Newmont
CRIPPLE CREEK & VICTOR

Permit M-1980-244

Cresson Project Amendment 14

Appendix 11

Spill Prevention, Control, and Countermeasures Plan (SPCC)

Spill Prevention, Control, and Countermeasures Plan

Cripple Creek & Victor Gold Mining Co. Cresson Project

March 2024

Cripple Creek & Victor Gold Mining Company
SPILL PREVENTION, CONTROL, AND COUNTERMEASURE PLAN
For the Cresson Project

DocuSigned by:
Lori Douglas
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Approved and Issued by________________________Date 07-Mar-24
Lori Douglas, General Manager

- The Emergency Response Procedures (ERP) and associated Plans are controlled documents to avoid conflicting or duplicated information, updates, edits, or additions to the ERP or this SPCC Plan shall be coordinated through the Health & Safety or Sustainability & External Relations Manager.

- Employee and Third Party Contact information is found in the ERP under CONTACTS tab. Contacts must be made in accordance with the ERP guidelines and ONLY designated staff.

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Acronyms

ADR1	Arequa Gulch Adsorption Desorption Recovery Plant
ADR2	Maize Gulch Adsorption Desorption Recovery
ASTs	Aboveground storage tanks
BMPs	Best Management Practices
BS	Spent Solution
CC&V	Cripple Creek & Victor Gold Mining Company
CDPHE	Colorado Department of Public Health and Environment
CFR	Code of Federal Regulations
CWA	Clean Water Act
DRMS	Division of Reclamation, Mining, and Safety
EB	Enhanced spent
ERP	Emergency Response Procedures
EPA	U.S. Environmental Protection Agency
ERC	Environmental Response Coordinator
Ft	feet
HCl	Hydrochloric Acid
HGM	High Grade Mill
HSSE	Health, Safety and Security Department
MFF	Midway Fuel Farm
NaOH	Sodium Hydroxide
TS	Truck Shop
P.E.	Professional Engineer
PPE	Personnel Protective Equipment
PS	Rich Solution
PSES	Process Solution Enhancement System
PSSA	Rich Solution Storage Area
RQ	Reportable Quantities
S&ER	Sustainability and External Relations Department
SDS	Safety data sheet
SOP	Standard Operating Procedure
SPCC	Spill Prevention, Control, and Countermeasure
SRP	Spill Response Plan
SS	Spent Solution
VLF	Valley Leach Facilities
VLF1	Arequa Gulch Valley Leach Facility
VLF2	Maize Gulch Valley Leach Facility

GENERAL INFORMATION

Purpose

The purpose of this Spill Prevention, Control and Countermeasures (SPCC) Plan is to describe the measures implemented by Cripple Creek & Victor Gold Mining Company (CC&V) to mitigate the potential for oil discharges from occurring at the Cresson Project Operations (Permit No. M-1980-244) located in the Cripple Creek Mining District of Colorado. The SPCC Plan will be used to prepare CC&V personnel to respond in an appropriate, safe, effective, and timely manner to mitigate the impacts of a discharge if it occurs. Additionally, this SPCC Plan presents guidance on the implementation of containment systems and procedures to protect water quality from potential soil and water contaminants. This SPCC Plan presents an assessment of the potential for contaminant releases, describes the controls to prevent contaminant releases, and provides procedures and guidance for responding to contaminant releases. Federal and State Reportable Quantities (RQs) are used to determine agency reporting and remediation requirements as appropriate.

CC&V's policy is to prevent hazardous substance releases 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.

Applicability

The procedures and policies described herein apply to the activities of all "Authorized Persons", which include "CC&V personnel" and other Authorized Persons on site under CC&V supervision or contract. Distribution of this SPCC Plan is to be restricted to Authorized Persons, including CC&V personnel, contractors, and applicable government agencies/organizations. "CC&V personnel" include CC&V and Newmont Mining (i.e., the parent company to CC&V) employees. Other Authorized Persons such as contractors, subcontractors, consultants or subconsultants (i.e., any personnel under contract with CC&V and not directly part of CC&V) are required, as appropriate, to develop and provide their own enforceable requirements and procedures for spill prevention, control and countermeasures, such that their requirements are in place prior to work at the site and that those requirements are coordinated and consider this SPCC and CC&V's Spill Response Plan (SRP). Distribution of this SPCC is to be restricted to CC&V personnel, Authorized Persons, and applicable government agencies/organizations.

This SPCC Plan is to be used by CC&V personnel to assist in responding to, containing, remediating and recording, and reporting responses to releases. Names and telephone numbers of CC&V personnel and other persons to be notified are listed on the front cover and in the ERP under the CONTACTS tab. Transporter contacts are listed in the ERP under the CONTACTS tab. The external reporting contacts and agencies to which certain releases are to be reported by representatives of S&ER are also listed in the ERP under the CONTACTS tab.

This SPCC Plan is applicable, but not limited to, the following areas of the Cresson Project:

- Ironclad Facility, Warehouse, and Truck Shop (TS)
- Midway Fuel Farm (MFF);
- Crusher Facilities;
- Arequa Gulch Adsorption Desorption Recovery (ADR1) Plant:
- Process Solution Enhancement System (PSES) Facility;
- High Grade Mill (HGM) Facility; and
- Maize Gulch Adsorption Desorption Recovery (ADR2) Facility.
- Mobile Service Equipment

This SPCC Plan applies to oil and oil related products (e.g., petroleum, hydrocarbon products, etc.) used at the Cresson Projects, which could reasonably be expected to discharge in quantities that may be harmful into or upon the navigable waters of the United States[1].

Materials not covered by this SPCC Plan, including hazardous materials and chemicals used at the Cresson Project, are addressed in CC&V's Spill Response Plan (SRP), which was prepared in conjunction with this document.

SPCC Requirements and Conformance

This SPCC Plan, in conjunction with CC&V's SRP, has been prepared to meet the requirements of 40 Code of Federal Regulations (CFR) Part 112 (40 CFR Part 112) for CC&V's SPCC Plan and the requirements of the Colorado Division of Reclamation, Mining, and Safety (DRMS), and supersedes any earlier Plan developed to meet provisions in effect since 1974.

CC&V Management has determined that this facility does not pose a risk for substantial harm under 40 CFR Part 112, as recorded in the "Substantial Harm Determination included in Section 2.3".

References to those Federal and State rules and regulations for the development of plans related to spill prevention, control, and response are on file with Newmont's Sustainability and External Relations Department (S&ER).

Conformance with Applicable Regulations

In accordance with Title 40 CFR §112.7(a)(1) and §112.7(j), this SPCC Plan provides a complete discussion of the minimum prevention standards and the additional prevention standards described in other applicable rules and regulations. The subsequent sections of this SPCC Plan describe the means and methods employed to conform to the applicable requirements.

In accordance with Title 40 CFR §112.7, this sub-section describes the anticipated additional facilities or procedures, methods, or equipment which are not yet fully operation or employed, but are to be incorporated under this SPCC Plan.

Scheduled Tasks:

Other than regular inspections, no SPCC-related tasks are scheduled for this facility.

Scheduled Physical Upgrades:

No SPCC-related physical upgrades are scheduled for this facility.

Deviations

This SPCC Plan conforms with the requirements of 40 CFR Part 112, with the following exceptions where additional mitigation measures are in place:

At the MFF, the underground lined area is not suitable to serve as secondary containment during the portion of the year when this ground is frozen and/or snow and ice-covered. This renders the subsurface soil impermeable and unable to function as secondary containment. Should a significant or catastrophic release occur from one of the single-walled fuel storage tanks the release would flow overland to the north and follow the road towards the Ironclad Facility and TS. The physical controls (i.e., containment berms) will be maintained to promote drainage towards the Ironclad Facility and TS, should this scenario occur.

External Reporting – Reportable Quantities

Releases that occur outside of a facility or building footprint and outside an engineered containment area and which meet or exceed the numeric thresholds are known as "RQs". RQs are listed in Table 1. RQs require reporting to appropriate county, State and/or Federal agencies. Spills or releases of these substances should be immediately reported to S&ER and CC&V Team supervisors. Use Enablon provided on the CC&V intraweb system to document the spill or release. Provide the Enablon Report to S&ER as soon as possible within the same shift of the occurrence so that external reporting can be accomplished within the required 24 hours.

Table 1 Reportable Quantities if Released to Land (1) Bulk Chemicals

Product Used at CC&V	Listed Chemical	RQ of listed Chemical (pounds)	Density of product (pounds/gallon)	Concentration of Listed Chemical (%)	RQ of Product (gallons)
Diesel or Gasoline	Diesel or Gasoline				1,000 (2)
Hydrocarbons (3)					250
Process Fluids(3)					500

(1) Discharge of oil in such quantities that result in exceedance of applicable receiving water quality standards or cause a film or sheen upon the surface of the receiving water must be reported to the National Response Center.
(2) Into or upon the navigable waters of the U. S. or shorelines in a single event
(3) CC&V internal reporting requirements

Releases to land that exceed the RQ threshold criterion in any 24-hour period must be reported to external agencies in accordance with this SPCC Plan (see Section 6.0 for more details). A S&ER representative will complete external notification, if and when necessary. Table 1 lists RQs of chemicals that require external spill reporting. SDS's for specific products are contained in Appendix B.

Engineering and Structural Controls to Guard against Spills

The Cresson Project has been constructed with spill containment around fuel storage areas, chemical storage areas, maintenance areas, and the areas in which cyanide solutions are present. Secondary containment structures have been designed to prevent spilled materials from entering stream channels, migrating to areas subject to stormwater runoff and off-site migration. Such control features will be maintained and will function at their design capacity. Earthen containment berms will be inspected monthly for proper function, cleaned out when foreign objects or trapped water threatens to diminish the containment capacity, and repaired whenever cracks in the berm or tears in the liner compromise containment. Concrete containment structures will also be inspected, cleaned out, and repaired as required.

The mining areas, vehicle maintenance facilities, and leaching/processing facilities all have built-in protections against spills and leaks. Specific design criteria, which emphasize attention to spill and leak prevention, containment, chemical storage, and environmental monitoring, have been incorporated into the overall plan. Examples of specific facility designs that help control spills include:

1. high level alarms and continuous recording of tank volumes in the Ironclad and Truck Shop bulk oil storage facilities;
2. designed and constructed floor sumps in the Ironclad light vehicle shop and truck shop;
3. engineered oil skimmers and a water filtration system in the large truck wash bay; and
4. aerosol can depressurizing units mounted on used paint storage drums within over-pack drums at various locations throughout the site.

Certain facilities at the Cresson Project have been located to provide for optimum environmental control. Such facilities are located outside of drainages and flood plains or have had surface water diversions installed to minimize surface water run-on and run-off.

Transfers of materials subject to control under this SPCC Plan (e.g., oils, fuels, etc.) will be conducted in accordance with CC&V procedures described later in this plan. CC&V personnel assigned to operations involving transfer of chemicals or fuels and lubricants are responsible for implementing these procedures.

Management Controls to Guard against Spills

The Cresson Project employs certain Best Management Practices (BMPs) to help prevent spills from occurring. BMPs employed at the Cresson Project include the following:

- Good Housekeeping - This refers to the conscientious effort of employees to maintain work areas so that spilled materials are not allowed to be released into the environment. Clean, uncluttered work areas promote safety and help prevent spills.
- Preventive Maintenance - CC&V personnel utilize the inspection and monitoring function as a means to identify where and when physical and operational controls need to be updated. CC&V management is committed to updating and improving controls through periodic inspections (see below) and follow-up.
- Material Handling Practices – Material handling procedures and practices are critical to mitigating releases at the Cresson Project. Hazardous materials are stored inside curbed containments in the ADR plant, bulk oil is stored within concrete-walled or lined earthen berm containments, and employees are instructed in the environmentally safe handling of these products. Additional material handling practices utilized by CC&V personnel to reduce the likelihood of material spills are described elsewhere in the SRP and in this SPCC Plan.
- Visual Inspections - Visual inspections are conducted periodically and records are maintained onsite.

PLAN ADMINISTRATION

Management Approval

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 SPCC Plan per §112.7 (d)(2) of 40 CFR Part 112.

Signed by_____________________________Date ______________

Lori Douglas, General Manager

Professional Engineer Certification

2.2 Professional Engineer Certification

I, Jonathan H. Gillen, Professional Engineer (PE), hereby attest that I am familiar with the Cripple Creek & Victor Gold Mine 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 (67FR 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 Plan was written to comply with the spirit of applicable requirements (as amended) by the November 10, 2010 deadline.

I attest that I, or my agent, visited the site on **November 19th and 20th 2019** for the purposes of gathering information in order to prepare this *UPDATED* CC&V 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 and testing the tanks and containers have been established and are herein incorporated. Based on my professional engineering judgment and the information provided to me by the owner, this SPCC Plan is adequate for the CC&V 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 SPCC 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 SPCC Plan.

Jonathan H. Gillen

Jonathan H. Gillen, PE (Colorado Registration Number 0055777)

Date: 20 December 2019

Seal: COLORADO LICENSED PROFESSIONAL ENGINEER JONATHAN HENRY GILLEN 55777 Jonathan H. Gillen

2.3 Certification of the No Substantial Harm Criteria

Pursuant to the requirements of 40 CFR Part 112, Appendix C, this facility certifies the following:

- This facility ***does*** have oil storage in excess of 42,000 gallons.
- This facility ***does not*** transfer oil over water to or from vessels.
- This facility ***does not*** have oil storage capacity >1,000,000 gallons.

Therefore, this facility does not meet the substantial harm criteria listed in 40 CFR 112 Appendix C, Attachment C-1.

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this SPCC Plan related to substantial harm and based on my inquiry of those individuals responsible for developing the information. I believe the information is true, accurate, and complete.

Signed by_Date ______________________ Lori Douglas, General Manager

Plan Locations

A complete copy of this SPCC Plan will be maintained at the following locations:

Offices:

- Administration Bldg. – General Manager's Assistant's Office
- Ironclad Security Access
- Mine Rescue Team Van
- Cripple Creek Fire Department
- Teller County Local Emergency Planning Committee
- PSES Facility
- ADR1 Facility
- ADR2 Facility
- HGM Facility
- Crusher Facility – Millwright's Office
- Ironclad Facility and TS

A signed, current copy of this SPCC Plan, including all attachments will be retained onsite as long as industrial activities occur at the CC&V Facility. The SPCC Plan must be made available to the U.S. Environmental Protection Agency (EPA), the Colorado Division of Reclamation and Mine Safety (DRMS), and the Colorado Department of Public Health and Environment (CDPHE) for onsite review during normal working hours. The SPCC Plan and the associated documentation (e.g., reports, records, inspection results, integrity testing, audits, etc.) will be updated periodically to incorporate new information and regulatory-required updates to the plan and the attachments. SPCC Plan documents and records will be maintained for a period of at least three years.

Plan Amendments and Reviews

In accordance with 40 CFR Part 112.5 (b) a complete review and evaluation of this SPCC Plan must be completed at least once every five years. This SPCC Plan will be reviewed, and amended as necessary, whenever:

- There is a change in design, construction, operation, or maintenance at the site, which materially effects the potential for discharge from the facility;
- During inspections or investigations by site personnel or regulatory entities it is determined that the SPCC is ineffective; or if the general objectives of the plan are not being met;
- Upon receipt of notification from the EPA Regional Director that the SPCC does not meet one or more of the minimum requirements of the permit, the required changes will be made, and certification provided to the director;
- Commissioning or decommissioning of tanks;
- Replacement, reconstruction, or movement of tanks;
- Reconstruction, replacement, or installation of piping systems;
- Construction, or demolition that might structurally alter secondary containment structures;
- Changes of product or service; and
- Revision of standard operation or maintenance procedures at a facility that would have a material effect on containment.

Any necessary amendments, based on the review and evaluation, must be prepared within six months of the evaluation and implemented as soon as possible, but no later than six months following the preparation of the amendment. Scheduled reviews and Plan amendments are recorded in the Plan Review Log (Section 6). A signed statement must be prepared by the person conducting the evaluation, stating that a review and evaluation of this SPCC Plan was completed, and that the plan will or will not be amended as a result. This statement will be kept with the Plan as an attachment. A certified professional engineer must review and certify any technical amendments.

Cross-Reference with SPCC Provisions

This SPCC Plan does not follow the exact order presented in 40 CFR Part 112. Section headings identify, where appropriate, the relevant section(s) of the SPCC Rule. Table 2 presents a cross-reference of Plan sections relative to applicable parts of 40 CFR Part 112.

Table 2: SPCC Cross-Reference

40 CFR (1)	Requirement*	Location in Plan
112.3(d)	Have the SPCC plan certified by a registered professional engineer.	Section 2.2
112.3(e)(1)	Maintain a copy of the plan at your Facility.	Section 2.4
112.3(e)(2)	Have a copy of the plan on-Site for review by the Agency.	Section 2.4
112.4(a)	Whenever your Facility discharges >1,000 gallons of oil in a single discharge or has two discharges of >42 gallons within 12 months, submit the information described in 112.4(a)(1)-(9) to the regional administrator within 60 days.	Section 3.4.3
112.4(c)	Send to the State a copy of the information submitted to the regional administrator.	Section 1.1
112.4(d)	Amend the plan if required to do so by the regional administrator.	Section 2.5
f112.5(a)	Amend the plan when there is any change that materially affects the potential for a discharge. · Implement any amendment within 6 months.	Section 2.5
112.5(c)	Have technical amendments certified by a registered professional engineer in accordance with 40 CFR 112.3(d) except as provided in 40 CFR 112.6.	Section 2.5
112.7	Management must give full approval to the plan and the authority to commit resources.	Section 2.1
112.7	The plan must either follow the sequence of §112.7; or must be an equivalent plan, which includes all applicable SPCC requirements, with a cross-reference to the 40 CFR 112 requirements.	Table 2
112.7(a)(1)	Include a discussion of Facility's conformance with the requirements listed in Part 112.	Section 1.1
112.7(a)(2)	Where the plan does not conform to the applicable requirements [see regulations], then: · state the reasons for nonconformance, · describe in detail alternate methods and how equivalent environmental protection will be achieved.	Section 1.2
112.7(a)(3)	Describe the physical layout of the Facility, and include a diagram which shows the location and contents of each container. · Include completely buried tanks that are exempted from 40 CFR 112 requirements. · Include all transfer stations and connecting pipes.	Section 5 Tables 3-10 Figures 3-9
112.7(a)(3)	Address:	
	(i) the type of oil in each container and its storage capacity;	Tables 3-10
	(ii) discharge prevention measures, including procedures for routine handling of products;	Section 4 and 5
	(iii) discharge or drainage controls around containers and other structures, equipment, and other procedures for controlling a discharge;	Section 4 and 5

40 CFR (1)	Requirement*	Location in Plan
	(iv) countermeasures for discharge discovery, response, and cleanup by the Facility and that might be required of a contractor;	Section 4 and 5
	(v) methods of disposal recovered materials in accordance with applicable legal requirements; and	Section 6.5.3
	(vi) contact list and phone numbers for the Facility response coordinator, National Response Center, clean-up contractors, and all appropriate Federal, State, and local agencies.	ERP under the CONTACTS tab
112.7(a)(4)	Provide information and procedures in your plan to enable a person reporting a discharge to provide the information described in 112.7(a)(4).	Section 6.6
112.7(a)(5)	Unless you have submitted a response plan under 40 CFR 112.20, describe emergency response procedures in a user- friendly format, and include appropriate supporting materials as appendices.	Section 6.2 Table 11
112.7(b)	Discuss the potential for equipment failure. Where experience indicates no reasonable potential for equipment failure, include a statement to this effect.	Section 5.2.2 Section 5.3.2 Section 5.4.2 Section 5.5.2 Section 5.6.2 Section 5.7.2 Section 5.8.2 Section 5.9.2 Section 5.10.3
112.7(b)	Where experience indicates a reasonable potential for equipment failure, include the following for each major type of failure: · a prediction of the discharge's direction; · rate of flow; and · total quantity of oil that could be discharged.	Section 5.2.2 Section 5.3.2 Section 5.4.2 Section 5.5.2 Section 5.6.2 Section 5.7.2 Section 5.8.2 Section 5.9.2 Section 5.10.3
112.7(c)	Provide one of the following to prevent discharged oil from reaching navigable waters:	
112.7(c)(1)	(i) dikes, berms, or retaining walls (sufficiently impervious); (ii) curbing or drip pans; (iii) culverts, gutters, or other drainage systems; (iv) weirs, booms, or other barriers; (v) spill diversion ponds; (vi) retention ponds; and/or (vii) sorbent materials.	Tables 3-10
112.7(d)	If the installation of structures or equipment listed in the sections identified in this section is not practicable as determined by the Facility: · clearly explain why the measures are not practicable, and · conduct periodic integrity testing for bulk storage containers and leak testing of valves and piping.	Section 1.2

40 CFR (1)	Requirement*	Location in Plan
112.7(d)(1) 112.7(d)(2)	Unless you have submitted a Facility response plan under 40 CFR 112.20, provide: · an oil spill contingency plan following 40 CFR 109; and · a written commitment of manpower, equipment, and materials.	Section 2.1
112.7(e)	Conduct inspections in accordance with inspection procedures included in the plan; · have the inspections signed by the appropriate inspector/supervisor; · keep a record of the inspections in the plan for 3 years.	Section 3.5 Appendix E
112.7(f)(1)	Train the oil handling personnel in the operation and maintenance of equipment to prevent discharges, discharge procedure protocols, pollution control laws, regulations, and the contents of the plan.	Section 3.8
112.7(f)(2)	Designate a person accountable for discharge prevention who reports to Facility management.	Section 2.1 Section 3.7
112.7(f)(3)	Conduct discharge prevention briefings for oil-handling personnel at least once a year. Discuss known discharges, failures, malfunctions, and recently developed precautionary measures.	Section 3.7
112.7(g)	Fully fence facilities handling, processing, and/or storing oil; and lock and/or guard entrance gates when the Facility is unattended or not in production.	Section 3.3
	Provide adequate security to ensure that master flow and drain valves remain locked when the Facility is unattended or not in production.	Section 3.3
	Lock oil pump starter controls in the "off" position, and locate the controls at locations accessible only to authorized personnel.	Section 3.3
	Securely cap or blank flange the loading/unloading connections of oil pipelines or Facility piping if the piping is not in service or on stand-by status for an extended time.	Section 3.3
	Provide sufficient lighting to allow the discovery of discharges and to prevent discharges occurring through acts of vandalism.	Section 3.3
112.7(h)(1)	Where drainage from the unloading area does not flow into a catchment basin or a treatment Facility, use a quick drainage system or a containment system which holds the largest compartment of any tank car or truck.	Section 1.4 Section 3.1 Section 4.9.1
112.7(h)(2)	Provide an interlocked warning light or brake interlock system, physical barrier system, wheel chocks, or warning signs to prevent the departure of vehicles before all oil transfer lines are disconnected.	Section 3.6
112.7(h)(3)	Prior to filling and departure, inspect the lowermost drain and all outlets for leakage on the tank car/tank truck, and adjust to prevent discharge while in transit.	Section 3.6 Appendix H
112.7(i)	If a field-constructed aboveground container undergoes repair, alteration, reconstruction, or change in service that may affect the risk of a discharge or failure, due to brittle fracture or other catastrophe, or has discharged oil or failed due to brittle fracture failure or other catastrophe, evaluate the container for risk of discharge or failure due to brittle fracture or catastrophe and as necessary take appropriate action.	Section 4.1
112.7(j)	Provide a complete discussion of the conformance of the plan to all other applicable discharge prevention and containment requirements, or any applicable more stringent State rules, regulations, and guidelines.	Section 1.3 and this table

40 CFR (1)	Requirement*	Location in Plan
112.7(k)	In lieu of general secondary containment required in paragraph (c) of this section, implement for qualified oil-filled operational equipment the alternate requirements as described in paragraph (k)(2) of this sub-section, as follows:	Section 4.9 Section 4.10
	(2)(i) Establish and document the facility procedures for inspections or a monitoring program to detect equipment failure and/or a discharge for qualified oil-filled operational equipment without secondary containment.	Section 4.10 Appendix A
	(2)(ii) For qualified oil-filled equipment without secondary containment, provide the following: (A) An oil spill contingency plan following the provisions of Part 109 of this chapter; (B) A written commitment of manpower, equipment, and materials required to expeditiously control and remove any quantity of oil discharged that may be harmful.	Section 4.10 Section 6.0
112.8(b)(1)	Restrain drainage from diked storage areas by valves or other positive means to prevent an oil discharge or excessive leakage into the Facility drainage or effluent treatment system.	Section 4.1
112.8(b)(2)	Use valves of the manual, open-and-closed design for the drainage of diked area (you may not use flapper-type valves).	Section 4.1
112.8(b)(3)	For areas without dikes or berms with a potential for discharge, design the drainage systems to flow into a pond, lagoon, etc., designed to retain the oil or return it to the Facility; and locate catchment basins outside of areas subject to periodic flooding.	Section 4.1
112.8(b)(4)	For a Facility not engineered as in (b)(3) above, equip the final discharge of all ditches inside the Facility with a diversion system that would, in the event of an uncontrolled discharge, retain the oil in the Facility.	Section 4.1
112.8(b)(5)	Where drainage waters are treated in more than one treatment unit and such treatment is continuous, and pump transfer is needed, provide two "lift" pumps, with at least one permanently installed. Design the Facility drainage systems to prevent a discharge in case there is an equipment failure or human error at the Facility.	Section 4. 9
112.8(c)(1)	Only use a container where the material and method of construction are compatible with the stored material and the conditions of storage, such as temperature and pressure.	4. 1
112.8(c)(2)	Provide all container installations with secondary containment for the entire installation, the containment to have a capacity of the largest single container, and sufficient freeboard to contain precipitation; and ensure that diked areas (walls and floors) are sufficiently impervious to contain discharged oil.	4. 2
112.8(c)(3)	Prevent the discharge of uncontaminated precipitation from diked container areas directly to the storm sewer, etc., (i.e., bypassing any treatment system) unless:	
	(i) the bypass valve to the treatment system is sealed closed;	Section 4. 3
	(ii) the rainwater drainage is inspected to avoid a discharge of oil;	Section 4. 3
	(iii) the bypass valve to the treatment system is opened and resealed under responsible supervision; and	Section 4. 3
	(iv) records are maintained of such events.	Appendix F
112.8(c)(4)	Protect any completely buried metallic storage tanks installed after January 10, 1974, by coating or cathodic protection; and regularly leak test those tanks.	Section 4. 5

40 CFR (1)	Requirement*	Location in Plan
112.8(c)(5)	Protect the buried portion of any partially buried metallic storage tanks by coating or cathodic protection, or do not use the tanks.	Section 4. 5
112.8(c)(6)	Test aboveground containers at some suitable frequency for integrity using visual inspections and another system of non- destructive testing. Also: · inspect the supports and foundations of the containers; · keep records of the comparisons of the tests/inspections; and · frequently inspect the outside of all containers visually for deterioration, discharges, or accumulation of oil inside their dikes.	Section 4. 6
112.8(c)(7)	Control leakage of internal heating coils by monitoring the steam return or exhaust lines for oil, or pass the lines through a separation or retention system.	Section 4. 7
112.8(c)(8)	Engineer or update each container installation in accordance with good engineering practice to avoid discharges, providing at least one of the following: (i) high liquid level alarms with an audible or visual signal; (ii) automatic high liquid level pump cut-off devices; (iii) a direct signal between the container gauge and pumping station; or (iv) a fast response system to detect oil level of each storage container with a person present to monitor gauges. Also: (v) regularly test liquid level sensing devices.	Section 4.1
112.8(c)(9)	Observe the effluent treatment plant frequently enough to detect upsets that could cause a release.	Section 4. 9
112.8(c)(10)	Promptly correct for visible discharges from container seams, gaskets, piping, pumps, valves, rivets, and bolts, and promptly remove accumulated oil from diked areas.	Section 4. 10
112.8(c)(11)	Either locate mobile or portable containers to prevent a release, or provide a secondary means of containment with a capacity equal to that of the largest container plus precipitation.	Section 4.11
112.8(d)(1)	Provide buried pipelines installed or replaced on or after August 16, 2002, with a protective wrapping and coating. Also: · provide cathodic protection or corrosion protection in accordance with 40 CFR 280 or 281, for the piping; and · carefully inspect any exposed piping for deterioration and, if you find deterioration, take corrective action.	Section 4. 4
112.8(d)(2)	When a pipeline is not in service or is in stand-by for an extended time, cap or blank flange the terminal connection at the transfer point and mark it as to origin.	Section 4. 12
112.8(d)(3)	Properly design pipe supports to minimize abrasion and corrosion and to allow for expansion and contraction.	Section 4. 12
112.8(d)(4)	Regularly inspect all aboveground valves, piping, and appurtenances. · Conduct integrity and leak testing of buried piping at the time of installation, modification, relocation, or replacement.	Section 3.5 Section 4. 12
112.8(d)(5)	Warn all vehicles entering the Facility to avoid damaging aboveground piping or other oil transfer operations.	Section 4.12
112.20(e)	Include a signed copy of the certification form "Certification of Applicability of the Substantial Harm Criteria" located in Attachment C-II to Appendix C to Part 112	Section 2.3

40 CFR (1)	Requirement*	Location in Plan

Notes:
(1) = As required under 40 CFR Part 112, Subpart A and Section 112.8
* = Only selected excerpts of relevant rule text are provided. For a complete list of SPCC requirements, refer to the full text of 40 CFR Part 112.

GENERAL FACILITY INFORMATION

Description of Mine Facilities

The mine facilities at the Cresson Project are shown on Figure 2. CC&V's gold mining activities use conventional surface mining and ore crushing methods. Mineral recovery is accomplished by leaching with dilute cyanide solutions, followed by solution enhancement, carbon adsorption, then desorption, and electrowinning. Valley Leach Facilities (VLFs) and internal ponds containing cyanide solutions are double and triple lined with the incorporation of leak detection systems. The operating leach facilities, VLF1 and VLF2, are 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. Mineral Beneficiation Facilities (also known as Adsorption, Desorption, Recovery facilities or "ADRs") are constructed and operated to provide containment and collection of any spills within the ADR1 and ADR2 buildings. The VLFs and ADRs are "non-discharging" (zero-discharge) facilities and serve as secondary or tertiary spill containment for spills occurring within these areas.

Major equipment maintenance is performed at the Ironclad Warehouse (IW) and the Truck Shop (TS). Minor equipment maintenance operations and vehicle re-fueling occurs in selected field locations within the mining operation. Maintenance of mechanical equipment associated with the crushers takes place at the primary and secondary crushers.

Location of CC&V Operations

CC&V's Cresson Project Operations are located within the Cripple Creek Mining District, generally between the Cities of Victor and Cripple Creek. The permitted mining operations occur within one to two miles of either city. For reporting purposes the CC&V site location, expressed as latitude and longitude at the Carlton Security Access is: Latitude is 38º 43' 37" North and Longitude 105º 09' 27" West.

The Project area, in southern Teller County, is accessible by Colorado State Highway 67 between Victor and Cripple Creek, Teller County Road (CR) 81 from State Highway 67 in Gillete Flats through Victor, from Teller CR 82/83 (Cameron Road) and from State Highway 67 (north of Cripple Creek). Figure 1 shows the general location of the site.

Site Security at CC&V Operations

CC&V's properties are subject to the following general security measures:

- a substantial portion of the property is fenced with barbed wire with chain link or wire mesh and barbed wire;
- entrances to mine property are gated and locked;
- the permit boundaries are staked and warning signs are posted;
- most onsite facilities are staffed on all operating shifts, so that there is a company supervisor onsite 24 hours a day, 7 days a week (24/7);
- security guards are on duty 24/7 at the Ironclad Security Access entrance from County Road 82;

- key portions of the site are lighted during the night-time hours. Individual facility security measures (barricades, bollards, poles, locked buildings, etc.) are discussed in other sections of this plan, as appropriate.

If necessary, additional facility security is detailed under Section 4.0.

Evaluation of Spill Potential

Evaluation of spill potential of materials stored at each facility is described in further detail under Section 4.0.

Drainage Description

The CC&V mine site is located on the topographic divide between Fourmile Creek and Beaver Creek drainages that are in the upper Arkansas River basin. Stormwater runoff, generated by intense rain and sleet events of short duration, and by rapid snowmelt, is diverted away from areas of disturbance, including storage areas for petroleum products and hazardous substances. Runoff from inside the disturbed area is directed through sediment control structures, which provide additional spill control in the event that a potential contaminant should move outside the immediate release area. Surface waters are monitored within the watershed and also downstream of the Cripple Creek Mining District.

Diversion of stormwater runoff and control of runoff from disturbed areas are conducted:

- in accordance with the General Stormwater Permit (Permit No. COR-040049) issued to CC&V for its activities in the Cripple Creek Mining District;
- in accordance with applicable provisions of the mining reclamation permits issued by the Colorado Department of Natural Resources' Division of Reclamation, Mining and Safety (DRMS); and
- in accordance with Conditional Use permits issued by Teller County.

Groundwater in the vicinity of the Cresson Project is generally deep at a depth of approximately 3,000 feet. Shallower perched water tables exist but are small and discontinuous. Ground water is monitored at certain perimeter down gradient locations at the Cresson Project.

Spill Potential of Materials stored at each facility is described in further detail under Section 4.0.

Spill Path Monitoring

If a spill or leak has the potential to migrate from the point of occurrence, spill monitoring will be implemented if necessary 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, ammonium nitrate fuel oil (ANFO), or other chemicals to migrate from the point of occurrence is dependent on the amount of the spill, the ground conditions at the time of the release, the topography, and the nature of the spill control measures in place. These materials will be quickly absorbed into soil or adsorbent 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. Surface water monitoring will be implemented downstream, if necessary.

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.

Discharge History

There have been no reportable releases to waters of the State or U.S. during the past three years.

This section will be updated if any discharges occur; See Section 5.6 for details on discharge notification.

Inspections, Tests, and Records

As required by the SPCC Rule, CC&V personnel or other designated personnel will perform the inspections, tests, and evaluations described in this section.

Routine Inspections

Routine inspections of the oil storage areas are conducted in each work area by operations personnel in conjunction with their duties. This type of inspection involves:

- looking for container tank, and/or piping damage or leakage, stained or discolored soils, or excessive accumulation of water in containment areas; and
- observing the condition and integrity of all oil handling equipment.

Documentation is maintained for these inspections in hardcopy workplace inspections, which vary for each specific work area and task. However, any issues identified must be reported to the Area Environmental Coordinator, who is responsible for coordinating appropriate responses (e.g. arranging for removal of used oil from the facility; repairing leaking equipment, tankage, or fixtures, updating the SPCC Plan or contacting his/her manager if additional resources are needed).

Monthly Inspection

The CC&V designated personnel use the forms provided in Appendix A for monthly inspections. The monthly inspections cover the following key elements:

- Observing the exterior of aboveground storage tanks, pipes, and other equipment for signs of deterioration, leaks, corrosion, and thinning.
- Observing tank foundations and supports for signs of instability or excessive settlement.
- Verifying the proper functioning of gauges and visual leak indicators.
- Checking the inventory of discharge response equipment and restocking as needed.

All problems regarding tanks, piping, containment, or response equipment must immediately be reported to the Area Environmental Coordinator. Visible oil leaks from tank walls, piping, or other components must be repaired as soon as possible to prevent a larger spill or a discharge. Pooled oil is removed immediately upon discovery.

Written monthly inspection records shall be signed by the CC&V designated person and maintained with this SPCC Plan in Appendix A for a period of three years.

Annual Inspection

CC&V personnel performing annual inspections use the form provided in Appendix A. The annual inspections cover the following key elements:

- Observing the exterior of aboveground storage tanks, pipes, and other equipment for signs of deterioration, leaks, corrosion, and thinning.
- Observing tank foundations and supports for signs of instability or excessive settlement.
- Verifying the proper functioning of gauges and visual leak indicators.
- Checking the inventory of discharge response equipment and restocking as needed.

All problems regarding tanks, piping, containment, or response equipment must immediately be reported to the Area Environmental Coordinator. Visible oil leaks from tank walls, piping, or other components must be repaired as soon as possible to prevent a larger spill or a discharge to navigable waters or adjoining shorelines. Pooled oil is removed immediately upon discovery.

As required by the SPCC regulations, written annual inspection records shall be signed by the CC&V Environmental Coordinator and maintained with this SPCC Plan in Appendix A for a period of three years.

Periodic Integrity Testing

For certain shop-built tanks that are 5,000 gallons or less, visual inspections performed in accordance with STI 001 protocol will suffice. Tanks larger than 5,000 gallons that are either shop or field-erected tanks, will require periodic integrity testing be performed by certified Steel Tank Institute STI 001 or certified API 653 inspector on a periodic basis as provided by each standard. Tank testing records are kept in Appendix G, or if the reports are too large, only a summary is kept in Appendix G with a reference to where the reports are kept at the facility.

Tank testing is coordinated by the respective departments using the storage tanks.

Tank Truck Loading and Unloading Area

This facility is not equipped with a loading/unloading (LU) rack.

There are tank truck LU areas designated LU1, LU2, and LU3 located at the MFF (Figure 4) and LU4 located on the west side of the IW (Figure 3). The tank trucks and the facility are equipped with sufficient general secondary containment and sufficient active measures to respond to a most likely release during a transfer. As an added containment measure, the LU activities are performed within areas that contain a liner.

The following procedures primarily relate to on-site movement and use of oils, fuels, and chemicals. CC&V personnel 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 weather and other 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: Check 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 flow if released, and planning 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.

A standard operating procedure (SOP) for fueling heavy equipment at the MFF is attached in Appendix H.

Responsibilities of Environmental Response Coordinator and CC&V personnel

The Health, Safety, Security, and Environment Manager will act as the Environmental Response Coordinator (ERC) for CC&V under the auspices of this SPCC Plan. The ERCs responsibilities will include:

- implementing this plan in the event a spill occurs,
- coordinating the clean-up activities,
- filling out the appropriate forms to document the spill,
- ensuring compliance with all provisions of this plan, and
- providing the required training for employees in the procedures defined in this plan.

It is the responsibility of area managers (process operations, mine operations etc) to prevent releases of fluids or other material that might contaminate water draining from the site and to control such releases should they occur. However, in the event of a spill it is imperative that any person with knowledge of a release immediately notifies his/her supervisor and then completes an Enablon report. Supervisors or second level responders are responsible for notifying S&ER when releases occur. Releases exceeding the RQ listed in Section 1.3 of this SPCC Plan must be brought to the attention of S&ER immediately.

Training

CC&V's HSSE Department administers training on SRP and SPCC requirements. Training includes general instructions and training on spill prevention and response, as well as periodic instruction on the nature, transportation, and handling of hazardous materials. Training is done as part of regular annual safety training and/or on an as-needed basis. A record of these training meetings is made and filed in the Safety Supervisor's office.

Specific training in spill response coordination, clean-up, and detoxification is provided for selected CC&V I Mine Rescue Team (MRT) members. At least one of the specially trained CC&V personnel will be on site 24 hours/day, 7 days/week. In the event of a spill, these specially trained CC&V personnel 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 and acids are kept available at the mine for use as needed.

MRT members are trained in the proper detoxification procedures for each type of material. Acids used on site can be neutralized with the addition of lime and water. Lime can be added directly to the spill area in the powder form.

Records of the training sessions shall be kept on the form shown in Appendix A and maintained with this SPCC Plan for a period of three years.

CC&V Personnel 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 HSSE that provides safety and 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.

HSSE 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 or other emergency, CC&V personnel are trained to announce a "Mayday" on the mine radio. Safety, supervisors, and the Mine Rescue Team are trained in appropriate response procedures.

Contractor Locations

As discussed above, Authorized Persons (i.e., Contractors) are required to develop their own SRP/SPCC Plans to address their respective operations, including when present and working at the Cresson Project. These plans must be coordinated with CC&V's SRP and SPCC Plan.

There are several areas within the boundaries of the CC&V mine site where contractors perform construction, maintenance, or related operations and where petroleum products or other environmentally sensitive materials may be stored and used. Contractor operations include:

- Ironclad area – Buckley Powder's Bulk Emulsion Plant
- Western area (including ADR2) - Conley Construction and Various Contractors
- East of the VLF1 and Southeast of the Secondary Crusher – Various Contractors
- Contract exploratory drilling - Boart Longyear and Timberline throughout the mine site
- Seasonal Construction - locations vary
- Contract Maintenance (Power Motive, Wagner, et al) - locations vary

The details of the Contractor's plans to prevent, manage and control spills at contractor sites are not presented here. Instead, these areas will be maintained by the identified contractors and will be periodically inspected by CC&V S&ER department to ensure compliance. Each of the identified operators is required to have appropriate spill prevention, control, and countermeasures in effect at each of their sites within CC&V property.

Contractor's Oil Storage Facilities

There are several contractors that conduct operations within the boundaries of CC&V property including: Boart Longyear and Timberline, Conley Construction, and Buckley Powder. It is the policy of CC&V management to require contractors to maintain separate SPCC plans that meet the requirements of 40 CFR Part 112. Copies of SPCC Plans for each contractor are on file with S&ER.

OIL STORAGE AND DISCHARGE PREVENTION STANDARDS

Individual oil storage and use areas within the Cresson Project are described in this section. Where applicable, chemical storage is mentioned; however, the SRP provides a more comprehensive summary of the management of these non-SPCC-regulated materials. The descriptions of bulk storage areas are organized by category and location.

The categories of SPCC-regulated materials described in the following sections include:

- Oil
- Oil and Petroleum-based products.

Ironclad Warehouse and Truck Shop Locations (Figure 3 and Table 3) – oil, lubricants, and hydraulic oil are stored at these locations in aboveground storage tanks (ASTs) in an interior area constructed to contain the products; used oil is stored in totes or drums on the shop floor; and diesel fuel is stored in a fuel tank for the fire pump. Small quantities of used oil and varieties of petroleum-based lubricants are stored in totes, large drip pans or drums, on the TS floor.

Midway Fuel Farm (Figure 4 and Table 4) - diesel fuel, gasoline, fuel additives, motor oil, and hydraulic oils are stored in ASTs within a lined secondary containment area.

Crusher Storage Areas (Primary and Secondary) (Figure 5 and Table 5) – hydraulic oil and lubricants are stored either on a grate covered metal box over a concrete floor or within other secondary containment.

Adsorption Desorption Recovery (ADR1) Plant (Figure 6 and Table 6) – diesel fuel is stored in ASTs outside and to the east of the ADR1 Plant.

Process Solution Enhancement System (PSES) Facility (Figure 7 and Table 7) – oil-containing electrical transformers are located on the northeast side of the PSES Plant.

High Grade Mill (HGM) Building (Figure 8 and Table 8) – diesel fuel and new and used grease and oils are stored inside the HGM Building in ASTs and steel drums.

Maize Gulch Adsorption Desorption Recovery (ADR2) Facility (Figure 9 and Table 9) – generators are located on the northwest side of the ADR2 building that contain diesel fuel.

Slaker Yard, and Run of Mine Silo (Figure 10 and Table 10) – Diesel fuel, oil, and two transformers at stored in the slaker yard, and near the Run of Mine (ROM) Silo.

Mobile Equipment and Fleet Maintenance Equipment (Table 11) anywhere on the Cresson Project – diesel fuel, lubricants and greases, hydraulic oil, and antifreeze are hauled in lube trucks to supply mine equipment.

Bulk Storage Containers (Primary Containment)

Bulk storage containers (also known as primary containment structures) for oils, oil-based products, and chemicals used for the Cresson Project are generally described below. Details regarding specific containers are described in later sections of this SPCC Plan. Details regarding specific containers for chemicals and non-oil-based products are described in Section 4 of the SRP. Types of bulk storage containers currently used for oil and oil-based products include:

- ASTs
- Transformers
- 55-gallon drums
- Fuel containers mounted on equipment
- Intermediate Bulk Containers (IBCs)

Tables 3 through 11 summarize the construction type, volume, and content of the bulk storage containers at each of the facilities for SPCC regulated materials. The SRP summarizes the construction, volume, and content of the bulk storage containers at each of the facilities for non-SPCC regulated materials.

Primary Containment Construction

ASTs and transformers are constructed in accordance with industry specifications and standards. ASTs are constructed of steel, and transformer casings are steel. The design and construction of all bulk storage containers are compatible with the characteristics of the oil product they contain, and with temperature and pressure conditions.

There are no field-constructed aboveground containers on the Cresson Project.

Secondary Containment

The secondary containment system for each container is described in Tables 3 through 10. Calculations of required secondary containment volumes for each storage container described in this section are included in Tables 3-11.

Secondary containment that is in the form of a liner or building is discussed at each facility under Section 4.0.

Transfer Areas

General Secondary Containment: At transfer areas, sized secondary containment is not provided. General secondary containment is sufficient to contain any expected release scenario. Spill cleanup kits that include absorbent booms, absorbent pads, and personal protective equipment are located in several areas as described in Section 5.4. The spill kit inventory is checked during regularly scheduled work place inspections to ensure that used material is replenished. Onsite personnel visually observe the transfer areas during daily operations and written inspections are conducted monthly. Personnel are present during all transfer operations so would be aware of a spill immediately. If a spill should occur, onsite personnel are trained to respond per Section 6.0 of this SPCC Plan.

Transformers and other Oil Filled Operational Equipment

General Secondary Containment: The transformers at CC&V are not all situated within passive secondary containment; transformers are on relatively level ground which would limit the extent of a discharge. Spill cleanup kits that include absorbent booms, absorbent pads, and personal protective equipment are located in several areas as described in Section 5.4. The spill kit inventory is checked during regularly scheduled work place inspections to ensure that used material is replenished. If a spill should occur, onsite personnel are trained to respond per Section 6.0 of this SPCC Plan.

Drainage of Diked Areas

This section is not applicable since there is no drainage from diked areas.

Corrosion Protection

This section is not applicable since there are no buried storage tanks at this facility.

Partially Buried and Bunkered Storage Tanks

This section is not applicable since there are no partially buried or bunkered storage tanks at this facility.

Inspections and Tests

Monthly and annual written inspections are performed by CC&V designated personnel as described in Section 3.5 of this SPCC Plan.

Visual inspections of the containers, including secondary containment systems, are performed during routine activities at the facility. In addition, the outside of the containers is inspected for signs of deterioration, discharges, or accumulation of oil. Any indication of deterioration or leakage that may cause a discharge or accumulation of oil inside containment areas is reported to appropriate personnel. A documented inspection of the oil containers and secondary containment systems will be completed monthly. The results of the inspection will be recorded on the Monthly Inspection Sheets found in Appendix A.

Integrity Testing

Leaks from tank seams, gaskets, hoses, and pumps are promptly corrected. Records of inspections and tests are signed by the inspector and kept at the facility for at least three years.

Tank integrity testing will be performed according to the plan provided in Appendix G and the requirements summarized in Section 3.5.4.

Heating Coils

This section is not applicable since there are no heating coils present at the facility.

Overfill Prevention Systems

All tanks are equipped with level gauges but do not have automatic shutoffs.

55-gallon drums and 275 to 330-gallon totes are not equipped with level gauges or alarm devices. As dispensing of product from and into drums and totes is overseen by personnel, possible discharges are minimized. If a discharge does occur, spill control measures would be implemented. Many of these tanks are not refilled; they store new oil products that are only withdrawn from the drum or tote. Drums and totes containing oils are filled in small quantities and personnel are always present during this operation, in the event of any spills during filling.

Effluent Treatment Facilities

There are no effluent treatment systems that discharge to navigable waters at this facility.

Sanitary waste water is piped to septic vaults and are periodically pumped and transferred by truck to a Publicly Owned Treatment Works.

Visible Discharges

Visible discharges from any container – including seams, gaskets, piping, pumps, valves, rivets, and bolts – are quickly corrected upon discovery. The CC&V staff who routinely work in each operating area of the facility are responsible for ensuring that equipment is repaired and spills or leaks are cleaned up using absorbent materials in the spill kit.

Piping

There is no underground piping located at the facility.

Piping systems associated with the tanks at this facility are designed and operated in such a manner to minimize potential oil discharges.

Piping that is not in service, or in standby service for an extended time, is capped or blank-flanged at the transfer point and marked to prevent oil discharges. Pipe supports associated with the tanks are designed according to good engineering practices to minimize abrasion and corrosion, and to allow for expansion and contraction. Aboveground piping is supported by pedestals, hangers, or secured to a suitable structure. Tanks and piping are grounded as necessary.

Vehicles entering the Facility are warned to avoid damaging aboveground piping or other oil transfer operations.

All aboveground piping and valves are inspected per the inspection protocol in this plan to assess their condition. Inspection includes aboveground valves, piping, appurtenances, expansion joints, valve glands and bodies, catch pans, pipeline supports, locking of valves, and metal surfaces. As required by the Steel Tank Institute, vents are installed on the tank system, and components such as vent covers, poppets, and emergency pressure relief components are in place. These are checked at appropriate intervals to verify that components are moving freely and vent passageways are unobstructed.

OIL STORAGE FACILITIES AT CC&V OPERATIONS

Ironclad Facility, Warehouse, and Truck Shop

The Ironclad Facility (Figure 3) and the TS consists of the Ironclad Warehouse (IW) which is comprised of a bulk oil storage room, the maintenance shop with a lube service bay, and a light vehicle shop which includes the light vehicle wash bays, a Hazardous Materials Accumulation and Storage Room, and a bulk oil off-loading facility. Locations of SPCC-regulated storage containers are depicted in Figure 3 and listed in Table 3.

Inside the Ironclad Warehouse - Several ASTs containing oil, used oil, oil-based products, and diesel fuel are located inside secondary containment structures within the IW. This large bulk oil storage room is located north of the maintenance bays and the room itself provides 25,700 gallons of secondary containment. A major upgrade to this storage area was completed in 2010, consisting of refurbishment of the floor with new concrete, cleaning and disposing of oil contaminated soils, and placement of drip pans in strategic locations where petroleum products are stored.

Spills from these containers would either report to the building sump or the secondary containment vat provided in the Oil Room.

Outside the Ironclad Warehouse - ASTs containing used oil, and transformers containing oil are located outside the IW.

Truck Shop – The TS consists of a large bulk oil storage room, the truck maintenance shop with a lube service bay, large vehicle wash bays, a burner room with heaters, and a bulk oil off-loading facility. In addition to the bulk oil storage areas, there are other petroleum storage containers located in the work areas of the TS. Additionally, there is an oil water separator and skimmer that holds oily water in the large vehicle wash bay.

Material Storage / Secondary Containment

An inventory of primary containment and secondary containment structures for specific SPCC-regulated materials stored at the IW and the TS is provided in Table 3. The SPCC-regulated materials being stored, the volume of the material and the volume of the secondary containment are listed in Table 3. As described in Section 5.10 below, under SPCC regulations, transformers are not required to have secondary containment, though secondary containment may be present.

Non SPCC-regulated materials are discussed in the SRP.

Secondary containment systems are present at the IW and TS facilities. Details regarding secondary containment are provided in the discharge prevention section, below.

Potential Spill Scenarios, Volumes and Direction of Flow

The greatest potential for spills at the Ironclad Facility is in the transfer of used oil into the drip tray units when changing oil or the transfer of fluids in the drum and tote storage area of the warehouse. In either case, the quantities spilled would most likely be on the order of several gallons. In the unlikely event of a large tank rupture in the Oil Room, several hundred gallons could flow within the secondary containment vat, but there is virtually no chance that oil spilled could escape secondary containment in the covered and contained building. The overall spill potential is rated as low.

The greatest potential for spills at the TS is in the transfer of used oil into the drip tray units when changing oil. Another potential spill scenario is off-loading of oil products from bulk tank trucks. In either case, the quantities spilled would most likely be on the order of several gallons. In the unlikely event of a large tank rupture in the Oil Room, several hundred gallons could flow within the secondary containment, but there is virtually no chance that oil spilled could escape secondary containment in the covered and contained building. The overall spill potential is rated as low.

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

Discharge Prevention

Ironclad Facility - The most important activity to prevent spills and potential discharges at the Ironclad Facility is operator care in the transfer of fluids, using common sense and diligence in making sure connections are secure, drip pans are in place, and containers are positioned to receive fluids properly.

Bulk storage of petroleum products is primarily inside the IW building in the Oil Room. The Oil Room floor consists of a concrete slab, overlaying a gravel bed, on top of a concrete-lined “vat”. Spills from tanks in the Oil Room, whether from tank rupture, overfilling, or pump / piping leaks, will be contained inside the containment structure within the Oil Room containment area. The gravel fills a concrete-surfaced "vat" that was previously used for mineral beneficiation. Any spilled petroleum fluids would be captured on the floor or within the gravel layer inside this concrete lined containment. The containment volume above the gravel fill is approximately 40,840 gallons (32.5-feet (ft) x84-ft x 2-ftx7.48 gallons/ft). Subtraction of the volumes occupied by the tanks themselves leaves about 25,700 gallons of available containment. Therefore, the containment structure is more than adequate to hold 110% of the volume of the largest tank (12,000 gallons). There is a nine-connection fill manifold located outside the building on the west side of the Ironclad Facility. The nine off-loading connections on this manifold are directly linked to the tanks in the Oil Room. All fill lines are fitted with back-flow check valves located near the outside-terminus of the fill lines. Air vents from the top of the tanks are directed to the gravel underlying the tanks. A small concrete pad provides minimal secondary containment at the off-loading area.

Some of the used oil may be burned in oil-fired furnaces that provide heat to the Ironclad Facility. Off-site recycling of used oil occurs on a regular basis in the summer months when there is a surplus of used oil. Prior to these transfers of used oil the volume of used oil remaining in the tank will be estimated using the tank’s electronic level indicator. This indicator is located on the west wall of the tank farm. Any transfers of used oil from the storage tank to a transporter's truck will be attended by the transporter to monitor for leaks and/or spillage.

Transfer Areas at the Ironclad Facility - Transfers of petroleum products and antifreeze from bulk tankers at the Ironclad Facility will occur on the North side of the IW on a 14-foot concrete containment pad sloped towards a sump that can be pumped to the used oil storage tank. The fill lines are fitted with back-flow check valves located near the outside-terminus of the fill lines. The majority of the used oil generated by oil changes in the Ironclad Facility is burned in oil-fired boilers that provide heat to the TS. Off-site disposal of used oil occurs on an irregular basis when there is a surplus of used oil. Prior to these transfers of used oil, the storage tank will is measured with an electronic tank level gauge (“Veeder Root") to estimate the volume of used oil remaining in the tank. Any transfers of used oil from the storage tank to a transporter's truck will be attended by the transporter to monitor for leaks and/or spillage.

TS - The most important activity to prevent spills at the TS is operator care in the transfer of fluids, using common sense and diligence in making sure connections are secure, drip pans are in place, and containers are positioned to receive fluids properly.

Bulk storage of petroleum products is primarily inside the TS building in the Oil Room. The TS Oil Room is a secondary containment in itself, with a concrete floor and footings that extend up at least one foot from the floor in order to provide 43,000 gallons of containment capacity. Spills from tanks in the Oil Room, whether from tank rupture, overfilling, or pump / piping leaks, will be contained inside the containment structure. The containment structure is more than adequate to hold 110% of the volume of the largest tank (12,000 gallons). Mounted on the wall of the TS Oil Room is an electronic display panel that monitors the volume of materials in the various tanks.

There is an enclosed thirteen-connection fill manifold located outside the building on the north side of TS. The 13 off-loading connections on this manifold are directly linked to the tanks in the TS Oil Room. All fill lines are fitted with back-flow check valves located near the outside-terminus of the fill lines. The off-loading area is built on a concrete containment pad that slopes in-ward to the building and there is a sump beneath the pad that will collect spills. Collected fluids in the sump can be pumped to the used oil storage tank. No overfill warning devices are installed.

The majority of the used oil is burned in oil-fired boilers that provide heat to the TS. Off-site disposal of used oil occurs on an irregular basis when there is a surplus of used oil. Prior to these transfers of used oil, tank readings will be obtained from the storage tank to estimate the volume of used oil remaining in the tank. Any transfers of used oil from the storage tank to a transporter's truck will be continually attended by the transporter to monitor for leaks and/or spillage.

Spill Response Procedures

Section 6.0 provides the general spill response procedures for use at the Ironclad Facility and TS.

Tank Integrity Testing

Tank integrity testing will be performed according to the plan provided in Appendix G and the requirements summarized in Section 3.5.4.

Midway Fuel Farm

The MFF is located south of Ironclad Warehouse and TS. The MFF is shown on Figure 4. Locations of SPCC-regulated storage containers are depicted in Figure 4 and listed in Table 4.

Material Storage / Secondary Containment

An inventory of primary containment and secondary containment structures for specific SPCC-regulated materials stored at the MFF is provided in Table 4. The material being stored, the volume of the material and the volume of the secondary containment are listed in Table 4.

Non SPCC-regulated materials are discussed in the SRP.

Secondary containment is provided by an underground sump filled with coarse rock with an estimated porosity of 20%. Since the volume of the sump is 18,000 cubic yards, the calculated volume of containment considering porosity is 560,000 gallons. This volume is sufficient to contain the volume of all six diesel fuel tanks.

Potential Spill Scenarios, Volumes and Direction of Flow

There are several potential spill scenarios at the MFF including (but not limited to):

- Tank damage or rupture - very unlikely, and depending on the season, the spill would either be captured by infiltration into the lined containment area or, in cold weather, the spill would flow overland to the north and follow the road towards the Ironclad Facility and TS.
- Hose rupture during filling of vehicles - possible in fueling area on one of the pads;
- Spillage during off-loading from tanker truck; and
- Spillage during the fueling of large mining equipment - likely if equipment moves during fueling operations or if operator does not pay attention to details such as replacing fill hoses and staying with vehicle during fueling.

Should any of the above scenarios actually take place the volume of petroleum products or antifreeze is anticipated to be on the order of <5 to several hundred gallons.

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

Discharge Prevention

CC&V's Mine Maintenance Department has published an SOP for the MFF. This procedure can be found in Appendix H and includes a section for discharge prevention.

Spill Response Procedures

Section 6.0 provides the general spill response procedures for use at the MFF. The following narrative provides additional detail on spill clean-up.

Clean-up of Small Spills - Water captured inside the MFF secondary containment cells will be removed on a regular basis. If the water has an oily sheen, it will be removed and treated through the oil skimmer located at the TS Wash Bays. Absorbent pads are available in the warehouse and on mobile fuel/lubricant trucks to assist in cleaning up minor spills.

Free liquids with an oily sheen that are collected in the MFF sumps will be pumped into appropriate containers. Oily liquids will be hauled to the oil skimmer sump located at the TS Wash Bay or shipped off site for recycle.

Liquids that contain antifreeze will be place in totes or drums and shipped off site to a recycling facility.

Tank Integrity Testing

Tank integrity testing will be performed according to the plan provided in Appendix G and the requirements summarized in Section 3.5.4.

Crusher Facilities

Locations for the primary and secondary crushers, crusher oil storage shed, and the crusher maintenance shed are shown on Figure 5. A variety of greases and oil are stored and used in the crushing facilities, as discussed in the following narrative.

The Crusher Oil Storage Shed serves as the primary facility for storing greases and oils used at the crushers. It is a roofed building on a concrete slab with an overhead door for entry and exit. Drums and totes of various greases and oils are stored here on the concrete floor. See the inventory in Table 5 for a description of drums, totes, tanks, and secondary containment. Various drums and totes are also stored on grated steel pallets outside along the southeast wall of the Oil Storage Shed.

Hydraulic oil, greases, and lubricants used for maintenance of the crushers are stored in 55-gallon drums, five-gallon buckets, tanks, and totes near the Primary and Secondary Crushers. A portable lubricating unit (approximately 67-gallon capacity) operates throughout the Secondary Crusher building, and a variety of greases and oils are stored in totes and drums on the ground floor.

Material Storage / Secondary Containment

An inventory of primary containment and secondary containment structures for specific SPCC-regulated materials stored at the Crusher Facilities is provided in Table 5. The material being stored, the volume of the material and the volume of the secondary containment are listed in Table 5. Over 26,000 gallons of primary containment storage capacity exists in the Crusher Oil Storage Shed and the adjacent open containment area. As discussed in Section 5.10 below, under SPCC regulations, transformers are not required to have secondary containment, though secondary containment may be present.

Non SPCC-regulated materials are discussed in the SRP.

Secondary containment structures with respective volumes of 2,000 gallons (concrete floor of shed), and 210 gallons (grated pallets) are present in the Crusher Oil Storage Shed and the adjacent containment area. Although the grated palettes present east of the shed would not contain the entire spill of one of the 500-gallon totes of various oils and greases stored on top of it, the palette along with on-site BMP's would ensure a spill would not leave the Crusher Facility area.

Totes and drums, containing lubricants at the crusher buildings have no secondary containment other than the concrete slab floors of the buildings. Given the viscous nature of these lubricants, any spill would be contained within the building. However, most large lubricant tanks in the crusher buildings do have secondary containment sumps, a catch pan, or both.

Potential Spill Scenarios, Volumes and Direction of Flow

Most of the greases used for lubricating the mechanical devices within the crushing facilities are heavy, viscous, dense greases that are unlikely to spill. In the unlikely event of a grease tote or tank rupture the grease is so resistant to flow that it would not migrate more than several feet from the storage vessel. Therefore, significant spillage of greases is not expected to be a problem.

Hydraulic oils used in the crushers are stored and used at locations that are underlain by a concrete slab, where spills can be observed during routine inspections and unit operation and properly cleaned-up. The most likely amount spilled would be on the order of <10 to 100 gallons.

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

Discharge Prevention

Extensive use of hydraulic oil occurs in the Crusher areas. The most important activity to prevent spills of hydraulic oil at the Crusher Facilities is operator care in the transfer of fluids, using common sense and diligence in making sure connections are secure, drip pans are in place, and containers are positioned to receive fluids properly.

Runoff from areas surrounding the Crusher Facilities flows to holding ponds where any oil spilled can be skimmed prior to release. Even though catchment of runoff is provided, special care will be exercised to prevent hydraulic oils from migrating to areas outside the crushers.

Used oil generated at the Crushers are temporarily stored in drums or totes, and then hauled to the Ironclad Facilities for use as heating fuel or for shipment to an off-site disposal/recycling facility. Used greases stored in drums are hauled to the Ironclad Facilities for shipping to an off-site disposal facility.

Spill Response Procedures

Section 6.0 provides the general spill response procedures for use at the Crusher Storage Area. The following narrative provides additional detail on spill clean-up.

Tank Integrity Testing

Tank integrity testing will be performed according to the plan provided in Appendix G and the requirements summarized in Section 3.5.4.

ADR1 Plant

The ADR1 Plant is located in the southern portion of CC&V's Cresson Project, approximately 1 mile west of the town of Victor, CO. ADR1 is shown in Figure 6. The ADR1 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. Rich lines are steel and spent lines are steel/HDPE depending on location.

Material Storage / Secondary Containment

An inventory of primary containment and secondary containment structures for specific SPCC-regulated chemicals stored at the ADR1 Facility is provided in Table 6. The materials being stored, the volume of the primary containment for the material and the volume of the secondary containment are listed in Table 6. As described in Section 5.10 below, under SPCC regulations, transformers are not required to have secondary containment, though secondary containment may be present.

Non SPCC-regulated materials are discussed in the SRP.

Secondary and tertiary containment systems are present at the ADR1 Facility. Those include: (1) liner extends under the building itself forming a continuous barrier to guard against spills reaching the ground water; (2) the ADR1 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.

Petroleum-based oils or fuels stored at the ADR1 Plant is limited to generators with diesel fuel "belly" tanks, and electrical transformers, located outside on the east side of the building. Six Caterpillar diesel generator units (4 Model 3516B's and one 3512) provide stand-by power to the ADR1 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.

A total of 16,200 gallons of diesel capacity exist in the belly tanks of the ADR1 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. Liner exists subsurface beneath the ADR1 facility to capture potential spills. Jersey barricades do provide collision protection and a limited amount of secondary containment for the smaller generator.

The type and quantities of oil in these transformers is listed in Table 6a. Occasionally small vehicles such as mine supervisor trucks and delivery trucks will be in the general vicinity of the ADR1 Facility. Such vehicles conceivably could have spills or tank ruptures nearby.

Secondary and Tertiary Containment at the ADR1 Facility - Several redundant containment features exist at the ADR1 including:

- liner extends under the building itself forming a continuous barrier to guard against spills reaching the ground water;
- the ADR1 building has a concrete floor and curbing that provides secondary containment for spills from reagent tanks; and
- some of the tanks are double walled construction.

Potential Spill Scenarios, Volumes and Direction of Flow

The spill potential from the ADR1 generator diesel tanks is rated as low, due to the fact that re-fueling is infrequent. 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.

Spills from tanks within the facility would flow to the sump containment system within the facility itself. Any spills or releases of materials from the tanks or containers located outside of the ADR Plant would infiltrate the surrounding ground surface and flow down to the liner system. Additional details on the direction of flow are discussed in the discharge prevention section, below.

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

Discharge Prevention

1.1.1.1 Bulk Material Delivery, Storage, and Handling

The facilities for unloading, mixing, and storage of oil products and chemicals and reagents are located within the security perimeter of the mine—physically distant (1-2 miles) from any dwellings or communities. In addition, the ADR1 building and storage areas are constructed entirely upon the VLF1 liner system. Therefore, impacts to public health and safety from delivery, storage and handling of oil products and chemicals at ADR1 should be minimal.

Any spills will be contained inside of the ADR1 building itself, or within the VLF1 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 ADR1 plant or within the tanks located outside the building on the west and north sides.

Discharges from primary containment structures such as the steel tanks at the generators and the transformers can be mitigated through routine inspection for leaks and the application of proper maintenance.

Details specific to chemical (i.e., non SPCC-regulated materials, chemicals, etc.) are discussed in the SRP.

Spill Response Procedures

Section 6.0 provides the general spill response procedures for use at the ADR1 Plant.

Tank Integrity Testing

Tank integrity testing will be performed according to the plan provided in Appendix G and the requirements summarized in Section 3.5.4.

Security

In addition to the security measures in place for the entire CC&V facility, as described in Section 3.3, there is additional security for the ADR1, which is surrounded by a fence, well-lit during night hours, and is manned 24/7.

Process Solution Enhancement System (PSES)

The PSES Plant is shown on Figure 7. It 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 rich 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 (VLF1) 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 VLF1 where it can rob gold from rich leach solutions.

The system consists of three separate processes: (1) a Rich Solution (PS) Stabilization Process to equilibrate the chemistry of the rich solutions prior to the ADR1 Plant; (2) a process solution enhancement system to remove solids from the spent solution before pumping it back to the VLF1; and (3) a process to dewater the solids removed from the process solution.

These processes are discussed in more detail below.

Rich Solution Stabilization: The PSES process provides the reaction conditions needed to help stabilize the PS prior to the ADR1. The PS from VLF1 Phases 1, 2 and 5 flow to the PS Stabilization Tank. The PS from VLF1 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 ADR1.

Spent Solution Enhancement: The system directs the Spent Solution (BS) from ADR1 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 spent (EB) solution increases the operating life of the drip emitters on the VLF1. The EB solution pump station transfers the EB solution to the spent 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.

Materials Storage / Secondary Containment

An inventory of primary containment and secondary containment structures for specific SPCC-regulated chemicals stored at the PSES Facility is provided in Table 7. The chemicals being stored, the volume of the primary containment for the chemical and the volume of the secondary containment are listed in Table 7. As described in Section 5.10 below, under SPCC regulations, transformers are not required to have secondary containment, though secondary containment may be present. 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.

Non SPCC-regulated materials are discussed in the SRP.

The PSES area was constructed on top of an engineered lining system, which serves as a secondary or tertiary containment system. Any spills will be contained inside of the PSES building itself, or within the VLF1 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.

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 VLF1. Spills or releases from the tanks inside the plant would be captured within the building itself.

Potential Spill Scenarios, Volumes and Direction of Flow

The only SPCC-regulated oil storage at the PSES consists of two electrical transformers. The overall spill potential from oil-filled electrical transformers is low. The units are new, modern installations, and are mounted on concrete slabs.

The potential for spills of fuel, oil, liquid coagulants, or liquid sodium hydroxide to migrate a significant distance from the point of occurrence at the PSES is low. These materials will flow according to the ground surface topography and thus be contained within the PSES area, or releases will be contained and captured on concrete slabs or building floors.

Discharge Prevention

1.1.1.2 Bulk Chemicals and Reagents Delivery, Storage, and Handling

The facilities for unloading, mixing, and storage of oil-products and chemicals and reagents are located within the security perimeter of the mine—physically distant (2-5 miles) from any dwellings or communities. In addition, the PSES building and storage areas are constructed entirely upon the VLF1 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 VLF1 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.

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

Spills of chemicals and other non SPCC-regulated materials are discussed in the SRP.

Spill Response Procedures

Section 6.0 provides the general spill response procedures for use at the Crusher Storage Area. The following narrative provides additional detail on spill clean-up.

Tank Integrity Testing

Tank integrity testing will be performed according to the plan provided in Appendix G and the requirements summarized in Section 3.5.4.

High Grade Mill

The HGM facility is located in the western portion of CC&V's Cresson Project, approximately 4 miles north of the town of Victor, CO. The HGM facility is shown on Figure 8. The HGM 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 VLF through an HDPE/steel piping system. Rich lines are steel and spent lines are steel/HDPE depending on location.

The HGM 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 HGM Facility is also surrounded by containment berms 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. 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 HGM should be minimal.

Material Storage / Secondary Containment

An inventory of primary containment and secondary containment structures for specific SPCC-regulated materials stored at the HGM Facility is provided in Table 8. The material being stored, the volume of the primary containment for the material and the volume of the secondary containment are listed in Table 8. Occasionally light vehicles such as mine supervisor trucks and delivery trucks will be in the general vicinity of the HGM Facility. Such vehicles conceivably could have spills or tank ruptures nearby.

Non SPCC-regulated materials are discussed in the SRP.

The HGM facility was constructed on top of an engineered lining system, which serves as a secondary or tertiary containment system. Several redundant containment features exist at the HGM including:

- liner extends under the building itself forming a continuous barrier to guard against spills reaching the ground water;
- the HGM building has a concrete floor and curbing provides secondary containment for spills from reagent tanks; and
- some of the tanks are double walled construction.

Potential Spill Scenarios, Volumes and Direction of Flow

Spills or releases of materials from the tanks / containers located outside the HGM 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.

The spill potential from the HGM generator diesel tank is rated as low, due to the fact that refueling is infrequent and is a manned operation with an operator in attendance. 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.

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

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

Discharge Prevention

1.1.1.3 Bulk Chemicals and Reagents Delivery, Storage, and Handling

The facilities for unloading, mixing, and storage of oil products and chemicals and reagents are located within the security perimeter of the mine-physically distant (1-2 miles) from any dwellings or communities. Any spills will be contained inside of the High Grade Mill building itself, or within the VLF1 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.

The high Grade Mill is no longer in operation. Discharge prevention of non SPCC-regulated materials is discussed in the SRP.

Spill Response Procedures

Section 6.0 provides the general spill response procedures for use at the HGM.

Tank Integrity Testing

Tank integrity testing will be performed according to the plan provided in Appendix G and the requirements summarized in Section 3.5.4.

Maize Gulch Adsorption Desorption Recovery (ADR2)

The ADR2 facility is located in the western portion of CC&V's Cresson Project, approximately 2 miles northwest of the town of Victor, CO. The ADR2 facility is shown on Figure 9. The ADR2 Plant uses process (minerals beneficiation) reagents to recover precious metals from the ore.

The ADR2 Facility is constructed entirely upon the Rich Solution Storage Area (PSSA), which is a self-contained liner system with a subgrade fluids collection system with manually operated sump pumps. This liner system will contain any spills or stormwater that may infiltrate on-site. The ADR2 Facility is also contained within soil berms on all sides. These berms will prevent any stormwater from migrating off-site to surface water 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. Therefore, impacts to public health and safety from delivery, storage and handling of chemicals at the ADR2 Facility should be prevented.

Material Storage / Secondary Containment

An inventory of primary containment and secondary containment structures for specific SPCC-regulated materials stored at the ADR2 Facility is provided in Table 9. The materials being stored, the volume of the primary containment for the material and the volume of the secondary containment are listed in Table 6. Petroleum-based oils or fuels stored at the ADR2 Facility is limited to generators with diesel fuel "belly" tanks, and electrical transformers, located outside on the northwest side of the building. Occasionally light vehicles such as mine supervisor trucks and delivery trucks will be in the general vicinity of the ADR2 Facility. Such vehicles conceivably could have spills or tank ruptures nearby.

Non SPCC-regulated materials are discussed in the SRP.

Secondary and tertiary containment systems are present at the ADR2 Facility. Those include:

- liner extends under the building itself forming a continuous barrier to guard against spills reaching the ground water, the total available pore space volume for the lined area is approximately 30 million gallons (based on maximum operating fill level inside of liner, and potential accumulated stormwater in storage area), this volume is sufficient to contain the discharge from the largest tank located at the ADR2 Plant;
- the ADR2 building has a concrete floor and curbing that provides secondary containment for spills from reagent tanks; and
- some of the tanks are double walled construction.

Potential Spill Scenarios, Volumes and Direction of Flow

Oil spills or releases from tanks within the facility would flow to the sump containment system within the facility itself. Any spills or releases of materials from the tanks / containers located outside of the ADR2 Plant would be contained by the liner. The spill potential from the ADR2 Plant generator diesel tanks is rated as low, due to the fact that refueling is infrequent. 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.

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

Discharge Prevention

1.1.1.4 Bulk Chemicals and Reagents Delivery, Storage, and Handling

The facilities for unloading, mixing, and storage of oil products and chemicals and reagents are located within the security perimeter of the mine—physically distant (1-2 miles) from any dwellings or communities. In addition, the

ADR2 building and storage areas are constructed entirely upon the PSSA liner system. Therefore, impacts to public health and safety from delivery, storage and handling of chemicals at the ADR2 Facility should be prevented.

Any spills will be contained inside of the ADR2 building itself, or within the PSSA lined system.

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

Discharge prevention for non SPCC-regulated materials is discussed in the SRP.

Spill Response Procedures

Section 6.0 provides the general spill response procedures for use involving spills around the ADR2 Plant generators.

Tank Integrity Testing

Tank integrity testing will be performed according to the plan provided in Appendix G and the requirements summarized in Section 3.5.4.

Run of Mine Storage Areas

The Run of Mine (ROM) silo area is an area where a lime/cement silo is operated as part of mining operations and ore processing. The ROM storage area, including the lime/cement silo, is shown on Figure 2.

Material Storage / Secondary Containment

An inventory of primary containment and secondary containment structures for specific SPCC-regulated materials stored at the ROM storage area is provided in Table 10.

The materials, the approximate total storage capacity for the primary storage containers at this facility, and the volume and type of secondary containment is listed in Table 10.

Non SPCC-regulated materials are discussed in the SRP.

Elsewhere on the mine site, a 200-gallon hydraulic oil tank is located on the load out bin on top of the VLF1 liner. The ROM Silo can also be seen on figure two.

Potential Spill Scenarios, Volumes and Direction of Flow

The spill potential from the DFW generator diesel tank is rated as low, due to the fact that refueling is infrequent and vehicle traffic near the generator is light. Spills from the large steel transformer on the southern edge of the area are likely to be contained within its lined containment berm. The other storage containers in the DFW area are small, and have adequate secondary containment. If a catastrophic spill from one of these containers did occur it would drain to the east towards the haul road. However, the likelihood of a spill being large enough to travel this far is negligible.

Discharge Prevention

The most important activity to prevent spills and potential discharges at the DFW is operator care in the transfer of fluids, using common sense and diligence in making sure connections are secure, drip pans are in place, and containers are positioned to receive fluids properly.

Additionally, all secondary containment volumes in the DFW area are adequate to contain 110% of the tank volume or the tank volume plus the 24-hour 100-year storm.

Any spills will be contained inside of the ADR2 building itself, or within the PSSA lined system

Spill Response Procedures

Section 6.0 provides the general spill response procedures for use at the DFW area. The following narrative provides additional detail on spill clean-up.

Clean-up of Small Spills - Water captured inside the DFW area secondary containment cells will be removed on a regular basis. If the water has an oily sheen, it will be removed and treated through an oil. Absorbent pads are available in the DFW area and on mobile fuel/lubricant trucks to assist in cleaning up minor spills.

Tank Integrity Testing

Tank integrity testing will be performed according to the plan provided in Appendix G and the requirements summarized in Section 3.5.4.

Mobile Equipment

Fuel trucks and service trucks are used by CC&V at the Cresson Project to supply the mine's heavy equipment and earthmoving fleet with fuel and other petroleum products. The oil storage tanks on these vehicles are considered to be regulated as “mobile refuelers” as defined in 40 CFR 112.2, needing adequate general facility containment as discussed in Section 4.7.6 of the EPA SPCC Guidance for Regional Inspectors (EPA, December 2013). In addition, other large earthmoving equipment operating onsite contain significant quantities of oil and fuel and, while excluded from the SPCC Regulations as “motive power”, are discussed in this section of the SPCC Plan. Operating equipment or mobile equipment, for inclusion in this SPCC Plan, will refer to those vehicles that have oil in individual tanks with capacities of 55 gallons or greater, which are not considered to be “motive power” tanks, which include the fuel tanks used for vehicle propulsion or to power on-board equipment, and oil storage necessary to support operation of the equipment, such as on-board hydraulic systems. This applicability of 40 CFR 112.2 is based on Section 2.5.7 of the SPCC Guidance for Regional Inspectors (EPA, December 2013). Various types of mobile equipment containing greater than 55 gallons of oil are used at the Cresson Project. Table 11 provides a list of the types of equipment and tank capacities for the equipment.

Material Storage / Secondary Containment

Service trucks haul petroleum products including diesel fuel, antifreeze, motor oil, lubricating greases, and hydraulic oil to supply mine operations equipment. The oil storage tanks on these vehicles are considered to be regulated as “mobile refuelers”. Other mobile equipment such as dozers, loaders, haul trucks, drills, water trucks, graders, etc. use diesel fuel, hydraulic oil, motor oil, and antifreeze, and are considered to be “motive power” containers.

Refer to Table 11 for detailed information on storage capacity of mobile equipment.

Non SPCC-regulated materials stored with this equipment are discussed in the SRP.

Potential Spill Scenarios, Volumes and Direction of Flow

The most likely amount of fuel or oil spilled from mobile equipment is on the order of 1 to 50 gallons. A typical spill might involve a hydraulic line break, and this could occur anywhere on the site. Flow direction is even more dependent on where the line break or spill occurs. In general, the site's ground surface is loose native soil or crushed rock, and flow-paths are typically directed to containment areas. These factors are helpful in spill containment; therefore it would be unlikely that a spill would report off the site before it could be properly cleaned up and disposed.

SPCC Provisions for Mobile Equipment

Where oil product or antifreeze transfers occur in the field (not inside secondary containment), field personnel will use containment buckets, drip trays, or absorbents to catch any spillage. During these transfers of liquids, hoses, nozzles, pumps, flanges, tanks, and piping will be inspected and any significant deterioration will be reported to the maintenance department for repair or replacement as needed.

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 mobile operating equipment. “The general requirement for secondary containment, which can be provided by various means including drainage systems, spill diversion ponds, etc., will provide for safety and also meet the needs of Section 311 (j)1(c) of the CWA” according to the discussion on page 47055 of the July 17, 2002 Federal Register. The containment structures described in other sections of this SRP/SPCC Plan plus drainage controls included in the site storm water management plan (SWMP) meet the intent of the general secondary containment requirement.

Spill Response Procedures

Section 6.0 provides the general spill response procedures for mobile refuelers and motive power containers. The following narrative provides additional detail on spill clean-up.

Mobile refuelers maintain a supply of clean-up materials—such as sorbent pads and oil dry—and these units are capable of spill clean-up near any piece of mine mobile equipment.

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 TS Wash Bay or shipped off site for recycle.

Inspections and Tank Integrity Testing for Mobile Equipment

Monthly visual inspections of the storage tanks on the mobile refuelers will be conducted. Tanks on mobile operating equipment will not be subject to the monthly inspection or integrity testing protocols, but will be regularly inspected and maintained by CC&V personnel.

Electrical Gear (Transformers)

A large number of electrical transformers are used on the Cresson Project to supply power to buildings and process areas. Oil is used in transformers to prevent overheating. Various sizes of transformer units require different amounts of oil. Descriptions of the electrical gear and the volume of oil in each unit can be found in Tables 3 through 10.

Potential Discharge Scenarios

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

SPCC Provisions 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, most of the active (in service) transformers sit on elevated concrete pads. Typically, the transformers 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 report to the concrete elevated pads, or the ground surrounding the units. The most likely amount spilled is expected to be less than 10 gallons.

Spill Response Procedures

Section 6.0 provides the general spill response procedures for use involving spills involving Electrical Gear.

SPILL RESPONSE PROCEDURES

This section summarizes the routine operating procedures that must be followed to prevent releases of substances 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 personnel, and they apply to any activities conducted by CC&V at the Cresson Project.

General Spill Prevention and Response Procedures

The following procedures primarily relate to on-site movement and use of chemicals. CC&V personnel 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 A). Petroleum-based materials in the maintenance area are checked routinely to identify and repair leaks and maintain containment. The inspection includes 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 would 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.

Labels on storage containers are also part of the chemical spill prevention program and are posted at 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.

CC&V recognizes that engineering, structural, and management controls are not always going to prevent the occurrence of spills. Therefore, the following narrative describes how a spill will be cleaned up (general countermeasures). For a detailed descriptions of spill response procedures see Section 5.3 of this SPCC Plan.

General Spill Response Guidelines

Each CC&V Team Member will consider the ramifications of a spill or release whenever handling fluids or solids subject to this SPCC Plan. Individual and joint assessments of the risk for a spill, or, in other words, “awareness and common sense,” are two of the most important spill prevention and countermeasure tools.

An outline of the procedures to be followed when a spill or release occurs is presented on the following page and on the document cover of this SPCC and in the ERP under the SPILL RESPONSE tab. Detailed spill response guidelines and countermeasures are provided in Table 12 below. Each CC&V Team Member should think carefully when following this outline and steps will not be omitted unless they are clearly not applicable in a specific situation. Personal safety is the first consideration whenever responding to a spill or release subject to this SPCC Plan. The spill responder will have the appropriate training and expertise in spill control before commencing a clean-up operation.

Small Spills Outside of Containment Structures - Spills from drums or pails can be contained entirely within a building footprint and relatively easily removed from the concrete floor. Material spilled within the building will be recovered with a sorbent material (sorbent pads, pillows, oil dry, bentonite, or "kitty litter"). Sorbent pads that have been used to remove materials such as 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 products can only be disposed as conventional solid waste if they are not dripping.

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 an Environmental Coordinator. Contaminated material less than 9 square feet shall be collected and disposed of in the Large Truck Shop wash bay settling pond located outside the shop, or as directed by an Environmental Coordinator.

Large Spills Outside of Containment Structures - Available earth-moving equipment will be used to excavate a trench and sump system to retain the spill in the immediate vicinity of the spill. Fluids should be recovered into barrels or tanks quickly to minimize seepage. Straw bales may be used to absorb the remaining fluid. Sorbent soils or commercial sorbents may also be used to absorb the fluid. Impacted and excavated petroleum contaminated soils (PCS) shall be placed in a blast hole stemming material pile, or as directed by an Environmental Coordinator. Areas impacted by large spills shall be over-excavated to ensure complete removal of contaminated material. Appropriate monitoring parameters, frequency, and duration will be determined for each specific release event as needed to evaluate the impact of the release.

Table 12: Spill Response Guidelines

SPILL RESPONSE GUIDELINES
FIRST LEVEL RESPONDERS (any Team Member knowledgeable of the safe handling of the spilled substance) 1. **Safety is the first consideration** when responding to a spill. Human life or health must not be jeopardized. Be sure the site of the spill/accident is safe before proceeding. Treatment of life threatening injuries takes precedence. 2. Use **common sense**. 3. **Notify** another Team Member, and call for help if needed. 4. **Stop spill** at source (if this can be done safely). 5. **Stop spread** of spill (if this can be done safely). 6. **Report incident** to supervisor as soon as reasonably possible. 7. **Recover spilled material** and place in a contained area or treat to neutralize material. 8. Complete **Internal Spill Report**, after incident is managed. ((CC&V Discovery – Enablon Report)
SECOND LEVEL RESPONDERS (Another Team Member or Supervisor) 1. **Provide** first level responders with everything they need to safely and effectively respond to the spill. 2. **Inform** Sustainability and External Relations (S&ER) Department (719-283-4322) so that proper external notifications can be made per regulations. 3. **Notify Health,** Safety, Security & Environment Department.
S&ER RESPONSE 1. **Verify** field procedures are properly followed. 2. **Determine** information and notification requirements. 3. **Notify** General Manager, if external notifications are required. 4. **Notify** appropriate external entities within regulatory timeframe. Record details of who was informed of what and when, in accordance with the notifications. 5. **Follow-up** with an inspection of the site. Sample as necessary. Complete documentation. 6. **Review** incident and implement remedial measures if needed.
OFF-SITE SPILL RESPONSE POLICY Due to liability concerns, it is CC&V's policy not to respond to spills caused by other entities, including transporters, unless: 1. The spill is within the Cresson Project Area; or 2. CC&V has been requested to do so by the responsible party or the local emergency response team AND 3. A response is specifically authorized by the CC&V General Manager or his designee. **See "Vendor Contacts" tab located in the Emergency Response Procedures for telephone numbers of vendors that transport bulk materials to and from the Cresson Project.**

BE SAFE - NOTIFY - MITIGATE - REPORT - REVIEW - IMPROVE
SAFETY AND SECURITY RADIO CALL NUMBERS: "BASE-1," "R-1," "R-2"
S&ER RADIO CALL NUMBERS: "E-0," "E-1," "E-2," or "E-3"

Spill Response Procedures for Specific Types of Chemicals

Chemical spills are subject to the requirements of the SRP, and will receive immediate and judicious action. Procedures to be followed in the event of a chemical release, or a release of a non SPCC-regulated material are summarized in the SRP. The following is a summary of response procedures for SPCC-regulated materials.

Explosive Substances – Diesel, Gasoline, Kerosene, and Ammonium Nitrate

IN THE EVENT OF AN ACCIDENT INVOLVING A SPILL OR LEAK, FOLLOW THESE STEPS:

- Immediately extinguish open flames and smoking in the general area (there will be no smoking when materials such as these are handled or when they are in close proximity).
- Notify immediate supervisor or Team Member by radio. Supervisors will immediately notify Health, Safety and Security Department (HSS) and S&ER (phone numbers are listed in section 6). The General Manager and S&ER staff are authorized to make the necessary regulatory notifications.
- In the case of an injury to a person, make sure that HSSE is notified. If qualified, and if necessary, administer first aid and medical treatment.
- Attempt to stop or contain the flow of material only if there is no danger of combustion. If there is a danger of combustion, immediately clear the area. In attempting to stop or contain ammonium nitrate, a dust respirator should be worn.
- Begin clean-up activities promptly. Fuels should be carefully pumped back into properly vented storage containers and disposed of properly as needed. Contaminated material should be collected in clean 55-gallon drums and disposed of in a manner and at a location specifically approved for that material by S&ER.
- Complete an Enablon Report and notify supervisor as soon as possible but in no case later than the end of the shift.
- Conduct remedial and clean-up activities as required.

Petroleum-Based Oils and Antifreeze

IN THE EVENT OF AN ACCIDENT INVOLVING A 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 S&ER (phone numbers are listed in section 6). S&ER 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 HSSE 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 coolant. Once absorption is complete, contaminated material should be collected in barrels and disposed of in a manner and at a location specifically approved by S&ER for this material.
- Complete an Enablon Report and turn it in to supervisor as soon as possible but in no case later than the end of the shift.

Spill Response Materials and Resources

Spill response kits are situated at the following locations:

- Exploration Laydown Yard - Aerosol can puncturing station
- Secondary Crusher - Aerosol can puncturing station in the nearby Millwright Shop
- Truck Shop - Aerosol can puncturing station in the Southeast Corner of the Maintenance Bays
- Warehouse Area – Aerosol can puncture station next to the cardboard baler and Bay 4
- Light Vehicle Shop – Northwest corner of building

- Hazardous Waste Accumulation - Conex located east of Large Truck Shop
- Carlton Security Office Access Gate – Furnace room located behind the Safety office and next to the back exit door
- All existing Ready Lines
- High Grade Mill North and South Entrances
- Midway Fuel Farm (Fuel Island)
- ADR1 – aerosol puncturing station in SW side of building
- ADR2 - aerosol puncturing station in west side of building
- PSES - aerosol puncturing station in SW side of building
- Technical Services – Engineering - aerosol puncturing station in SE side of building

Lube trucks are supplied with materials to contain small petroleum releases and can be called on the radio. Use call number J3 for assistance. These locations are subject to change based on operational needs. Additional spill kits are located in other ancillary locations.

Both the Wet and the Metallurgical labs have spill response kits located:

- Wet Lab – Safety Shower in Wet Lab
- Metallurgical Lab – North side of central island; upper level

Spill kit contents vary from location to location throughout the facility. At a minimum, materials contained within a spill kit should include materials appropriate for responding to a release in the coverage area/location. At a minimum, the spill kit should contain:

- Petroleum absorbent materials
- Respirator
- Chemically resistant gloves
- Safety glasses
- Acid neutralizer
- Plastic containment bags

Management of Containers, Stormwater, and Cleaned-Up Waste Materials

Containers and Drums

Containers of petroleum products should, whenever possible, be ordered only when the empty container can be returned to the supplier for reuse. In the event the container cannot be recycled with the same product, or another compatible product and the container must be emptied, it needs to be drained of product. Draining of lubricants and mixing with oils destined for recycling may be acceptable but must not be done until S&ER has approved the draining. Containers that contain products destined for recycling, or which are not yet "empty," are to be stored within lined areas or other acceptable containment areas.

Empty containers that have held fuels, oils, or antifreeze will be properly drained and returned to the supplier for reuse, when possible, if they are not going to be refilled with the identical product. CC&V personnel using the products must be aware of which containers are to be sent back to a particular vendor for reuse. Residual fluids will be properly removed from containers in accordance with the next intended use of the barrel. Orderly storage and return to vendors reduces the potential for a release from these containers.

Stormwater

Stormwater and snowmelt accumulations will be removed from secondary containment structures to maintain the required storage volume. If water contained in a sump has an oily sheen, the oily layer can be pumped off into a temporary storage container. Typically, a 5-gallon bucket or 55-gallon drum container is sufficient volume to collect the oily sheen layer and transport it to an oil-water separator located at the Truck Shop Wash Bay at the Ironclad Facilities or transfer it to a 55-gallon drum designated for off-site disposal. Other measures such as sorbent pads specifically designed for oil absorption on water may be used to remove the oily layer on the water.

Clear water in containment sumps and secondary containment can be pumped to the ground outside the containment if a responsible individual monitors the process to assure there is no oily sheen and the pumping effort is recorded on the form provided in Appendix E.

Clean-Up Waste Materials

Following a spill clean-up effort, there will be some used materials such as booms, pads, socks, rags, oil dry soaked with oil, oil-contaminated soil, etc. Such materials should be gathered up and placed in drums or clean containers for proper disposal. Depending on the nature of the contaminated materials, it may be possible for them to be placed in a dumpster for disposal in the local landfill, or the materials may need to be shipped off-site to a licensed disposal facility. Sorbent pads that have been used to remove petroleum products, including fuels, antifreeze, and oils, may be disposed of as a conventional solid waste and placed into the commercial solid waste containers at various locations around the property, **provided no solvents or other potentially hazardous wastes have been added and no oil is dripping from these pads.** If the pads are dripping, the oil can be rung out and collected, or more pads can be used to absorb the free liquid, or the dripping pads can be containerized for off-site disposal. Disposal of any spill containment materials will be performed in accordance with the procedures described in CC&V's Waste Management Plan.

In the case of oil-stained soils that are free of other contaminants, these materials may be stockpiled at the stemming stockpile for use as stemming in blast holes. S&ER will make all decisions regarding the final disposition of any by-product waste generated by clean-up operations.

External Spill Reporting Discharge Notification

Spill reporting is paramount and required at CC&V. It is CC&V's policy for the first responder to notify their supervisor or contact Ironclad Security on the radio as the first step in reporting. The next step is equally important and involves contacting S&ER. The Health, Safety, Security, & Environment (HSSE) Manager will act as the ERC for CC&V under the auspices of this Environmental Response Plan. As ERC, one of the HSSE 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 the ERP under the FORMS tab and section 4.7.1 of this SPCC Plan, will be filled out, keeping in mind the "Reportable Quantities" as discussed in Section 4.7.2 and Table 1 in Section 1.1. The ERC or his designee will then follow through by contacting the appropriate agencies and any additional CC&V contacts or corporate contacts located in the ERP under the CONTACTS tab. In some instances, it may be appropriate for the ERC to contact people or governmental entities on the list located in the ERP under the CONTACTS tab.

Discharge Notification for External Agency Reporting

1. NAME AND TELEPHONE NUMBER OF PERSON MAKING REPORT: ______________________
DATE CALLED:_________________________AGENCY CALLED ___________________________
WHOM CALLED:_________________________TIME CALLED______________________________
2. NAME AND MAILING ADDRESS OF COMPANY FOR WHOM REPORT IS BEING MADE:
Physical Address: 1280 HWY 67 between Victor and Cripple Creek, Teller County, Colorado 80860
Mailing Address: P.O. BOX 191, (100 North Third St), VICTOR, COLORADO 80860
Location Coordinates: Latitude and Longitude: Security Office - 38º 43'37"N & 105º 09'27"W
Legal Location: (Township, Range, Section, ¼ section): T15S, R69W, Sec 31, NW1/4,
3. COUNTY WHERE SPILL OCCURRED: **TELLER**
4. LOCATION WHERE SPILL OCCURRED (ADDRESS OR OTHER LOCATION INFORMATION): (Relate to Mining District, State or County Roads, Township, Section and Range

____

5. DATE AND TIME OF INCIDENT: (Time of start of release, times of control measures)
Time of Spill: ___
Time Spill Stopped or Contained: ___
Time Cleanup Started: ___
Time Cleanup Finished: ____
6. NAME OF MATERIALS SPILLED (CHEMICAL NAME IF POSSIBLE): ________________________

____

____

7. QUANTITY OF MATERIAL SPILLED (The accuracy of this information is important. Indicate whether the quantity is estimated or measured): ____

____

8. SOURCE AND CAUSE OF SPILL: ____

9. STATEMENT OF WHERE SPILL OCCURRED (IF INTO ANY STREAMS OR WATERWAYS, THE NAMES OF SUCH STREAMS OR WATERWAYS) (Use USGS Topographic Maps if possible) (If material did not reach a drainage, especially not Arequa Gulch, Maize Gulch, Bateman Creek, or Grassy Valley, it likely did not enter a "stream").

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10. DESCRIPTIONS OF ANY INJURIES, FATALITIES, EVACUATIONS OR PROPERTY DAMAGES (This must be cleared with Safety): ____

____

____

11. DESCRIPTION OF REMEDIAL ACTIONS OR CLEANUP TAKEN AND/OR TO BE TAKEN:

____

____

12. NAMES OF OTHER AGENCIES THAT HAVE BEEN OR ARE TO BE NOTIFIED: ______________

____

____

13. INCIDENT NUMBER PROVIDED BY AGENCY: ____
14. WRITTEN REPORTS REQUIRED BY AGENCY: ____

Reportable Quantities

Reportable Quantities that require external reporting to environmental compliance agencies (pursuant to 40 CFR Part 116 and 117 or Colorado State guidelines) are listed in Table 1 of this SPCC Plan.

Plan Revision Log

Revision No	Revision Date	By Whom	Description
01	May 2006	P. Roberts	Initial release of document
02	December 6, 2007	M. Ellis	External Review & Update of Plan
03	January 8, 2008	P. Roberts	Replace RWL w LN
04	October 15, 2009	M. Ellis	Plan updates
05	August 17, 2010	P Roberts	Change Guenther to DuBois
06	July 2011	M. Ellis	Narrative Changes in Several Sections +New Tanks Added at ADR1 and VLF1
07	August 2011	M. Ellis	Integrity Testing Performed on Some Tanks; Changes in Transformers and Mobile Equipment; P.E. Review
08	Feb-Apr 2012	M. Ellis & G. Horton	Annual review and update of SPCC Plan; tanks added at ADR; map updates; general review / PE review, and minor changes in narrative
09	March-April-May 2013	M. Ellis & G. Horton	Annual review and update of SPCC Plan; new Midway Fuel Island added; map updates; general review / PE review, and minor changes in narrative
10	June 2014	M. Ellis & G. Horton	General Plan Updates
11	July 2015	R. Wymore	Separation of PSES and ADRfacilities as separate SPCC plans. Reviewof entire plan, and incorporation of any recent changes
12	December 2018	M. Kraeski, E. Munroe	Added PSES, HGM, ADR2 facilities to the SRP/SPCC. Review of entire plan and added SPCC regulated areas to the plan; map updated; PE review; and minor changes to the narrative.
13	December 2019	J. Ratcliff, Geosyntec	Split the SPCC into separate documents. Added Dump Four Warehouse area to the SRP.
14	February 2024	J. Gonzalez, B. Doering	Administrative changes. Removal of Dump Four Warehouse area from SPCC and SRP.