Prior to submittal of the final version of this report, CC&V provided documentation demonstrating completion and implementation of the site-wide corrective action, as documented on the CC&V Corrective Action Request Form. This documentation included the procedures developed and updated by CC&V as part of the implementation process for its site-wide corrective action as well as evidence that the procedures are being followed. More specifically, evidence provided includes:

- Updated versions of the HSMS and EMS Record Management Procedures identifying site-wide records that are maintained outside the Environmental and Safety departments along with a site-wide record matrix used to track key records required by the ICMC;
- Updated versions of the CC&V internal management system audit procedures (both HSMS and EMS);
- Records of interim records checks (a review of records performed on December 13, 2013);
- Records of monthly email reminders to record keepers requesting verification that key records were generated and have been maintained and managed pursuant to the Record Management Procedures; and
- A copy of the CC&V Corrective Action Request Form officially closed out on February 26, 2014.

Based on review of this additional objective evidence, in the auditor's professional judgment, CC&V has satisfactorily met the requirements of this Standard of Practice. CC&V performed a review of records for 2013 to

verify that various departments are maintaining records in accordance with the CC&V Records Management Procedures. Furthermore, CC&V will verify the effectiveness of actions taken during the next internal audit for the ISO 14001 and OHSAS 18001 management systems. Therefore, no immediate or substantial risk to health, safety or the environment was deemed to exist during implementation of this corrective action.

CC&V manages its PM program using software, which automatically produces PM work orders on an established schedule. The software system identifies future activities for regular preventive maintenance and includes information on the task requirements and completion. PM instructions are generated as an inspection checklist, and Maintenance personnel perform inspections on this basis. CC&V documents maintenance inspections by the PM work orders, which reside electronically and are also kept in hard copy format.

CC&V has implemented a *"change management"* procedure, which outlines a set of guidelines to follow when changes to operations occur, whether planned or unplanned, to ensure that significant environmental, health and/or safety impacts are considered in advance of operational changes. CC&V requires employees involved in operational changes to be familiar with this procedure and to notify the Environmental Resources department of changes that have the potential to impact the environment and to notify Safety of changes so that potential risks and or hazards associated with such changes may be evaluated.

The primary power source for the CC&V operation is overhead line power from the local grid. However, CC&V maintains six diesel-powered generators at the Arequa Gulch ADR Plant as backup power sources; sufficient to power all process pumps and equipment (i.e., the Arequa Gulch ADR Plant and VLF remain fully operational during line power outages). CC&V performs routine electrical and mechanical PM inspections on the generators.

Standard of Practice 4.2

Introduce management and operating systems to minimize cyanide use, thereby limiting concentrations of cyanide in mill tailings.

The operation is	☒ **not subject to** ☐ **in Full Compliance with** ☐ **in Substantial Compliance with** ☐ **in Non-Compliance with**	**Standard of Practice 4.2.**

Discussion of the basis for this Finding and any Identified Deficiencies:

This Standard of Practice is not applicable, as the Cresson Project is a heap leach operation and does not currently operate a mill.

Standard of Practice 4.3

Implement a comprehensive water management program to protect against unintentional releases.

The operation is in	☒ **Full Compliance** ☐ **Substantial Compliance** ☐ **Non-Compliance**	**with Standard of Practice 4.3.**

Discussion of the basis for this Finding and any Identified Deficiencies:

CC&V has developed a comprehensive, probabilistic, dynamic water balance model, using GoldSim© software, which tracks water flow throughout the engineered water management facilities at the site. The water balance model considers flows into and from the PSSAs and External Storage Pond, and accounts for the operating volume, draindown resulting from 12 hours of power loss, solution accumulation due to seasonal climatic variation at a 95 percent confidence level, the 100-year, 24-hour design storm event, and available pore space of the ore within the PSSAs. The model simulates climatic data inputs for precipitation and evaporation; ore loading, facility volumes, areas of coverage, and phases; material properties for initial moisture contents, field capacity, leaching moisture, and moisture uptake; process solution flows from the PSSAs to the Arequa Gulch ADR Plant; and solution application rates. CC&V commissions outside consultants to manage and refine the GoldSim© model as operations change. More specifically, the GoldSim© model is developed/refined for permitting/design purposes and is included in the Mining and Reclamation Permit application.

Based on the GoldSim© model, CC&V has developed a spreadsheet-based model designed to track water balance on a daily basis. Key objectives of the operational water balance are to maintain an optimum water balance, which maximizes gold production; minimize water use; avoid discharge situations; optimize cyanide use; and to maintain the internal/external pumping systems so that pumps do not cavitate. The operational model, which is maintained and reviewed daily by the Chief Metallurgist, considers ore moisture, precipitation, freshwater makeup to the Arequa Gulch ADR Plant and barren solution tanks, pump back from Arequa Gulch (underdrain flows) and the External Storage Pond, evaporation and ore take up.

Pursuant to the Mining and Reclamation Permit, CC&V monitors these parameters regularly and deviations from these criteria require further action. Operations personnel monitor solution levels and measure flows on a daily basis and provide results to the Chief Metallurgist for incorporation into the operational water balance. In addition to the routine inspection and monitoring performed by CC&V, the DRMS monitors solution levels on a monthly basis. The stormwater diversion along the southwest side of the Arequa Gulch VLF is inspected on a quarterly basis according to the Stormwater Management Plan.

The Arequa Gulch VLF is designed to have sufficient storage capacity to simultaneously contain the normal process solution operating inventory, draindown resulting from a 12-hour power outage, solution accumulation due to seasonal climatic variation at a 95 percent confidence level, the 100-year, 24-hour storm event, available pore

space of the ore within the PSSAs while maintaining required freeboard. Because the PSSAs are in-heap storage ponds, the primary operating criteria is to maintain solution levels in each PSSA at 80 percent capacity or less. Additionally, the hydraulic head on the secondary liner is maintained at two feet or less. The External Storage Pond is no longer required for emergency storage of process solution (based on modeled contingency flows and regulatory design criteria), and the pond now serves as a fresh/makeup water storage pond. However, CC&V continues to maintain the pond as a cyanide facility in case the pond is ever needed for emergency storage during an extreme upset condition. This pond does not continually or routinely store process solution and contains only enough precipitation water to help maintain the pond bottom liner.

CC&V collects precipitation data from an onsite meteorological station located near the southwest perimeter of the Arequa Gulch VLF, near the Phase 2 PSSA. The Environmental Resources department compiles daily summaries of the data for input to the water balance model on a monthly or more frequent basis.

Standard of Practice 4.4

Implement measures to protect birds, other wildlife and livestock from adverse effects of cyanide process solutions.

The operation is in	☒ **Full Compliance**	
	☐ **Substantial Compliance**	**with Standard of Practice 4.4.**
	☐ **Non-Compliance**	

Discussion of the basis for this Finding and any Identified Deficiencies:

Phase 3 pregnant solution flows through a small external solution equalization pond (a.k.a. "Bird Ball Pond") located on the south side of the Arequa Gulch VLF prior to reporting to the Phase 1 PSSA. This small pond, which is fenced and covered by HDPE bird balls, is the only facility in which open cyanide-bearing solutions could occur. However, CC&V indicated that, based on the current configuration and operation of the Arequa Gulch VLF, the pond will most likely no longer receive solution. Data reviewed during this onsite recertification audit demonstrate that weak-acid dissociable ("WAD") cyanide concentrations in the Phase 3 pregnant solution are typically below 10 milligrams per liter ("mg/L"). During this onsite recertification audit, CC&V provided water quality data for solution collected in the external equalization pond over the period January 5, 2010 through May 1, 2012. WAD cyanide concentrations ranged between 0.021 mg/L and 1.87 mg/L. From July 1, 2010 through May 1, 2012, the pond was dry.

The External Storage Pond is no longer required for emergency storage of process solution (based on modeled contingency flows and regulatory design criteria), and the pond now serves as a fresh/makeup water storage pond. However, CC&V continues to maintain the pond as a cyanide facility in case the pond is ever needed for emergency storage during an extreme upset condition. This pond does not continually or routinely store process solution and contains only enough precipitation water to help maintain the pond bottom liner. CC&V samples this water for

cyanide if process solution is introduced, which has not occurred over the past three years following the 2010 ICMC recertification audit. Cyanide is destructed via a hydrogen peroxide injection system in cases where process solution must be transferred to the External Storage Pond during an upset condition. Nonetheless, this pond is fenced and equipped with an audible hazing system.

CC&V uses buried drip emitters to apply leach solution to the tops of the heaps in order to minimize freezing and ponding. Drip lines on the sides of heaps remain on the slope surface, where the potential for ponding is low due to the steep slopes, although CC&V is continuing to explore a method to bury the drip lines on the side slopes so that the wind does not displace them. Overspray is effectively eliminated with the drip emitters.

Observations made during this 2013 ICMC recertification audit, combined with the results of the wildlife mortality monitoring, demonstrate that the CC&V procedures for applying leach solutions, inspecting the leach areas, and remediating ponding issues are being effectively implemented to minimize ponding and protect wildlife. According to wildlife mortality records reviewed and CC&V Environmental personnel interviewed during this onsite recertification audit, no cyanide-related wildlife mortalities have occurred since the June 2010 ICMC recertification audit. CC&V provided evidence of documentation completed for the nine wildlife incidents that have occurred over the past three years, none of which were cyanide-related.

Standard of Practice 4.5

Implement measures to protect fish and wildlife from direct and indirect discharges of cyanide process solutions to surface water.

The operation is in	☒ **Full Compliance**	
	☐ **Substantial Compliance**	**with Standard of Practice 4.5.**
	☐ **Non-Compliance**	

Discussion of the basis for this Finding and any Identified Deficiencies:

The nearest perennial surface water body to the operation is Cripple Creek, which is approximately two miles south. In compliance with the provisions of state and federal water quality regulations, CC&V is authorized to discharge to Arequa Gulch at two outfalls in accordance with effluent limitations, monitoring requirements and other conditions set forth in the Discharge Permit for Arequa Gulch. The discharge limitation for WAD cyanide at the outfalls is 0.02 mg/L and the Arequa Gulch "use protective status" is Cold Water Aquatic Life, Class 2 Recreational, and Agricultural. The compliance point locations are "end of pipe" at Arequa Gulch and there is not an established mixing zone for "in-stream" compliance.

There have been no direct discharges under the Discharge Permit for Arequa Gulch over the past three years following the 2010 ICMC recertification audit. Additionally, the Cresson Project has not experienced any indirect

discharges over the three-year period between ICMC recertification audits that have caused cyanide concentrations in surface water to rise above protective standards.

CC&V currently monitors surface water quality at six compliance points surrounding the operation and provides quarterly sampling results to DRMS. Surface water quality data for the period January 4, 2010 through July 10, 2013 were reviewed during this onsite recertification audit. The data demonstrate that, over this period, WAD and Free cyanide concentrations at all monitoring locations were below the detection limit (<0.01 mg/L).

Standard of Practice 4.6

Implement measures designed to manage seepage from cyanide facilities to protect the beneficial uses of ground water.

The operation is in	☒ **Full Compliance** ☐ **Substantial Compliance** ☐ **Non-Compliance**	**with Standard of Practice 4.6.**

Discussion of the basis for this Finding and any Identified Deficiencies:

The Arequa Gulch VLF is a zero discharge facility and currently employs four internal PSSAs (Phases 1, 2, 4 and 5). Solution within the PSSAs is piped to the beneficiation facilities at the Arequa Gulch ADR Plant. The ore storage liner system consists of a minimum one-foot thick soil liner placed on a prepared subgrade and overlain by geomembrane, which is then overlain by a leachate collection system embedded in a minimum two-foot thick layer of drainage cover fill material. The liner system within the PSSAs consists of a minimum of one-foot thick soil liner, overlain by geomembrane, overlain by solution collection fill material, overlain by geomembrane, which is then overlain by a minimum two-feet thick layer of drainage cover fill material. Additionally, the Arequa Gulch VLF is equipped with leak detection and collection systems.

The collection systems are continuously monitored and pumped to ensure that less than two feet of hydraulic head is placed on the lower synthetic liner. The entire Arequa Gulch VLF area is underlain by a leak detection system placed on the graded and prepared subgrade prior to placement of the soil liner. The PSSAs have adequate storage to handle the operating solution level, the 12-hour draindown level if there is no pumping of solution from the PSSAs, precipitation from a 100-year, 24-hour storm event, 95 percent of the mean monthly precipitation at the site, solution retained in the field capacity of the ore contained within the PSSAs while maintaining the design freeboard.

A geomembrane liner connected to the Arequa Gulch VLF liner system underlies the entire Arequa Gulch ADR Plant area, including the Cyanide Offload/Storage Facility. The liner serves as tertiary containment for the concrete secondary containment facilities provided at the offload and plant. The Cyanide Offload/Storage Facility, located adjacent to the Arequa Gulch ADR Plant building, consists of a curbed, concrete loading apron for staging the

delivery trucks/trailers containing the ISO tanks. The concrete apron drains to the adjacent concrete containment area occupying the Cyanide Mix Tank and the Cyanide Storage Tank.

CC&V conducts regular monitoring of groundwater downgradient of the operation and of leak detection and solution collection systems to ensure that the facility is functioning as designed and protective of the environment. Groundwater quality is regulated by DRMS in accordance with the Mining and Reclamation Permit. The regulatory numerical standard for cyanide in groundwater, applicable to the Cresson Project, is 0.20 mg/L WAD cyanide. During this recertification audit, the auditor reviewed quarterly groundwater monitoring data for the period January 19, 2010 through September 4, 2013. Over this period, WAD cyanide concentrations at all compliance wells were less than the detection limit (<0.01 mg/L).

Standard of Practice 4.7

Provide spill prevention or containment measures for process tanks and pipelines.

The operation is in	☒ Full Compliance ☐ Substantial Compliance ☐ Non-Compliance	with Standard of Practice 4.7.

Discussion of the basis for this Finding and any Identified Deficiencies:

All cyanide storage and process tanks at the Cresson Project are provided with concrete and/or lined secondary containment with adequate capacity to hold a volume greater than that of the largest tank within the containment and any piping draining back to the tank, and with additional capacity for the design storm event. Concrete floors, curbs, and containment walls provide secondary containment for all process tanks located inside the Arequa Gulch ADR Plant building. These concrete secondary containments have concrete floor sumps with dedicated, automated pumps to collect and remove cyanide solution and slurry spillage for return to the process circuits. The Arequa Gulch ADR Plant has an overflow sump that reports to the Arequa Gulch VLF lined containment area. This sump drain always remains open. The process tanks and vessels inside the Arequa Gulch ADR Plant are set on solid mass, concrete pads or are supported above the floor by steel structures.

Process tanks located outside the Arequa Gulch ADR Plant building and offload containment, include the Barren Solution Tank, the Enrichment Solution Tank and the Pregnant Solution Distribution Tank. The barren and enrichment tanks are located outside, on the north side of the Arequa Gulch ADR Plant building, within the lined area. The tank foundations are solid mass, concrete pads. The Pregnant Solution Distribution Tank is located on the first lift of the Phase 1 Arequa Gulch VLF area.

The Cyanide Offload/Storage Facility consists of a curbed, concrete loading apron for staging the delivery trucks/trailers containing the ISO tanks. The concrete apron drains to the adjacent concrete containment area

occupying the Cyanide Mix Tank and the Cyanide Storage Tank. The two tank foundations are solid mass, concrete pads.

A geomembrane liner, keyed to the Arequa Gulch VLF liner system, underlies the entire Arequa Gulch ADR Plant area, including the Cyanide Offload/Storage Facility located adjacent to the Arequa Gulch ADR Plant building. The liner serves as tertiary containment for the concrete secondary containment facilities provided inside the plant and at the offload.

All process solution pipelines at the Cresson Project are located within concrete or geomembrane-lined secondary containment. Additional containment measures include differential flow/pressure and interlock systems. All pipelines are located above ground with the exception of the short segment of drainpipe running from the Arequa Gulch ADR Plant overflow sump to the Arequa Gulch VLF. However, this pipe is located above the geomembrane underliner system, which drains to the Arequa Gulch VLF.

CC&V uses carbon steel, stainless steel, HDPE, and polyvinyl chloride ("PVC") piping materials and piping system components. All cyanide process tanks are constructed of carbon steel. These materials are compatible with cyanide and high pH solutions.

Standard of Practice 4.8

Implement quality control/quality assurance procedures to confirm that cyanide facilities are constructed according to accepted engineering standards and specifications.

The operation is in	☒ **Full Compliance** ☐ **Substantial Compliance** ☐ **Non-Compliance**	**with Standard of Practice 4.8.**

Discussion of the basis for this Finding and any Identified Deficiencies:

Please refer to Section 0.3 above for a list of the active cyanide facilities at the Cresson Project and to the previous ICMC Summary Audit Reports (September 2007 and September 2010) for the construction quality assurance and quality control ("QA/QC") programs implemented for the cyanide facilities in operation during those audits.

New cyanide facilities and modifications to existing cyanide facilities constructed subsequent to the 2010 ICMC recertification audit, include:

- Phase 4B/C Triangle Liner Certification (construction completed just prior to 20120 ICMC recertification audit);
- Construction of Phase 5 of the Arequa Gulch VLF (construction was ongoing during the 2010 ICMC recertification field audit);
- Construction of the Phase 5 Arequa Gulch VLF Ore Storage Area;
- Construction Phase 5 Arequa Gulch VLF Berm Modification;

- Construction of the Process Solution Enhancement System;
- Extension of the liner system at the Arequa Gulch VLF Load Out Bin; and
- Construction of new carbon train at the Arequa Gulch ADR Plant (Train E) and Enrichment Pump Station.

CC&V implemented QA/QC programs during the construction of these facilities as documented by construction and turnover reports. The construction QA/QC programs conducted for the VLF components and Process Solution Enhancement System address earthworks construction, geosynthetics installation, and all related facility systems. CC&V provided redlined construction drawings for the E-Train building addition and the Enrichment Pump Station building along with the turnover and final completion letters for these facilities. Appropriately qualified personnel reviewed cyanide facility construction and provided documentation that the facilities were built as proposed and approved.

CC&V retained the original QA/QC documentation for cyanide facilities constructed prior to and subsequent to the June 2007 ICMC certification audit. The documentation is archived in hardcopy format and resides in the Environmental Resources Manager's office. During this 2013 ICMC recertification audit, CC&V provided a listing of all QA/QC documentation associated with the Cresson Project, which covers the period 1994 through 2012.

Standard of Practice 4.9

Implement monitoring programs to evaluate the effects of cyanide use on wildlife, surface and ground water quality.

The operation is in	☒ **Full Compliance**	
	☐ **Substantial Compliance**	**with Standard of Practice 4.9.**
	☐ **Non-Compliance**	

Discussion of the basis for this Finding and any Identified Deficiencies:

CC&V has prepared and implemented written standard procedures for monitoring activities to evaluate the effects of cyanide use on wildlife and water quality. The Environmental Sampling Protocol Guide provides the procedures for monitoring and sampling groundwater and surface water quality. The protocol covers the Arequa Gulch VLF, PSSAs, the leak detection collection and solution recovery systems, underdrains, and the Arequa Gulch monitoring activities. The Environmental Sampling Protocol Guide for CDPHE Permits describes the sampling protocols that apply to the Arequa Gulch discharge permit. The Wildlife Protection Plan provides preventative measures for protecting wildlife mine wide and outlines inspection and reporting procedures.

The sampling protocol guides described were developed by CC&V personnel using EPA protocols. The protocols are managed and administered by the CC&V Manager, Environmental Resources and the CC&V Environmental Compliance Control Administer. The Manager, Environmental Resources has a Bachelor of Science degree in Applied Science and Technology and over 23 years of professional experience in the environmental field.

CC&V maintains an extensive monitoring network at the Cresson Project in accordance with its Mining and Reclamation Permit and its Discharge Permit for Arequa Gulch. Monitoring is conducted by CC&V professional staff. Samples collected in connection with these monitoring programs are analyzed by qualified third-party, certified laboratories. Appropriate QA/QC procedures are used to validate the sample collection and analytical methods. The Mining and Reclamation Permit with DRMS and the discharge permits with CDPHE specify monitoring locations and frequencies. The sampling protocols detail the steps for collecting, preserving, and preparing the samples prior to shipment. They also provide shipping and chain of custody procedures. CC&V documents field sampling conditions for each sampling episode, which is also included on the chain-of-custody forms.

Surface water monitoring is conducted on a quarterly basis at six locations surrounding the operation. In accordance with the Discharge Permit for Arequa Gulch, CC&V checks Outfall 001A three times per week, and samples are analyzed for cyanide weekly (if flowing). Groundwater quality and depths are monitored on a quarterly basis. Quarterly samples are taken at 15 Compliance Points surrounding the operation, including points located downgradient of the Arequa Gulch VLF.

In addition, regular monitoring of the leak detection and solution collection systems associated with the Arequa Gulch VLF is conducted to ensure that the facility is functioning as designed and protective of the environment. Fluid collected in the leak detection systems is tested for pH and WAD cyanide on a weekly basis. Water levels in the PSSAs and the solution collection systems are monitored at least weekly. Water levels in the leak detection collection and recovery system in the External Storage Pond are monitored at least weekly if process solution is introduced to the pond, and samples are periodically collected for analysis of pH and WAD cyanide.

The Wildlife Protection Plan requires weekly inspections to ensure that preventative measures are in place to protect wildlife. CC&V indicated that the wildlife mortality inspection frequency is daily, at minimum. CC&V personnel are instructed to contact the Environmental Resources department when wildlife mortalities are discovered and to document the details of the incident. Although not a regulatory requirement, the Environmental Resources department notifies the Colorado Parks and Wildlife (formerly Colorado Division of Wildlife) via telephone within 24 hours and documents evidence of the contact via memorandum. A written report is then completed, which includes photographic evidence of the incident. Additionally, the CC&V Monthly Activity Reports document any wildlife mortalities.

5.0 DECOMMISSIONING

Protect communities and the environment from cyanide through development and implementation of decommissioning plans for cyanide facilities.

Standard of Practice 5.1

Plan and implement procedures for effective decommissioning of cyanide facilities to protect human health, wildlife and livestock.

The operation is in	☒ Full Compliance ☐ Substantial Compliance ☐ Non-Compliance	with Standard of Practice 5.1.

Discussion of the basis for this Finding and any Identified Deficiencies:

CC&V provides DRMS with a written discussion of its proposed decommissioning procedures as part of its Mined Land Reclamation Permit for the Cresson Project and updates the decommissioning procedures with each permit revision. MLE2 is an extension of the existing Cresson Project operations to allow active mining to continue until approximately 2025, adding roughly nine years to the current mine schedule. The total period of operation and reclamation (including construction) for the Cresson Project under MLE2 is approximately 2012 through 2041. Post closure monitoring is scheduled to continue into 2046 to demonstrate compliance with the required regulatory criteria for WAD cyanide concentrations (0.2 mg/L) in the rinsate.

With each major revision to its Mined Land Reclamation Permit, CC&V updates the reclamation and closure components, including proposed measures and associated costs. These permit revisions also serve as the means to estimate and establish the current financial warranty obligation. CC&V provides this information in its annual reports submitted to DRMS.

Standard of Practice 5.2

Establish an assurance mechanism capable of fully funding cyanide related decommissioning activities.

The operation is in	☒ Full Compliance ☐ Substantial Compliance ☐ Non-Compliance	with Standard of Practice 5.2.

Discussion of the basis for this Finding and any Identified Deficiencies:

The Mined Land Reclamation Permit requires estimation and establishment of a financial warranty for third party decommissioning of all aspects of mine operations, which include all cyanide facilities. The most recent estimate, prepared in January 2012, is included in the MLE2 application, and incorporates current reclamation costs for all aspects of the Cresson Project, including any facility changes to support the planned MLE2. CC&V prepared the estimate assuming that a third party contractor will perform the activities.

The total current posted amount of the financial warranty covers all components of the Cresson Project with the exception of the Squaw Gulch VLF, of which construction has not yet commenced. CC&V will post the additional amount in two separate installments, as agreed to by DRMS, beginning in approximately 2015, to cover the two phases of the Squaw Gulch VLF, which is the last component to be completed under MLE2.

6.0 WORKER SAFETY

Protect workers' health and safety from exposure to cyanide.

Standard of Practice 6.1

Identify potential cyanide exposure scenarios and take measures as necessary to eliminate, reduce and control them.

The operation is in	☒ Full Compliance ☐ Substantial Compliance ☐ Non-Compliance	with Standard of Practice 6.1.

Discussion of the basis for this Finding and any Identified Deficiencies:

CC&V has developed procedures describing how cyanide-related tasks are to be conducted. These SOPs cover cyanide-related tasks such as, but not limited to, offloading cyanide, plant operations, and maintenance activities that involve the cyanide solution circuits. These procedures document equipment and PPE requirements, potential health and safety hazards including confined space, operator instructions, and pre-work inspections.

Workers are encouraged to provide input into procedural changes and improving health and safety. CC&V has a system where Opportunities for Improvement are entered into a database. A responsible person is assigned to implement the improvement and the project is tracked to completion. The Safety department has also implemented the Safety Observation program. CC&V uses this program to correct safety issues and recognize good practices. Observations are entered into the Workplace Management Reporting System ("WMRS") database where resolution of the issue is tracked to completion. Although encouraged to discuss health and safety procedures openly with supervisors, workers also have the opportunity to table issues at daily safety meetings and monthly safety meetings. Additionally, annual Mine Safety and Health Administration ("MSHA") refresher training solicits employee concerns.

CC&V has implemented a *"change management"* procedure, which outlines a set of guidelines to follow when changes to operations occur, whether planned or unplanned, to ensure that significant environmental, health and/or safety impacts are considered in advance of operational changes. CC&V requires employees involved in operational changes to be familiar with this procedure and to notify the Environmental Resources department of changes that have the potential to impact the environment and to notify Safety of changes so that potential risks and or hazards associated with such changes may be evaluated.

Standard of Practice 6.2

Operate and monitor cyanide facilities to protect worker health and safety and periodically evaluate the effectiveness of health and safety measures.

The operation is in	☒ Full Compliance	
	☐ Substantial Compliance	with Standard of Practice 6.2.
	☐ Non-Compliance	

Discussion of the basis for this Finding and any Identified Deficiencies:

CC&V SOPs stress the importance of maintaining cyanide solutions above pH 10 to minimize the potential for generation of HCN gas and for closely monitoring the pH when levels fall below this. The potential for HCN generation is monitored via fixed HCN monitors located at strategic areas throughout the Arequa Gulch ADR Plant and inside the Enrichment Pump Station building. CC&V maintains the pH of the cyanide solutions in the Arequa Gulch ADR Plant by application of caustic during the batch mixing process, and pre-treatment batch mixing process. During cyanide pre-treatment and batch mixing processes, procedures require the pH to be above 12. CC&V also adds lime to the leach pads to maintain the alkalinity of the leach solution.

CC&V monitors the pH of barren and pregnant solutions through collection and analysis of grab samples. The *"ADR Daily Operating Report"* lists the target pH values for pregnant solution, barren solution and enrichment solution as 10.4, 11.5 and 9.6, respectively. Review of records during this 2013 recertification audit, verified that CC&V is maintaining pH at these levels. In addition to the sampling program, there are inline pH-meters located at each of the carbon trains.

CC&V has identified areas of the process where the potential for cyanide exposure is significant and has implemented controls to minimize the potential for exposure of workers. The cyanide-related SOPs specify when personal HCN monitoring units are required for specific tasks. When Process or Maintenance personnel need to work in areas where there is a potential for HCN exposure they wear personal HCN detectors. CC&V has seven personal monitors and thirteen fixed HCN monitors installed at the Arequa Gulch ADR Plant. The personal and fixed monitors are calibrated to alarm at 4.7 parts per million ("ppm") and 10 ppm. The fixed systems are each equipped with visual and audible alarms. CC&V conducts routine maintenance on the HCN gas monitoring equipment, including recalibration of each unit as recommended by the manufacturer and confirmation that the visual and audible alarms are functioning.

CC&V has installed signs advising workers that cyanide is present and of the associated dangers. Cyanide warning signs are posted at frequent intervals around the Arequa Gulch VLF, on the doors of the Arequa Gulch ADR building and on piping and vessels inside and outside the Arequa Gulch ADR Plant. Piping containing cyanide was also well marked to show flow direction. Based on a recommendation by the auditor, following the field component of this audit, CC&V installed signs at all PSSA pump stations and provided photographic evidence demonstrating that a

general warning sign was placed at the entrance to the area and warning labels with flow directions were placed on pipelines.

There are eyewash/shower units are located throughout the Arequa Gulch ADR Plant, two units located at the Enrichment Pump Station, and two units at the Cyanide Offload/Storage Facility. There are also four eyewash kits/stations located throughout the Arequa Gulch ADR Plant. Process Operators check the units daily and monthly. The auditor spot-checked several the shower/eyewash stations during this 2013 recertification audit and identified several eyewashes in need of adjustment or repair; e.g., eyewash fountain too low or too high or flow in one eyepiece significantly obstructed. However, all showers/eyewash stations were functioning and available in the event of an emergency. Following the field component of this audit, CC&V repaired the faulty eyewash stations identified by the auditor and performed an assessment of the inspection program for the shower/eyewash stations to determine if operators are trained to recognize when a shower/eyewash station is not functioning properly and how to check for proper pressure. As part of the assessment, the Process Operators that perform the safety checks received on-the-job training. CC&V provided copies of sign-in sheets demonstrating that the assessment and associated training were performed. Additionally, a representative from the Safety department observed a daily safety walkthrough to ensure that the inspections are performed properly.

In the auditor's professional judgment, CC&V's shower/eyewash inspection and maintenance program implemented over the past three years represents sufficient evidence of the operation's good-faith effort to comply with the provisions of the ICMC. CC&V is inspecting the shower/eyewash stations on a routine basis and there are a number of units located throughout the process areas where cyanide is present. Based on the available units and the procedures and training implemented by CC&V regarding the inspection program, no immediate or substantial risk to health, safety or the environment was deemed to exist during implementation of the inspection assessment performed by CC&V.

Fire extinguishers are primarily ABC dry units in the Arequa Gulch ADR Plant. Only ABC dry units are located where cyanide is handled. CC&V checks fire extinguishers monthly. The units were observed to be easily accessible and were clearly tagged. The monthly inspection records were available covering the past three years between ICMC audits.

The CC&V Environmental Resources department manages Material Safety Data Sheet ("MSDS") information for chemicals used at the Cresson Project, including sodium cyanide. New or revised MSDS received from the supplier are scanned into electronic format and made available to all employees site wide, 24-hours per day, via the CC&V intranet site. MSDS are in English, the language of the workforce. Copies of MSDS of Bulk Chemicals, including Sodium Cyanide are also provided in the CC&V Emergency Response Plan/Procedures ("ERP"). First Aid procedures for cyanide are posted at strategic locations about the Arequa Gulch ADR Plant.

CC&V has an incident reporting and investigation procedure that covers all operations, including cyanide handling. The process is also used for reporting and investigating near misses. Incidents are investigated by the appropriate supervisor and reviewed by management. Records are maintained in the WMRS database. Additionally, as a

regulatory requirement, CC&V must complete MSHA reports that include any cyanide-related worker exposures, which require treatment or result in death. Furthermore, CC&V posts summaries of incidents on designated bulletin boards located around the mine.

Standard of Practice 6.3

Develop and implement emergency response plans and procedures to respond to worker exposure to cyanide.

The operation is in	☒ Full Compliance	
	☐ Substantial Compliance	with Standard of Practice 6.3.
	☐ Non-Compliance	

Discussion of the basis for this Finding and any Identified Deficiencies:

CC&V stores medical oxygen with resuscitators in dedicated and signed cabinets located inside the Arequa Gulch ADR Plant. Medical oxygen is also available at Carlton Security and in the metallurgical laboratory and is stored in emergency kit bags placed in strategic locations around the mine site, including the Arequa Gulch ADR Plant control room. The cyanide antidote kit is currently stored in the Carlton Security office located near the Arequa Gulch ADR Plant. The kit includes 12 ampoules of amyl nitrite, two vials of sodium thiosulfate, two vials of sodium nitrite and a bottle of activated charcoal. The primary means of communication while on site is the radio system. Cellular and landline telephones are accessible, if needed.

Process personnel complete monthly inspections of the emergency first aid equipment at the Arequa Gulch ADR Plant. Carlton Security personnel inspect the emergency first aid equipment and the cyanide antidote kit at Carlton Security each shift. The CC&V Mine Rescue Team also manages first aid equipment, including the equipment at Carlton Security, the cyanide antidote kit, and emergency kit bags located throughout the mine site. The auditor inspected the locations and spot-checked the condition of first aid equipment during the audit. The medical oxygen was clean and fully charged. The cyanide antidote kit is stored at room temperature and the antidote was current during this ICMC field audit.

Inspection records for the first aid equipment and cyanide antidote kits were complete over the three-year period between ICMC recertification audits, with the exception of the monthly inspections performed by the Mine Rescue Team. These monthly inspection records for the period June 2010 through 2012 were not available for review. Following the field component of this audit, the CC&V Mine Rescue Team was unable to locate the missing emergency equipment inspection records. It was determined that the records were misplaced during a recent transition between CC&V managers (Safety, Health and Security) and between Mine Rescue Team leaders. Consequently, CC&V issued an internal corrective action regarding records management and retention at the site to prevent recurrence of this issue in the future, and based on review of additional objective evidence provided by CC&V prior to submittal of the final version of this report (see Section 4.1 above), in the auditor's professional judgment, CC&V has satisfactorily met the requirements of this Standard of Practice. CC&V conducts routine

inspections of first aid equipment and cyanide antidote kit. Records for one component of this inspection program could not be located; therefore, no immediate or substantial risk to health, safety or the environment was deemed to exist during implementation of this corrective action.

The CC&V Cyanide Emergency Response Plan ("CERP") is an integral component of the operation's comprehensive ERP. The CERP is specific to cyanide and describes emergency response procedures in the event of an unplanned release of cyanide. The plan covers emergency response scenarios, response actions, response equipment, notification procedures, monitoring and remediation, and incident review procedures. Additionally, CC&V implements a specific SOP, which provides procedures for responding to cyanide exposures.

All CC&V employees are trained in first aid response including cyanide exposure symptom recognition and treatment and CC&V Mine Rescue Team members are trained in emergency medical response. Qualified Cripple Creek Emergency Medical Services ("CCEMS") personnel teach first aid during the CC&V annual refresher training course. The training includes administration of oxygen and amyl nitrite.

CC&V has maintained ongoing dialogue with local hospitals and medical emergency services over the years and Teller County Emergency Services are well prepared to receive and treat a cyanide-exposed patient at Penrose Hospital in Colorado Springs. If an incident occurs, which requires transport of a cyanide-exposed person off site for further medical attention, CC&V would use the local ambulance service (CCEMS) based in Cripple Creek. For more serious cases, air ambulance (helicopter evacuation) may be utilized. The Teller County ambulance service does not carry cyanide antidotes; therefore, if a cyanide exposure victim requires treatment and/or transport via ambulance, CC&V would give ambulance personnel its antidote kit, which would accompany the victim.

CC&V periodically conducts mock drills in accordance with its HSMS Manual and provided documentation of three cyanide-related mock emergency drills conducted subsequent to the 2010 ICMC recertification audit. A drill conducted in 2011 was a joint effort government agency and private sector drill sponsored by the Teller County Office of Emergency Management and the Teller County Sheriff's Office. The drill was produced with input, advice and assistance from the CC&V Mine Response Team, Teller County Sheriff's Office and Cripple Creek Fire Department. The development of the drill followed guidance set forth in the U.S. Department of Homeland Security, Homeland Security Exercise and Evaluation Program. The drill simulated a multi-hazard incident incorporating Law Enforcement, Fire, CCEMS, Hazardous Materials and the CC&V Mine Rescue Team.

Subsequent to the onsite component of the 2010 ICMC recertification audit, CC&V expanded the use of the existing WMRS to include recommendations from mock drills, which are entered into this system and tracked to completion. Observations are closed and archived when corrective actions have been completed. The 2011 mock drill had been entered into the WMRS (Incident and Action Changes Summary); however, records verifying that CC&V implemented or otherwise addressed the corrective actions identified in the other cyanide mock drills were not available for review. CC&V made multiple, unsuccessful attempts to locate the missing records and is confident that the records exist as they were reviewed during the annual OHSAS 18001 third party audit and provided evidence that the ERP is periodically tested through drills. Consequently, CC&V issued an internal

corrective action regarding records management and retention at the site to prevent recurrence of this issue in the future, and based on review of additional objective evidence provided by CC&V prior to submittal of the final version of this report (see Section 4.1 above), in the auditor's professional judgment, CC&V has satisfactorily met the requirements of this Standard of Practice. There is sufficient evidence over the past three years to demonstrate that CC&V has incorporated lessons learned from mock drills, as well as lessons learned from actual incidents into their response planning; therefore, no immediate or substantial risk to health, safety or the environment was deemed to exist during implementation of this corrective action.

7.0 EMERGENCY RESPONSE

Protect communities and the environment through the development of emergency response strategies and capabilities.

Standard of Practice 7.1

Prepare detailed emergency response plans for potential cyanide releases.

The operation is in	☒ Full Compliance ☐ Substantial Compliance ☐ Non-Compliance	with Standard of Practice 7.1.

Discussion of the basis for this Finding and any Identified Deficiencies:

CC&V has evaluated the potential for cyanide releases and related exposures at the Cresson Project and the CC&V ERP serves as a guide for responding to site-wide emergencies. The ERP guides the user to the specific response plans implemented at the Cresson Project, which include the Code 90 Red Response Plan, Crisis Communication Plan, Spill Response Plan, CERP, Fire Protection Plan, and the Geotechnical Code 90. Controlled copies of the ERP and supporting response plans are contained in common, three-ring binders, which reside at CC&V's Victor Administration Office, Denver Corporate Office, Ironclad Coordinator's Office, in the Ajax Conference Room (Critical Event Box), with the Mine Rescue Team, at the Carlton Security Office and with the Emergency Preparedness Director for Teller County. The Mine Rescue Team keeps a copy in the Mine Rescue Vehicle.

The CERP is specific to cyanide and describes emergency response procedures in the event of an unplanned release of cyanide. The plan covers emergency response scenarios, response actions, response equipment, notification procedures, monitoring and remediation, and incident review procedures. The SOP titled, *"Emergency Response to Cyanide Exposure"*, provides procedures for responding to cyanide exposures including use of the antidote (amyl nitrite) and administering first aid related to cyanide exposures. The purpose of the Crisis Communications Plan is to provide basic information to facilitate a managed response to an emergency. It focuses on internal and external communications and management organization to facilitate a response.

Due to liability concerns, it is CC&V's policy not to respond to spills caused by other entities, including transporters, unless: the spill is within the Cresson Project Area or CC&V has been requested to do so by the responsible party or the local emergency response team; AND the CC&V General Manager or his/her designee specifically authorizes a response. Therefore, the CERP considers only transportation accidents that could occur on site (i.e., during transport of cyanide between the guard gate and the cyanide offload facility). Any offsite incident related to the transportation of cyanide is the responsibility of Cyanco and its production and transport contractors as described in the Cyanide Master Purchase and Sale Agreement.

Standard of Practice 7.2

Involve site personnel and stakeholders in the planning process.

The operation is in	☒ Full Compliance ☐ Substantial Compliance	with Standard of Practice 7.2.
	☐ Non-Compliance	

Discussion of the basis for this Finding and any Identified Deficiencies:

CC&V developed the CERP with input from key employees. Additionally, CC&V consults with its employees periodically to ensure that the CERP addresses current conditions and risks. CC&V Environmental personnel regularly attend Local Emergency Planning Committee ("LEPC") monthly meetings. CC&V also gains input from LEPC members through their participation in mock drills. The public review process offered by state and county permitting processes solicits input from affected communities regarding all aspects of the operation. Additionally, CC&V provides a controlled copy of the ERP and supporting response plans to the Emergency Preparedness Director for Teller County, the control point and coordinator for all outside responders. The Community Affairs Manager serves as the primary point of contact for stakeholder questions or complaints that could affect ERP content.

Standard of Practice 7.3

Designate appropriate personnel and commit necessary equipment and resources for emergency response.

The operation is in	☒ Full Compliance ☐ Substantial Compliance	with Standard of Practice 7.3.
	☐ Non-Compliance	

Discussion of the basis for this Finding and any Identified Deficiencies:

The ERP identifies Emergency Response Coordinators and Responders along with necessary contact information. The ERP and associated plans also provide the location of response and remediation equipment, describes cleanup and monitoring procedures, and discusses internal and external spill notification and follow-up actions. Additionally, the ERP and associated plans describe the roles of outside responders for the release and exposure scenarios identified as having the potential to occur under extreme upset conditions.

The Crisis Communications Plan defines the duties and responsibilities of the coordinators and team members during a formal (Code 90 RED) emergency. These duties and responsibilities are also provided on Role Cards, which are used as checklists during an emergency. As outlined in the CERP, the Process Manager, or his/her designee, is the Primary Emergency Response Coordinator. The Emergency Response Coordinator authorizes the

call-out of the Mine Rescue Team (Emergency Response Team) and is responsible for coordinating all onsite emergency response measures. During a Code 90 RED, the Senior Vice President, North America or his/her alternate will assume the role of Emergency Commander and proceed with the ERP, including assigning individuals to required positions. Alternate Emergency Commanders include the General Manager, Process Manager, or the Mine Manager.

The ERP contains information regarding Mine Rescue Team call-out procedures and available, qualified personnel. The full Mine Rescue Team consists of 12 members and CC&V maintains at least four members on site at any one time. Each Mine Rescue Team member completes an eight-hour First Responder training course. Additionally, all team members receive 10 hours training each month. The efficiency and competence of the team are honed through participation in mock drills and responding to Code 90 emergencies.

CC&V maintains the equipment necessary to implement response procedures, including a Mine Rescue Vehicle. CC&V also stores emergency response equipment in the Emergency Response Shed located at Carlton Security near the Arequa Gulch ADR Plant and in the Mine Rescue Team training room at the Ironclad Facility. Calcium hypochlorite (for cyanide detoxification) is stored in the leach pad crew "Tuff Shed" located at the Arequa Gulch VLF. Self-contained breathing apparatus ("SCBA") and HCN gas monitoring equipment are available via Process personnel, Safety personnel, and the Mine Rescue Team.

The Mine Rescue Team Captain assigns two team members to inspect and inventory the equipment following each drill, training session or actual response. Completed electronic checklists covering the past three years of inspections of the cyanide emergency equipment stored with the Mine Rescue Vehicle were available for review. The auditor found the checklists complete with the name of the inspector, confirming that inspections are undertaken on a monthly schedule, as required. However, monthly inspection records for the emergency response equipment stored in the Emergency Response Shed located at Carlton Security, were not available for the period June 2010 through 2012. CC&V made multiple, unsuccessful attempts to locate records documenting inspections of emergency response equipment and is confident that equipment inspections are occurring as required; nonetheless, CC&V indicated that the individuals conducting the inspections failed to properly file completed inspection checklists. Consequently, CC&V issued an internal corrective action regarding records management and retention at the site to prevent recurrence of this issue in the future, and based on review of additional objective evidence provided by CC&V prior to submittal of the final version of this report (see Section 4.1 above), in the auditor's professional judgment, CC&V has satisfactorily met the requirements of this Standard of Practice.

Standard of Practice 7.4

Develop procedures for internal and external emergency notification and reporting.

The operation is in	☒ Full Compliance ☐ Substantial Compliance ☐ Non-Compliance	with Standard of Practice 7.4.

Discussion of the basis for this Finding and any Identified Deficiencies:

All notification is conducted in accordance with the ERP. A member of senior site management is responsible for determining if outside emergency assistance is required. Persons making such a determination shall not be the Emergency Response Coordinator since that individual is responsible for resolving the cyanide emergency. The Emergency Response Coordinator will authorize the Mine Rescue Team call-out. If the emergency is classified as a Code 90 RED (i.e., fatality or life threatening injury), procedures are in place to initiate the Crisis Communications Plan.

In accordance with its Spill Response Plan, CC&V Environmental Resources personnel report spills to land that exceed the Reportable Quantities volume criterion in any 24-hour period to external agencies. The CERP includes procedures for evacuation of off-site parties from residencies and businesses as necessary to protect the public from potential exposure from fire, chemical release or other catastrophe at the site. The ERP contains contact information for CC&V management, regulatory agencies, outside response providers, medical facilities, potentially affected communities and other stakeholders, including downstream water users, adjoining landowners and elected officials.

Standard of Practice 7.5

Incorporate into response plans and remediation measures monitoring elements that account for the additional hazards of using cyanide treatment chemicals.

The operation is in	☒ Full Compliance ☐ Substantial Compliance ☐ Non-Compliance	with Standard of Practice 7.5.

Discussion of the basis for this Finding and any Identified Deficiencies:

The Spill Response Plan, the CERP, and the SOP titled *"Cyanide Spillage"*, describe response and remediation measures for cyanide spills. The CERP describes the cleanup/remediation procedures and refers to the Spill Response Plan for detailed implementation through completion. Both plans include spill path monitoring procedures and the Spill Response Plan provides reporting procedures to carry out following the initial response.

SOP *"Cyanide Spillage"* provides cleanup and disposal procedures for spills of solid cyanide and cyanide solution. For both solid and liquid spills, CC&V will neutralize the unrecoverable cyanide with calcium hypochlorite and excavate contaminated soil for disposal on the Arequa Gulch VLF.

In the event of a spill to surface water (i.e., to Arequa Gulch) samples of the released solution would be collected if possible, at established locations, and downstream from but as close to the point of entry as is safely possible. In accordance with the CERP, CC&V will not attempt to oxidize, neutralize, or otherwise treat cyanide once it has entered Arequa Gulch. CC&V's philosophy is that all cyanide treatment chemicals are themselves toxic to aquatic life and in situ treatment is only marginally effective at best; therefore, all efforts focus on preventing releases to surface waters. For releases to groundwater, CC&V is committed to the regulatory response procedure stipulated by its Reclamation Permit, made part of the CERP, which requires increased monitoring of certain parameters at the existing groundwater monitoring wells. Drinking water supply wells are a considerable distance from the site, and are highly unlikely to be affected by spills.

If a spill or leak has the potential to migrate from the point of occurrence, CC&V will implement spill monitoring following cleanup of contaminated soil material. If a spill has the potential to migrate to surface water, CC&V will construct berms upgradient of the potential point of entry to the water and implement surface water monitoring downstream, if necessary. CC&V will monitor, decontaminate and/or remove soil along the spill area as necessary. If there is a potential for the spill to migrate off site, CC&V will obtain samples expeditiously from downgradient, existing surface and ground water stations and any additional water monitoring points deemed appropriate to monitor the potential migration pathways. The nature and extent of the spill and the potential environmental effects created by the spill will determine the development of the monitoring plan.

Standard of Practice 7.6

Periodically evaluate response procedures and capabilities and revise them as needed.

The operation is in	☒ **Full Compliance** ☐ **Substantial Compliance** ☐ **Non-Compliance**	**with Standard of Practice 7.6.**

Discussion of the basis for this Finding and any Identified Deficiencies:

In accordance with its CERP, CC&V shall review and evaluate the CERP biannually at minimum and following all incidents requiring its implementation. CC&V will revise the CERP based on these reviews, as necessary, to ensure that it remains current and effective. Updates to the contact lists in the ERP are made on an as-need basis (e.g., following personnel changes and public elections). The ERP was last updated on May 21, 2013 and the CERP was last updated on October 31, 2013.

CC&V has committed to periodically test its ability to respond to cyanide-related incidents and to implement appropriate first aid procedures. CC&V periodically conducts mock drills in accordance with its HSMS and provided documentation of three cyanide-related mock emergency drills conducted subsequent to the 2010 ICMC recertification audit (see Section 6.3 above).

According to the ERP, CC&V prepares a follow-up written report any time the ERP and associated plans are implemented in order to assess the adequacy of the plans. CC&V evaluates all cyanide exposure and release incidents to identify root causes and implement measures designed to prevent reoccurrence. The Crisis Communications Plan requires completion of a thorough incident review that focuses on continuous improvement and prevention. Incident reviews are entered into the WMRS database.

8.0 TRAINING

Train workers and emergency response personnel to manage cyanide in a safe and environmentally protective manner.

Standard of Practice 8.1

Train workers to understand the hazards associated with cyanide use.

The operation is in	☒ Full Compliance ☐ Substantial Compliance ☐ Non-Compliance	with Standard of Practice 8.1.

Discussion of the basis for this Finding and any Identified Deficiencies:

CC&V trains all employees in cyanide hazard recognition as part of new hire and annual refresher training. All new hires and contractors are required to view a video that speaks to cyanide management issues and hazard recognition. The CC&V *"Cyanide Containment Policy"* requires all employees with access to the cyanide containment system to know the general cyanide containment features of the facilities so that they will not compromise that containment with their actions. CC&V distributes this policy to all Process department employees and specifically addresses its requirements in new miner and annual refresher training. Additionally, CC&V provides hands-on training to contractors that will be working in an area involving the use of cyanide.

Annual refresher training is provided to all process personnel and Mine Rescue Team personnel. The Safety Coordinator provides cyanide safety training and the Manager, Environmental Resources provides training related to containment and spill response. The CCEMS ambulance paramedics also attend the training sessions and provide first aid training.

CC&V retains all training records through the duration of an individual's employment. Process-specific records for individual workers are accumulated by the responsible supervisor until the supervisor and trainee are satisfied with the trainee's understanding of the training subject. CC&V maintains an electronic record of training for each employee and hardcopy training records are retained in the Safety Systems Administrator's office. Attendance records are also kept of monthly Mine Rescue Team meetings and annual refresher training.

Standard of Practice 8.2

Train appropriate personnel to operate the facility according to systems and procedures that protect human health, the community and the environment.

The operation is in	☒ Full Compliance	
	☐ Substantial Compliance	with Standard of Practice 8.2.
	☐ Non-Compliance	

Discussion of the basis for this Finding and any Identified Deficiencies:

All process workers are subject to a task training program implemented by the qualified supervisor and experienced Process Operators. Contractors working in an area involving the use of cyanide receive hands-on training by the Safety Coordinator. Process Operators, Maintenance personnel, cyanide delivery drivers and temporary employees working in critical process areas, complete on the job task training regarding cyanide SOP requirements. Task training follows the content of the SOPs and qualified supervisors provide this training. A worker cannot be assigned tasks until he/she has completed task training and has been certified in that task by a qualified supervisor. Task-specific refresher training is only provided if an employee leaves the job for an extended period or if the SOPs change.

CC&V does not employ a formal examination or testing procedure (i.e., written exams or quizzes) for evaluating effectiveness of training. Training courses include an oral question and answer period. Employee competence is monitored through task observation during and after training. The task training records include the name of the employee, the topics covered, the date of training completion, and sign-off by the individual attesting to understanding the training subject, and the name and signature of the trainer.

Standard of Practice 8.3

Train appropriate workers and personnel to respond to worker exposures and environmental releases of cyanide.

The operation is in	☒ Full Compliance	
	☐ Substantial Compliance	with Standard of Practice 8.3.
	☐ Non-Compliance	

Discussion of the basis for this Finding and any Identified Deficiencies:

All processes involving the use of cyanide are documented as SOPs, which form the basis of operator training and address plant operations and procedures to be followed in the event of a release of cyanide. Additionally,

Maintenance personnel must be trained in procedures that address a cyanide release. Additionally, CC&V provides training related to containment and spill response during annual refresher training.

During new hire and annual refresher training, CC&V provides trains all workers in emergency response procedures related to a cyanide release. This training includes first aid procedures for treating worker exposure to cyanide. Additionally, CCEMS paramedics provide general first aid refresher training. To supplement this training program and improve response skills, CC&V conducts periodic mock drills involving cyanide release scenarios. Three cyanide-related mock emergency drills were conducted subsequent to the 2010 ICMC recertification audit.

Mine Rescue Team members participate in the mock drills and complete the annual refresher training, which includes emergency response and first aid. The mock drills identify areas where, in addition to other recommendations, the knowledge and skills of the responders would benefit from additional training. Additionally, Mine Rescue Team members are trained in the use of SCBA and participate in monthly emergency response training covering various topics. Mine Rescue Team monthly training records include topic covered, date and sign-off list of attendees. Mock drill and tabletop drill records include a list of personnel and emergency responders that participated in the drill.

CC&V involves local response agencies and medical facilities in the cyanide emergency planning and response process through regular LEPC meetings. The Pikes Peak Regional Hospital attends LEPC monthly meetings. Additionally, CC&V provides a controlled copy of the ERP and supporting response plans to the Emergency Preparedness Director for Teller County, the control point and coordinator for all outside responders. Furthermore, CC&V involves outside responders in the mock drills conducted to test its emergency response procedures.

9.0 DIALOGUE

Engage in public consultation and disclosure.

Standard of Practice 9.1

Provide stakeholders the opportunity to communicate issues of concern.

The operation is in	☒ Full Compliance	
	☐ Substantial Compliance	with Standard of Practice 9.1.
	☐ Non-Compliance	

Discussion of the basis for this Finding and any Identified Deficiencies:

CC&V remains actively engaged in the local and regional community and provides several means for stakeholders to communicate issues of concern regarding cyanide use and management at the mine. These include LEPC meetings, public meetings, mine tours, a Visitors Center, and corporate website.

Standard of Practice 9.2

Initiate dialogue describing cyanide management procedures and responsively address identified concerns.

The operation is in	☒ Full Compliance	
	☐ Substantial Compliance	with Standard of Practice 9.2.
	☐ Non-Compliance	

Discussion of the basis for this Finding and any Identified Deficiencies:

The CC&V website, visitor center and mine tours provide regular and ample opportunities for stakeholders to interact with CC&V personnel and obtain information regarding cyanide management practices and procedures. The CC&V website contains a professionally produced educational video titled, "A Virtual Mine Tour," which provides substantial public information with respect to the project history, design, the overall mine life cycle and the mining process (including use of cyanide). The video is also available for sale in digital videodisk format at the CC&V Visitors Center, located in Cripple Creek, which is open year round with seasonal hours of operation. CC&V hosts free presentations throughout the year at the Visitors Center, which cover a variety of topics regarding the Cresson Project. CC&V has also created a publicly accessible overlook, the American Eagles Overlook, which permits open visual observation of pit development, overburden placement, and leaching operations.

Standard of Practice 9.3

Make appropriate operational and environmental information regarding cyanide available to stakeholders.

The operation is in	☒ Full Compliance ☐ Substantial Compliance ☐ Non-Compliance	with Standard of Practice 9.3.

Discussion of the basis for this Finding and any Identified Deficiencies:

CC&V has developed informative materials that it provides to tour participants and/or the general public. As previously discussed in Section 9.2 above, the CC&V website provides substantial information regarding the overall mine life cycle and the mining process, including the use of cyanide. Additionally, CC&V has prepared a wide variety of explanatory materials designed to explain the mining and recovery process, including a hard copy brochure, which describes the life cycle of a mine and the various operational and process components of the Cresson Project including the use of cyanide, and individual information sheets explaining the operational and process components described in the brochure. CC&V makes these materials available to the public via its office and Visitors Center, and local museums located in Victor and Cripple Creek. Furthermore, the regulatory permit applications for the Cresson Project, which are public record, explain all aspects of the operation in detail.

If an exposure incident resulting in hospitalization or a fatality were to occur, CC&V would report it to MSHA, the DRMS, and other State agencies and local officials, depending on the specific circumstances of the exposure. It is CC&V's position that providing information to the public is the exclusive purview of the responsible regulatory agencies or officials and summaries of such incidents may be posted on responsible agency websites or would otherwise be available to the public from the agency upon request. Disclosures of specific details of reportable events continue to be controlled by the ERP, i.e., more specifically, the CC&V (and as necessary, Regional) Crisis Communication Plan. On a case-by-case basis, CC&V may choose to prepare internal and/or external press releases or bulletins associated with such instances, as one of the potential outcomes of ERP implementation.

An incident occurred in the CC&V metallurgical laboratory in 2013 whereby an employee was exposed to HCN gas due to another employee not following proper procedures. The victim exhibited signs of cyanide poisoning, CC&V personnel administered oxygen immediately, and the worker recovered fully. The worker did not lose consciousness or require hospitalization, and returned to light duty work immediately (during the same shift); therefore, CC&V did not notify MSHA.

Since the 2010 ICMC recertification audit, no releases have occurred off the mine site, and no releases have occurred on or off the mine site, which resulted in significant adverse effects to health or the environment, required reporting under applicable regulations or that caused applicable limits for cyanide to be exceeded. Nonetheless, following all spills or releases, CC&V notifies DRMS as a courtesy. If such a release were to occur, CC&V would report the incident as described above.

Contact information for the agencies and other sources referenced in items above, where the public can access information regarding cyanide releases or exposure incidents that have or may occur at the Cresson Project, is provided below for easy reference:

MSHA
Office of the Administrator
1100 Wilson Boulevard Room 2436
Arlington, Va. 22209-3939
Phone: (202) 693-9600
Website: http://www.msha.gov/

DRMS
1313 Sherman Street, Room 215
Denver, CO 80203
Phone: (303) 866-3567
Website: http://mining.state.co.us

10.0 REFERENCES

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WILDLIFE PROTECTION PLAN

Cripple Creek & Victor Gold Mining Co. Cresson Project

CONTENTS OF THE PLAN

I) INTRODUCTION

All aspects of the Cresson Project shall take into account the safety and protection of wildlife on the mine site, at processing sites, and along all access roads to the mine site with attention given to periods in the life cycle of those species which may require special consideration (e.g., elk calving, migrations routes, and peregrine falcon nesting).

II) PREVENTATIVE MEASURES WITHIN RESPECTIVE AREAS OF ACTIVITY

A) LINED PONDS

- All lined ponds should be fenced to exclude wildlife. Fences should be a minimum of 6 feet high with openings no larger than 3 inches in diameter in the bottom 3 feet. The bottom of the fence should be buried a minimum of 6 inches.

- All gates in fenced areas should meet the same standards as detailed above. For example, when the gates are closed, all gaps, such as those below and between the gates, should be modified to meet the same diameter requirements listed above.

- All gates on fenced areas should remain closed and be posted with signs indicating the same.

- Vector (bird) deterrence methods should be deployed if a lined pond contains process solution. These methods may include, but are not limited to bird balls, netting, and/or sonic devices.

B) ACTIVE LEACHING OR PROCESS FACILITIES – (>20 ppm cyanide concentration)

Exclusionary measures should be taken as needed to deter wildlife from inhabiting the area. Such measures include:

- Any area of standing process solution with a surface area larger than 3' x 3' should be corrected as soon as reasonably possible.

- Use of buried drip-lines for solution distribution on the leaching facility to reduce to likelihood of standing process solution.

- Routine evaluations of the process solution distribution network within the leaching facility to minimize standing solution as result of malfunctioning valves, flanges or connections.

- In areas where standing process solution cannot be avoided, measures such as fencing, bird balls, and/or netting should be deployed.

C) MINE AREA AND OTHER EXCAVATIONS OR DISTURBANCES

- If obvious habits and/or young, such as nests, eggs, calving areas, pups, or dens, are found when entering new areas for development, the findings should be reported to CC&V Environmental Resources to ensure that all appropriate procedures for removal and/or relocation are followed.

- Access to the tops of high-walls should be restricted by some form of fencing or berms.

- Storm-water control sumps, drilling exploration sumps, and any other excavations should be adequately bermed to discourage entry and graded with slopes no steeper that 1:1 to easily facilitate wildlife egress.

D) HAUL ROADS AND ACCESS ROADS

- Care should be taken to avoid contact with any wildlife on or near roads if safely possible.

- Alerts should be made by radio to advise other employees working in the area of wildlife on haul roads or access roads.

E) BUILDINGS AND ADMINISTRATIVE AREAS

- Care should be taken to properly dispose of food waste in order to reduce wildlife access therein.

- Rodent control methods should be employed to minimize hygiene hazards and reduce predator (such as fox) attractions.

F) PROPERTY-WIDE CONSIDERATIONS

- Spills, particularly anti-freeze, should be cleaned up immediately to ensure that wildlife do not come in direct or indirect (mobilized through storm-water runoff) contact with the product. Please refer to CC&V Spill Prevention and Protection Plan for further guidance.

- Bowhunting on CC&V property may only allowed during recognized hunting seasons and with prior permission from CC&V. Hunting with firearms is not allowed on CC&V property.

- Herding or intentionally chasing or harassing wildlife is not allowed.

- Feeding of wildlife is not only against Colorado state law, it is not beneficial to wildlife and is therefore not tolerated at CC&V. Periodic, environmental bulletins will be distributed property-wide to discourage such activity, if needed.

III) MAINTENANCE AND INSPECTIONS OF PREVENTATIVE MEASURES

A) INSPECTIONS

- All areas listed in section I should be evaluated on a weekly basis. Each department on site should conduct evaluations as it applies to their work area. For example:
  (a) Process is responsible for evaluating process areas such as, lined process ponds and the Valley Leach Facility.
  (b) Mine Operations is responsible for evaluating excavated areas and highwalls that pertain to mining operation.
  (c) Departments that have the potential to have spilled product are responsible for evaluating their areas and managing the clean up any spills that occur.
  (d) Exploration is responsible for excavations (sumps) and any other exploration related projects that could potentially adversely affect wildlife.
  (e) Projects is responsible for all sites that are under construction and related activities that are coordinated through the Projects Department.
- Inspections should ensure that preventative measures are in place and meet all criteria detailed under section I). PREVENTATIVE MEASURES, of this plan.
- If repairs are determined necessary, these repairs should be completed within 48 hours of the evaluation.

B) MAINTENANCE

Preventative measures should be maintained to meet criteria detailed under section I., PREVENTATIVE MEASURES, of this plan, until the reclamation bond for a given area has been released or reclaimed to the extent that wildlife sre no longer exposed to potential risks outlined herein.

IV) LEGACY CONSIDERATIONS

A) RECLAMATION

- Habitat management and creation, if part of the Reclamation Plan, should be directed toward encouraging the diversity of both game and non-game species, and shall provide protection, rehabilitation or improvement of wildlife habitat.
- Operators are encouraged to contact Environmental Resources, whom may contact the Colorado Division of Wildlife and/or federal agencies with wildlife responsibilities to see if any unique opportunities are available to enhance habitat and/or benefit wildlife which could be accomplished within the framework of the approved final Reclamation Plan.

- Creativity within reclamation (within suitable reclamation guidelines) is encouraged to randomly incorporate features that promote wildlife habitat diversity and mimic natural, un-disturbed conditions through methods and goals such as:
    (a) Variability in slope direction and severity in order to increase differential snow drifting and subsequent micro-climate diversity.
    (b) Dozer pockets
    (c) Boulder piles
    (d) Motte or clump woody vegetation re-establishment
    (e) Woody vegetation travel, cover, and browse corridors.

B) BIODIVERSITY

Every reasonable effort should be made to increase bio-diversity in the post-mining environment. This includes variability in soil conditions, slope aspect, slope severity,

C) SUSTAINABILITY

Post-mining land use planning should incorporate features that will not require maintenance for biotic and functional sustenance. Examples include:

(a) Vegetation seed mix including native species
(b) Storm-water control features that are permanent in nature.

V) REPORTING WILDLIFE FINDINGS

A) WILDLIFE INJURED OR SICK

When wildlife is found injured or sick on or near CC&V property, the following procedure must be followed immediately.

(a) Ensure that your safety is not compromised at the scene while analyzing the situation.
(b) Contact Environmental Resources (ER)
(c) Document as much of the following information as is pertinent and provide to Environmental Resources.
    (i) Time found
    (ii) Location found or last seen
    (iii) Species involved (elk, deer, fox, etc)
    (iv) Number of animals involved
    (v) Cause of injury or sickness, if known.
    (vi) Symptoms observed
    (vii) Action taken to help the animal, if applicable

(viii) Identify needed measures to prevent reoccurrence of the incident

(d) Assist Environmental Resources, as necessary, to care for the animal appropriately

(e) Incorporate needed measures to prevent reoccurrence of the incident

B) Wildlife Fatalities

When wildlife fatalities occur on or near CC&V property, the following procedure must be followed within a two hour period.

(a) Ensure that your safety is not compromised at the scene while analyzing the situation.

(b) Contact Environmental Resources

(c) Document as much of the following information as is pertinent and provide to Environmental Resources.

(i) Time incident occurred or time wildlife was found

(ii) Location found

(iii) Species (elk, deer, fox, etc)

(iv) Number of animals involved

(v) Cause of death, if known

(vi) Other applicable observations

(vii) Identify needed measures to prevent reoccurrence of the incident

(d) Assist, as necessary, to dispose of the animal appropriately

(e) Incorporate needed measures to prevent reoccurrence of the incident

Revision No	Revision Date	By Whom	Description
01	April 4, 2007	G. Goodrich	Initial release of document
02	October 29, 2008	PMR	Update revision history per CAR-CCV-2008-002
03	July 28, 2010	MAV	Plan Update w/ CN Code Audit improvements
04	November 22, 2011	MAV	Update State Agency Contact Info.
05	August 12, 2013	TCC	Review and Update

Appendix A

Procedures for Handling and Reporting Wildlife Incidents to the Colorado Division of Wildlife

When wildlife is found or reported dead or injured on CC&V property, the following procedures should be followed by Environmental Resources Team Members within a 24 hour period:

1. Notify the Environmental Resources Manager
2. If the wildlife is injured, contact DOW immediately so they can advise on and assist with the situation
3. If the wildlife is found dead, the incident must be reported to CDOW within 24 hours of the finding.
4. Make a note of all aspects of the finding in preparation for reporting to CDOW. Include the following:
    a. Location
    b. Time found and/or time reported to ER
    c. Species, approximate age (if obvious) and sex
    d. Number of wildlife involved
    e. Cause of death or injury
    f. Action taken to avoid recurrence
    g. Any other details pertinent to the incident
5. If applicable, take a water and/or soil sample at the scene
6. Dispose of the carcass through proper burial. Note and mark burial location so one could return to the location if needed (for autopsy, etc.) Smaller animals or birds may be preserved for a period of time by placing in a freezer.
7. Photo-document all aspects of the finding including:
    a. Site and animal as found
    b. Animal close up for identification purposes
    c. Injuries to the animal
    d. Burial site and procedures
8. Report the incident and findings to CDOW, via telephone, within 24 hours of the finding. The current officer for the CC&V area is Tonya Sharpe – Office (719) 227-5281, Cell (719) 439-9635
9. Document conversations with CDOW using the phone memo format.
10. Complete a written report on the incident. The report should include
    a. All items listed in #4
    b. Location of burial site
    c. Telephone memo documenting conversation with CDOW
    d. Pictures taken
11. Route a completed copy of the report to Environmental Resources Files