GRASSY MOUNTAIN MINE PROJECT

Emergency Response Plan

Submitted to:

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CALICO RESOURCES

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ACRONYMS

<	less than
>	greater than
ANFO	ammonium nitrate fuel oil
BATFE	Bureau of Alcohol, Tobacco, Firearms and Explosives
BLM	Bureau of Land Management
Calico	Calico Resources USA Corp.
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
CIL	carbon-in-leach
CPA	Consolidated Permit Application
DHS	Department of Homeland Security
DOT	Department of Transportation
EPCRA	Emergency Planning and Community Right-to-Know Act
ERP	Emergency Response Plan
ERT	Emergency Response Team
HAZWOPER	Hazardous Waste Operations and Emergency Response
ICS	Incident Command System
IMT	Incident Management Team
kV	kilovolt
LEPC	Local Emergency Planning Committee
MSHA	Mine Safety and Health Administration
Mst	million short tons
NRC	National Response Center
OAR	Oregon Administrative Rules
ODEQ	Oregon Department of Environmental Quality
OERS	Oregon Emergency Response System
ORS	Oregon Revised Statute
OSHA	Occupational Safety and Health Administration
PPE	personal protective equipment

ppm	parts per million
Project	Grassy Mountain Mine Project
RHMERT	Regional Hazardous Materials Emergency Response Team
ROM	Run of Mine
RQ	reportable quantity
SDS	safety data sheets
SPCC	Spill Prevention, Control, and Countermeasure
stpd	short tons per day
TSF	Tailings Storage Facility
TWRSF	Temporary Waste Rock Storage Facility
V	volt
VHF	very high frequency
WPCF	Water Pollution Control Facility

1. INTRODUCTION

This *Emergency Response Plan* (ERP) has been prepared by Calico Resources USA Corp. (Calico) in support of the Grassy Mountain Mine Project (Project) located in Malheur County, Oregon. The ERP fulfills the Oregon Revised Statute (ORS) 517.971 requirement for a spill prevention and credible accident contingency plan to be part of the Consolidated Permit Application (CPA). The ERP also fulfills the requirement for a spill contingency plan under the Bureau of Land Management (BLM) Plan of Operations. The ERP incorporates by reference the Malheur County Local Emergency Planning Committee (LEPC) Emergency Response Plan.

This plan has been developed in accordance with applicable federal, state, and local provisions:

- P.L. 99-499, the Emergency Planning and Community Right-to-Know Act (EPCRA) (SARA Title III) of 1986, Title 42 Chapter 116 Subchapter 1 – Emergency Planning and Notification §11003 (a-g).
- Title 40 Code of Federal Regulations (CFR) Part 355 Emergency Planning and Notification.
- Title 40 CFR Part 370 Hazardous Chemical Reporting Regulations.
- ORS 401.032, 035, 305, and 309, 453.307 to 505 and 465.101 to 127 and 517.971.
- Oregon Administrative Rules (OAR) Chapter 837 Division 85.
- OAR Chapter 340 Division 142.

1.1 PURPOSE

The ERP serves multiple purposes:

1. To provide a description of general response procedures to emergencies that could potentially occur at the facility, regardless of their nature or cause (e.g., natural disaster or event such as wildfire, flood, earthquake; mining operations or process incident; and/or human error);
2. To provide more specific procedures to a spill/discharge of hazardous material and/or oil;
3. To provide the information required for a spill prevention and credible accident contingency plan, which includes establishing responsibilities and guidelines for actions to be taken by mine personnel in the event of a credible accident. Per ORS 517.971(7)(m), a 'credible accident' means an unplanned discharge of ore processing solutions, ore processing solution contaminated water, or chemicals from a mine facility into surface water, ground water, soil, overburden, or living resources in sufficient quantity to impair the pre-mine quality of the receiving water, soil, overburden, or living resources, or that would exceed the discharge limitations of the Oregon Department of Environmental Quality (ODEQ). A credible accident may also include but is not limited to the following types of accidents: fires, unplanned detonation of explosives, equipment failures, and fuel spills and accidents resulting from human errors or natural disasters.

The ERP is intended to assist personnel and responsible parties in making timely decisions and taking positive actions toward a successful resolution of the problem. This ERP identifies potential sources of spills, establishes measures of spill prevention, and defines control, cleanup, and reporting procedures, including instructions for what should be done in the event of a release. To assist with satisfying

requirements for emergency preparedness, the ERP will be referenced in the routine safety training program, as described in the *Safety Training Plan*.

In addition, this ERP has been prepared to support the application for a new Water Pollution Control Facility (WPCF) Permit for the Project.

1.2 OBJECTIVES

The objectives of this ERP are to:

1. Provide the operating facility with the necessary information to properly respond to an emergency;
2. Define personnel roles for emergencies involving hazardous conditions;
3. Reduce the potential for accidental spills and environmental degradation by taking precautionary measures and being prepared for potential emergencies; and
4. Include an exercise program to ensure that the ERP and related response activities meet environmental protection objectives.

1.3 UPDATING PROCEDURES

This is a preliminary version of the ERP. As the Project proceeds and final information concerning permit requirements, construction, operations, and site personnel is developed, the ERP will be revised prior to Project commissioning. In addition, the ERP will be reviewed during development of the *Safety Training Plan* for the facility.

This ERP will be reviewed and updated on a regular basis during operations to ensure it remains applicable to the hazards associated with the operation and the responsible parties who will be assigned to respond to a spill. Modifications or changes will be made if conditions pertaining to this ERP change.

2. PROJECT DESCRIPTION

2.1 PROJECT LOCATION AND ACCESS

The Project is located in eastern Oregon, at 43.673°N latitude, 117.364°W longitude in Malheur County, approximately 22 miles south-southwest of Vale (Figures 1 and 2).

Access to the Project is provided by Twin Springs Road, a seasonally maintained unpaved road that originates at Russell Road, which is a paved two-lane county road that joins with US 20, approximately 4 miles west of Vale, Oregon (Figure 2). The Project area may be reached from the Twin Springs Road via 2.5 miles of secondary unpaved roads. Winter and wet weather conditions occasionally limit access to the property, although on-site travel is generally possible year-round. The access road will be upgraded for year-round activities during mine construction and will be maintained by Calico during the mine operations. Calico plans to control access at the mine area and processing plant by using fencing and gating, as well as upgrading the existing public access from the existing Twin Springs Road.

The community nearest the project is Vale, Oregon, with a population of approximately 1,700. Vale is the seat of Malheur County and the home of all related government offices. The regional BLM office is also located in Vale. Fuel, restaurants, lodging, groceries, hardware supplies, and equipment-repair shops are available in Vale. Other logistical support is available in Nyssa and Ontario, Oregon, both of which are located within 30 miles of the Project. Boise, Idaho, a major metropolitan city, is within a 90-minute drive of the Project area and has the closest commercial airport served by major US airlines.

2.2 PROJECT ACTIVITIES AND INFRASTRUCTURE

Calico proposes to mine approximately 2.07 million short tons (Mst) of mill-grade ore and 0.27 Mst of waste rock for a mine life of approximately 7.8 years; however, the Tailings Storage Facility (TSF) has been sized to contain 3.64 Mst should additional Reserves be identified. The material (both ore and waste) will be extracted from the underground mine using conventional underground mining techniques including drilling, blasting, mucking, loading, and hauling at a rate of approximately 1,200 short tons per day (stpd), four days per week. Calico will use hydraulic loaders to load the ore and waste into the haul trucks. The haul trucks will transport the waste rock to the Temporary Waste Rock Storage Facility (TWRSF) near the TSF and transport the ore to the Run of Mine (ROM) stockpile adjacent to the crushing and milling facilities. The ore will be crushed and leached in a carbon-in-leach (CIL) processing plant a rate of 750 stpd, seven days per week. The leached tailings will go through a cyanide detoxification process, amended with lime, then be pumped in a slurry to the TSF, with supernatant solution recovered and pumped back to the Mill.

In general, the proposed mining and metal processing operations will consist of an underground mine and ore processing facilities, including a conventional mill and TSF, a TWRSF, and other support facilities (Figures 3 and 4). The Project will include the following major components:

- An underground mine, with Mine Portal, decline, and ventilation shaft;
- TSF with Tailings Embankment, Tailings Impoundment, and Reclaim Pond;

- TWRSF;
- Process Plant Area, which includes the Process Plant building, control room, crushing facilities, conveyors, ore bins, control rooms, CIL processing plant, reagent storage building (including chemical and reagent storage), gold room, and Collection Pond;
- Infrastructure and ancillary facilities that include Project site main gate and guard house, administration office and change house, assay laboratory and sample preparation area, truck workshop and warehouse, wash pads, Process Plant workshop and warehouse, meteorological station, explosive magazines, parking areas, ore stockpiles, solid and liquid hazardous waste storage, and fuel storage and dispensing area;
- Roads, including upgrades to the Twin Springs and Cow Hollow roads, and construction of the Mine access, internal access, and Mine haul roads;
- Yards and laydown areas;
- Growth Media Stockpiles;
- Water supply, including Production Wellfield, water pipeline, raw water storage tank, and Potable Water Treatment Plant;
- Power supply that includes a power substation, upgrades to the existing 69 and 12.5 kilovolt (kV) overland power transmission system, new 34.5 kV overland power transmission system, onsite powerlines, and generators;
- Permanent and temporary stormwater diversion channels;
- Other areas, including the exploration areas, septic system, and perimeter fence;
- Quarry; and
- Reclamation Borrow Areas.

2.3 FUELS AND CHEMICALS

Calico will transport, store, and use a variety of fuels and reagents for operation of the Project.

Table 3 lists the petroleum products and chemicals/reagents (hazardous and non-hazardous) stored at the site. Section 6.1 describes petroleum storage and handling. Section 5.4 describes hazardous materials expected to be associated with the Project, and their handling and disposal. Transportation of hazardous materials will be handled by vendors and comply with United States and Oregon Department of Transportation (DOT) requirements.

Safety data sheets (SDS) for the products stored on site will be available on site.

3. REPORTING AND NOTIFICATION

3.1 INITIAL INCIDENT REPORTING

1. The first person on the scene reports the incident to their supervisor.
2. The supervisor notifies the General Manager, who is the primary emergency contact, and Environmental Manager.
3. The Environmental Manager reports the spill to the Oregon Emergency Response System (OERS) for all spills, National Response Center (NRC) if the spill is to water, and the Mine Safety and Health Administration (MSHA).

The primary emergency contact for the project is the General Manager. Emergency contact information for site personnel, first responders, medical care, and local and federal agencies is provided in Table 1.

Spills to land or water will be immediately reported to OERS, which is operated by the Oregon Office of Emergency Management. The ODEQ, state and other public safety agencies receive notification through OERS. State requirements require reporting of any releases to waters of the state, above the reportable quantity (RQ) for Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) hazardous substances, and any release of petroleum substances above 42 gallons. ODEQ encourages the reporting of any release and does not penalize for over reporting. Calico's Environmental Manager or designee will be responsible for incident reporting.

Reporting to MSHA is immediate - within 15 minutes of when the operator knew or should have known about the accident.

3.2 INCIDENT REPORTING FORMS

Spills will be immediately reported to the ODEQ through OERS by the Environmental Manager via telephone. A spill/release report will be emailed to DOSPILLS@deq.state.or.us using the ODEQ spill release form (https://www.oregon.gov/deq/FilterDocs/SpillReleaseReportForm.pdf). Spills that are reported to ODEQ will also be reported to the Vale BLM office, if the spill occurs on BLM-managed land, per the contact information listed in Table 1. Spills to water will be immediately report to the NRC by the Environmental Manager.

Incident Command System (ICS) forms available online (www.nwcg.gov/publications/ics-forms) will be used by the Incident Management Team (IMT) during the response. These forms will be used to document incidents that occur as well as assist mine personnel during an emergency.

3.3 EXTERNAL EMERGENCY SERVICES AND CONTACT INFORMATION

In accordance with the MSHA regulations, mine operators are required to establish emergency firefighting, evacuation, and rescue procedures for the surface portions of their operations. Calico will coordinate procedures in advance with available firefighting organizations. Only persons wearing and

trained in the use of mine rescue and firefighting rescue equipment will be allowed to participate in the underground rescue and firefighting operations.

Responding mine personnel will first contact external emergency services via two-way radios installed in vehicles and heavy equipment or by phone. A separate radio frequency will be established for emergency use, and emergency response and communication protocols will be established. Due to the remote location of the site, fire response will be handled by mine staff until the appropriate agency can respond.

Once the emergency has been stabilized, the Sheriff's Department and additional regulatory agencies as required will be contacted. Malheur County has a single 911 answering point/dispatch center located at the Malheur County Sheriff's Office in Vale. That dispatch center handles calls for law enforcement, fire, and EMS agencies. According to the Oregon State Fire Marshal, there are seven fire agencies listed for the County; Adrian RFPD, Nyssa FD, Ontario F&R, Ontario RFPD, Payette RFPD-Oregon, Vale FD and Weiser RFPD Annex-Oregon. Most of the fire responders are volunteers. Weiser RFPD and Payette RFPD will respond into small areas of Malheur County as needed. Neither have stations or equipment in Malheur County.

Ontario Fire & Rescue is home to the Oregon State Regional Hazardous Materials Emergency Response Team (RHMERT) #14. This team is made up of responders who receive training at a technician level to respond to and help identify and mitigate hazardous materials releases.

The closest major medical center to the mine is Saint Alphonsus Medical Center in Ontario, Oregon, located approximately 37 road miles from the Project site. This has an emergency room and other facilities to handle injuries that may occur. If immediate care is necessary that cannot be provided at Saint Alphonsus Medical Center in Ontario, the Life Flight Air Ambulance out of Ontario, Oregon, is equipped to provide rapid air transportation of critically injured/ill persons. For less critical incidences, a clinic is available in Vale, Oregon, located approximately 22 miles from the Project.

Malheur County is served by Treasure Valley Paramedics which has two ambulances in Ontario and one in Nyssa, and Vale Ambulance with one ambulance (not part of Treasure Valley Paramedics). Outside of the Ontario area, the County is served by volunteer fire and ambulance service.

Calico will have medical staff on site to treat minor incidents and to try to stabilize any major medical incidents until the Life Flight Air Ambulance out of Ontario, Oregon, is dispatched and can reach the Project site.

Table 1 includes the list of required internal and agency contacts in the event of a release or incident at the facility. This ERP does not currently provide the names and contact numbers of site-specific personnel, as they have not been finalized. However, this will be done prior to commencement of operations and Table 1 revised to reflect the complete information.

3.4 TRANSPORTATION-RELATED INCIDENTS

Spills of hazardous materials during transit are regulated under OAR 110 which is administered by ODOT. In the event of an incident, the transporter of the hazardous material is required to immediately notify:

- OARS at 1-800-452-0311 for calls within Oregon or 1-503-378-4124 outside of Oregon
- NRC at 1-800-424-8802
- Waste generator (refer to manifest or shipping papers for details).

In addition, the transporter is responsible for noting the time and location of the incident as well as the type of hazardous waste which was spilled and within 30 days of the incident, file a Hazardous Materials Incident Report (DOT Form F5800.1) with the Oregon DOT.

4. EMERGENCY RESPONSE

4.1 EMERGENCY SITUATIONS

Emergency situations may be the result of various conditions, natural and human-caused. These conditions include earthquake, wildland fire, torrential rain/flooding, high wind/windstorm, landslide, mine infrastructure instability, transportation incident, explosives incident, operational failure, process failure, equipment failure, human-started fire, worker injury/illness, power outage, TSF dam breach, overtopping of the reclaim pond, overtopping of the dam crest, impoundment or reclaim pond leakage, etc.

These conditions may not be emergencies, but they may be the cause of emergencies, such as hazardous materials or oil spills, injuries, process shutdown, etc. In all cases, the emergency response procedures in Section 4.2 will be followed.

Calico has a written Emergency Action Plan for the Project for emergencies that require evacuation, as noted in Table 2. The plan is available at the site for employees to review. Michael McGinnis is responsible for the Emergency Action Plan and will ensure that all employees understand it and follow it. Review of the Emergency Action Plan will be incorporated into the *Safety Training Plan* for the facility.

4.2 EMERGENCY RESPONSE PROCEDURES

The following emergency response procedures are to be followed in the event of an emergency on site, regardless of the cause or nature of the event:

1. The first person on the scene reports the incident to their supervisor;
2. The supervisor notifies the General Manager and Environmental Manager;
3. The Environmental Manager gathers information about the incident, and completes preliminary information on an incident report form;
4. At the General Manager's direction, the Environmental Manager contacts the on-site Emergency Response Team (ERT) to be dispatched to the incident;
5. Initiate site evacuation procedures if required (see Emergency Action Plan above);
6. Contact off-site emergency units and contractors if necessary;
7. Supervisor completes an incident report form;
8. Verbally notify agencies of incident;
9. Follow up incident with debriefing and develop corrective action plan to reduce the potential of a similar incident and/or to reduce the impact of a similar incident; and
10. Evaluate emergency response procedures and modify, as necessary.

Personnel responding to emergencies will follow appropriate safety and health standards according to MSHA, Hazardous Waste Operations and Emergency Response (HAZWOPER), and other applicable federal, state, and local standards.

4.3 EXPLOSION RESPONSE

Explosive agents will be purchased, transported, stored and used in accordance with the Bureau of Alcohol, Tobacco, Firearms and Explosives (BATFE), Department of Homeland Security (DHS) provisions and MSHA regulations. The primary explosive used will be ammonium nitrate fuel oil (ANFO) . Explosive agents, boosters and blasting caps will be stored within a secured area. Boosters and detonators will be stored in separate storage magazines.

Explosive storage facilities will be constructed at the southwest side of the mine area. This location uses a hill as a natural barrier between the explosives-storage facility and other infrastructure. The storage facility will consist of a powder magazine in accordance with current applicable explosives regulations. Dirt berms will be placed around the magazines for additional security. Explosives will be delivered to the site by vendors using the main access.

Only trained and experienced persons are allowed to carry and handle explosives and detonators.

ANFO is used as a blasting agent. It is stable under normal conditions of storage and handling. Incompatible materials to avoid contact with other explosives, pyrotechnics, solvents, acids, alkalis, reducing agents, amines, phosphorus, organic materials/compounds, finely divided combustible materials, finely divided metals and metal oxides.

In the event an explosive or exothermic reaction were to occur, toxic and/or irritating fumes including carbon dioxide, carbon monoxide, oxides of nitrogen, nitric acid and ammonia may be emitted.

If a fire or explosion does occur:

- Do not fight the fire.
- Cease operation in the area.
- Avoid breathing fumes or gases.
- Immediately isolate the area and evacuate personnel to the designated assembly area.

Use only remote or fixed extinguishing systems (sprinklers).

4.4 TSF FAILURE RESPONSE

Potential failure modes were considered during development of the TSF design, beginning with the Pre-Feasibility Study. The TSF is designed as a “zero discharge” facility with a geomembrane lining system that provides a barrier between the natural environment and the tailings and process solutions. During the design process, credible risks were mitigated to reduce the risk to as low as reasonably possible, employing best available technology for TSF facilities in the arid western United States. Golder evaluated credible risks associated with the TSF and surrounding facilities in their Technical Memorandum dated November 3, 2021 (Appendix A). If a TSF failure were to occur at the facility, the Emergency Action Plan (Table 2) would be implemented and an IMT established to coordinate response activities as described in Section 4.6.

4.5 SPILL RESPONSE PROCEDURES

The following procedures are to be followed in the event of a hazardous materials or fuel release:

1. The first person on the scene reports the incident to their supervisor and attempts to control the source, if it can be done safely;
2. The supervisor notifies the General Manager and Environmental Manager;
3. Remove ignition sources;
4. The Environmental Manager gathers information about the incident, notifies OERS, MSHA, and NRC as appropriate, completes preliminary information on an incident report form;
5. At the General Manager's direction, the Environmental Manager contacts the onsite ERT to be dispatched to the incident;
6. Contact off-site emergency units and spill response contractor if necessary;
7. Contain spill material and control release;
8. Remove and secure contaminated material;
9. Arrange for proper disposal of contaminated material;
10. Supervisor completes an incident report form;
11. Verbally notify agencies of spill if the amount is greater than or equal to the reportablequantity;
12. Follow up incident with debriefing and develop corrective action; and
13. Evaluate emergency response procedures and modify, as necessary.

4.5.1 CYANIDE RELEASE RESPONSE

The anticipated volume and storage areas for sodium cyanide are listed in Table 3. This table is preliminary and will be finalized prior to start-up of the facility as part of the required communication that must be filed with the State Fire Marshal within 30 days of a regulated substance arriving onsite.

Details of sodium cyanide transport and storage are provided in Section 3 of the *Cyanide Management Plan*. Spill response materials needed for sodium cyanide spills include bags of ferrous sulfate neutralizing agent, calcium/sodium hypochlorite drums, bags of lime or soda ash, and chemical absorbent.

In the event of a release of sodium cyanide, the immediate area will be evacuated and isolated. Personnel will move upwind of spill. Entry to the confined area by unauthorized personnel will be prevented.

Sodium cyanide is not combustible, but may generate toxic, flammable, corrosive and explosive hydrogen cyanide gas if in contact with water, carbon dioxide fire extinguishers and some foam fire extinguisher that contain acidic agents.

Response efforts will NOT begin until the ERT has been assembled, the appropriate hazard assessment of the site is performed, and the cyanide antidote kit and trained medical responders are available.

Prior to commencing spill response efforts, the ERT will ensure that:

- All ignition sources have been eliminated;
- Contact with acids or acid fumes is not present;
- Responding personnel don appropriate PPE, including an approved respirator for vapors and dust, goggles, rubber suit, rubber, gloves, and boots. A self-contained breathing apparatus should be worn in the case of large spills.

The ERT will initiate a 50-foot isolation area around the release to avoid personnel exposure. The area surrounding the spill will be diked to prevent spill migration. The dike will be used to contain and stabilize a contaminated area; contain or divert the spill away from sensitive areas; and create recovery locations.

An embankment may be built perpendicular to the flow or around a contaminated area and can be constructed with sand, earth, or vermiculite. The barrier can be built by manual labor or with heavy equipment. Once constructed, the barriers will be monitored and shored-up, as necessary. If the spill migrates past the barrier, another barrier will be constructed downslope of the spill trajectory.

Absorbent materials suitable for contact with sodium cyanide may be used for liquid spill recovery efforts. Recovered material will be placed in appropriate containers and returned to the manufacturer or disposed appropriately, in accordance with the *Waste Management Plan*. Generously cover remaining residue with lime or soda ash to maintain a pH of 9 or higher, add ferrous sulfate, then water and mix well. Allow 30 minutes for complete penetration and neutralization to occur. Collect residue and store in dedicated containers for disposal. Test for presence of free cyanide. If >10 parts per million (ppm), repeat cleanup. If <10 ppm, proceed with final clean up using dilute aqueous sodium or calcium hypochlorite. Spray hypochlorite solution evenly to the area being decontaminated. Repeat until free cyanide content is <1 ppm.

4.5.2 OIL SPILL RESPONSE

The types and volumes of hydrocarbon products stored on site as well as anticipated storage locations are listed in Table 3. This table is preliminary and will be finalized prior to start-up of the facility as part of the required communication that must be filed with the State Fire Marshal within 30 days of a regulated substance arriving onsite. Anticipated products include diesel, oil, hydraulic fluid, gear lube, anti-freeze, and grease. Used oil and antifreeze will also be stored on site. Diesel will be stored in double-walled tanks; the remaining oils will be stored in drums or totes within secondary containment at the truck shop. The likelihood of a spill escaping secondary containment is small; however, Calico will be prepared to respond to oil spills.

Spill response equipment (Section 5.5) will be stored at various locations on site and in the truck shop. This equipment includes absorbent socks/pads and kitty litter. If a spill occurs during vehicle maintenance or a discharge from an oil container escapes secondary containment, the first responder will use absorbents to soak up the fluid.

If a spill occurs that requires more than the first responder actions, the on-site ERT will be notified. The off-site spill response contractor will be notified for spills that exceed the ERT's capabilities.

The ERT's initial objective will be to construct berms and/or dikes to contain and accumulate oil for recovery. These barriers contain and stabilize a contaminated area; contain or divert oil away from sensitive areas; and create recovery locations. This involves building an embankment perpendicular to the flow of the oil or around a contaminated area. These can be constructed with a wide variety of materials including soil, gravel, snow, sandbags, oil boom, timbers and logs, and can be built by manual labor or with heavy equipment. Once constructed, the barriers will be monitored and shored-up, as necessary. If oil migrates past the barrier, another barrier will be constructed downslope of the oil trajectory.

If the spill occurs in a building, floor drains will be protected by placing a cover over the drain and diverting oil away from the drain. If the spill occurs outdoors, nearby culverts will be blocked using sandbags, sheet metal or plywood barriers.

Absorbent socks, pads, and boom will be used within the berm/dike to recover fluid. Used absorbents will be placed in open-top drums or empty totes for temporary storage.

Spills from vehicles will be reported to the first responder's supervisor. Small spills can be removed using manual tools and sorbent materials. Larger spills will be reported and responded to as described above.

When the spill response contractor (see Section 5.5) has arrived and received a detailed briefing from the IC, the contractor will take over response activities. If the spill has been effectively contained by the emergency response team, the contractor will start recovery operations, using a vacuum truck and/or pumps. Free oil will be pumped into the vacuum truck or into open top drums and totes for temporary storage. After the free oil has been recovered, absorbent pads will be used to wipe off hard surfaces (piping, structures, concrete).

Impacted soils will be excavated and stored in totes or temporary stockpiles until it can be disposed of. Stockpiling and other temporary storage of contaminated soils and oiled response materials will be coordinated with state and federal agencies by the IMT. The Project's *Waste Management Plan* describes disposal of recovered oil and oily materials.

4.5.3 CHEMICAL SPILLS RESPONSE

Chemicals, other than sodium cyanide and oil products discussed in Sections 4.3.1 and 4.3.2 respectively, that will be used on site are listed in Table 3 and include hazardous and nonhazardous materials in solid (powder, pebble, etc.) or liquid form. Unplanned events may occur that require rapid response to protect worker health, prevent or reduce releases to the environment, and reduce damage to equipment.

SDS will be available on site; the SDS provide specific safety precautions and response procedures for the subject chemical.

In general, response to fluid chemical spills is similar to oil spill response: Follow the procedures in Section 4.3, control the source, contain the fluid, and cleanup using sorbent materials.

Solid chemicals can be swept up and placed in containers.

4.5.4 CONTACT AND RECLAIM WATER SPILL RESPONSE

The contact water used in gold extraction in the leaching circuit has a pH of 10 to 10.5 which is necessary to achieve gold extraction as well as prevent the formation of hydrogen cyanide gas. Sensors and alarms for hydrogen cyanide are installed in this area of the mill and are further described in Section 5.4.

Spills of contact water at the mill, if not remaining within the secondary containment of the process building, would flow toward the plant water collection pond. Detoxified slurry from the final tailings pump box is sent to the TSF through a buried pipe-in-pipe. When it daylights, the aboveground pipe is positioned within a lined containment trench. Thus, detoxified slurry water is unlikely to migrate offsite.

Reclaim water from the tailings reclaim pond will be pumped to the mill for reuse via overland double containment piping. A release from this reclaim stream may travel overland to discharge offsite. Contact or reclaim water spills described here, or additional unplanned events may occur at the facility. Rapid response will be initiated to protect worker health, prevent or reduce releases to the environment, and reduce damage to equipment. The physical characteristics of contact and reclaim water streams at the mine, as well as specific safety precautions and response procedures for spills of these materials will be communicated to employees through the Hazard Communication program. In general, response to contact or reclaim water spills will be similar to oil and chemical spill response, following the procedures in Section 4.3: control the source, contain the fluid, and cleanup using appropriate sorbent materials.

4.6 INCIDENT COMMAND SYSTEM AND DUTIES OF MINE PERSONNEL

Incidents will be managed by an IMT under an ICS structure (Figure 5). Personnel filling the ICS roles are identified. One person may fill multiple roles, depending on the size and severity of the incident.

4.6.1 GENERAL MANAGER/INCIDENT COMMANDER

The General Manager or designee will be notified as soon as possible when a reportable spill or release occurs. The General Manager will take on Incident Commander responsibilities and will direct all public statements made to the media, if required.

4.6.2 ENVIRONMENTAL MANAGER/PLANNING SECTION

The Environmental Manager will determine and verify pertinent facts about the incident, including the amount and location of the spill or release, probable direction, and time of travel of the spill, resources required at the scene, and the property that may be affected. The Environmental Manager may advise, instruct, and/or direct containment, countermeasures, and cleanup of the release. The Environmental Manager will assess the area to determine the effect and extent of the spill or release and report the information to the General Manager.

4.6.3 SAFETY OFFICER

The Safety Officer will ensure the safety of all persons involved with a spill or release. Once on the scene of the spill, the Safety Officer will evaluate the area for dangers and will ensure that all persons involved are equipped with the appropriate safety gear and have received the proper training. The Safety Officer may also determine if tests for toxic gases are required prior to handling of the spilled material.

4.6.4 SUPERVISOR/OPERATIONS SECTION

The foreman of an area where a spill or release occurs is responsible for coordinating the initial containment. The Supervisor is responsible for determining if the spill will require the ERT. Once the spill or release is controlled, the Supervisor must coordinate with the Environmental and Safety Departments to determine if the spill is or is not a reportable spill.

4.6.5 EMERGENCY RESPONSE TEAM (ERT)/OPERATIONS SECTION

Calico will have a trained ERT at the site 24 hours per day to manage potential spills of regulated materials at the site. Response for transportation-related releases of regulated materials bound for the site will be the responsibility of the local and regional agencies. However, where appropriate, Calico may assist with response to off-site incidents, including providing resources, based on agency requests.

The ERT will include employees who have been specially trained to work with hazardous materials in a safe and proper manner. The team will be trained in the use of all safety gear and will promote and demonstrate safe remediation practices. The prime responsibility of the team is to assess a scene for hazards, act professionally and conduct cleanup procedures.

4.6.6 FINANCE/ADMINISTRATION AND LOGISTICS SECTION

Calico administrative personnel and finance/accounting/procurement personnel will be handling finance/administration and logistics within the IMT.

5. EMERGENCY PREPAREDNESS

5.1 PERSONAL PROTECTIVE EQUIPMENT

Mine and process personnel will be required to wear personal protective equipment (PPE), including hardhats, steel-toed and steel-shanked boots, leather gloves, eye protection, safety vests, and hearing protection (where necessary), as required by MSHA. Process personnel will also be provided with chemical-resistant gloves, aprons, coats, pants, face shields, and dust masks or air-purifying respirators, depending on the particular task being performed at a given time. Eye wash stations will be placed at all locations where hazardous chemicals are stored.

5.2 FIRST AID

A first aid clinic will be housed in the administration and security offices. First aid kits will be maintained in the administration building, security office, maintenance shop and warehouse, assay laboratory, and process building, in addition to vehicles and heavy equipment as required by MSHA. Personnel will be trained and certified in CPR (cardiopulmonary resuscitation) and basic first aid on an annual basis. Cyanide antidote kits will be staged in the cyanide storage tank area, the leach CIL area, and the assay lab.

5.3 FIRE PROTECTION

Raw water will be pumped from boreholes to the raw-water storage tank, which will be sized to include a fire-water reserve (78,000 gallons).

Water for fire protection will be distributed from the raw water tank located on Grassy Mountain via a network of piping and will be maintained under a constant pressure with a jockey pump. The piping will be looped and sectionalized to minimize loss of fire protection during maintenance. Where located outside buildings, fire water piping will be buried below the groundsurface to eliminate the potential of pipes freezing.

Yard hydrants will be limited to the fuel storage tank area. Wall hydrants will be used in lieu of yard hydrants and will be located on the outside walls of the buildings in cabinets that will be heated during winter months.

Fire protection within buildings will include standpipe systems, sprinkler systems, and portable fire extinguishers. Standpipe systems will be provided in all structures that exceed 46 feet in height, as well as where required by building code, local authorities, or the insurance underwriter.

Sprinklers will be provided at the following locations or to protect the following items: truck workshop; assay laboratory; above hydraulic or lube packs that contain more than 120 gallons of fluid; lube-storage rooms; any conveyor belts that are within tunnels or other enclosed spaces which would be hazardous to fight fires manually; transformers; and warehouses.

Fire extinguishers will be placed in buildings, equipment storage yards, vehicles, and heavy equipment, as required by MSHA. Fire extinguishers will be of the type required to address the reasonably anticipated class of fire at a given location. Fire extinguishers will be serviced regularly to ensure their proper functioning. Locations and proper use of fire extinguishers will be reviewed with personnel on an annual basis, at a minimum, and upon assignment for new personnel.

Based on information in the SDS for the following chemicals, water should not be used for fire suppression if these chemicals are present:

- Methyl ethyl ketone: Use dry powder or dry sand.
- Silver inquart: Use powder for metal fires.
- Sodium hydroxide (liquid): Foam, carbon dioxide, or dry chemicals may be used.
- Sulfuric acid: Substance is non-flammable; use media appropriate to extinguish surrounding fire.

5.4 HAZARDOUS MATERIALS IDENTIFICATION, TRANSPORT, STORAGE, AND USE

A variety of chemicals will be used at the Project. Table 3 lists chemicals that will be used at the Project and identifies if the material is qualified as hazardous and under which definition. Table 3 also indicates the expected storage volume. The on-site storage containerization and units may vary according to vendor availability.

Hazardous materials are defined by 49 CFR 172 according to the following characteristics:

- Toxicity;
- Explosive properties;
- Corrosiveness;
- Flammability;
- Oxidizing properties; and
- Potential for violent or chemical reaction when mixed.

Hazardous materials can also be defined via listing. These include the Consolidated List of Chemicals Subject to EPCRA, CERCLA, and Section 112(r) of the Clean Air Act (“List of Lists”), Occupational Safety and Health Administration (OSHA) Hazard Communication/SDS, and US DOT Table of Hazardous Materials and Special Provisions.

Materials will be transported, stored, and used in accordance with applicable federal, state, and local regulations and guidelines, including the US DOT; Bureau of Alcohol, Tobacco, Firearms and Explosives; Department of Homeland Security; MSHA; Oregon DOT; and the Oregon State Fire Marshal. Chemicals will be handled according to standard industry practices which will include the use of PPE, task training, and preventive maintenance of equipment, tanks, pipes, and fittings.

Hazardous materials will be stored at the most efficient location according to their place of use. Small quantities of chemicals will be stored in secure, fire-proof cabinets in the assay lab adjacent to the area of their use. ln areas where corrosive materials are stored or used, the concrete floor will be covered with an impermeable compound, resistant to corrosive chemicals. Only chemical groups compatible with one

another may be stored together. Incompatible materials will not be stored in proximity to one another (i.e., same room or cabinet).

SDS for hazardous materials used in mine operations will be maintained in strategic locations at the mine and may also be maintained electronically. The SDS provide relevant information on physical characteristics, hazardous reactivity, fire and explosion data, and health hazard information, including safety precautions, first aid, and medical treatment.

Tanks and other containers will be clearly labeled as to their contents.

Given the properties of the reagents and their interactions with each other, design of the reagent preparation area will largely focus on the isolation of cyanide. The cyanide offloading and storage area is located away from incompatible reagents and in a low traffic area of the Process Plant. The cyanide offloading and storage area will also be separated from the acidic reagent preparation area by the alkaline reagents. In this configuration the basic chemicals act as a buffer to prevent the exposure of acidic reagents and sodium cyanide, which would lead to the generation of cyanide gas.

The reagent area will be covered but open to the air to provide adequate ventilation. Reagents will be prepared and stored in separate self-contained areas on the west side of the Process Plant (Figure 4) and delivered by individual metering pumps or centrifugal pumps to the required addition points. Acidic and basic reagents will be stored and mixed in physically-separated areas to ensure no exposure of cyanide to hydrochloric acid, copper sulfate or SMBS, which would generate hydrogen-cyanide gas. Analyzers for hydrogen-cyanide gas will activate local audible and visual alarms as well as alarms on the control system in the event hydrogen-cyanide gas is present. Personal cyanide monitoring devices will be provided to personnel working in the leach and CIL area. Clear and unambiguous signs and safety eyewash/shower stations will be provided at key locations in areas of regular work activity. The *Cyanide Management Plan* has more information regarding reagent transportation, offloading and storage.

Secondary containments for the chemicals will be sized to contain 110 percent of the largest tank in the containment; if precipitation can fall into the containment area, the capacity will be increased to contain precipitation from a 25-year storm event (1.22 inches). Concrete containment drawings and calculations are included in the *Mill Design Plan*.

Hazardous materials storage reporting requirements are discussed in the *Toxic and Hazardous Substances Transportation and Storage Plan*.

5.5 SPILL RESPONSE EQUIPMENT AND CONTRACTORS

Spill containment and cleanup equipment maintained at strategic locations throughout the mine include the following:

- Oil absorbent rolls;
- Oil absorbent pads;
- Oil absorbent booms;
- Oil absorbent pillows;

- Spill kits;
- Backhoe or excavator;
- Motor graders; and
- Bulldozers.

If the spill is of significant size and/or duration, special cleanup efforts such as those provided by environmental contractors will be used, as necessary. The nearest spill response contractors are located in Boise, Idaho and Prineville, Oregon:

Olympus Technical Services, Inc	**(208) 562-5500**	Boise, Idaho (1.5- to 2-hr drive)
SMAF Environmental	**(800) 875-7069**	Prineville, Oregon (4-hr drive)

5.6 CONTACT WATER MANAGEMENT

Water within the watersheds where the mine facilities are located is classified into two categories, "contact" and "non-contact" water. Contact water includes surface water and groundwater that has been exposed to excavated materials (i.e. ore, tailings and/or waste rock) or to mining process facilities. Surface contact water will be collected for storage and reuse within the site, either in ponds, pits or sumps. Non-contact water is surface water and stormwater that has not been in contact with disturbed surfaces within the site (i.e., freshwater) and is either diverted around the mine facilities or collected for storage and reuse. Non-contact water that mixes or comingles with contact water becomes contact water.

Calico will monitor contact waters, including the CIL plant and reclaim ponds. Response and reporting requirements specific to contact water will be consistent with reporting notifications provided in Sections 3 and 4 of this plan.

5.7 DISPOSAL AND WASTE MANAGEMENT

Waste management is described in the Project's *Waste Management Plan*. The Project's *Waste Management Plan* and *Petroleum-Contaminated Soil Management Plan* describe disposal of recovered materials and contaminated spill response materials. The plans include the process followed for temporary stockpiles of contaminated soil and other temporary waste storage.

5.8 COMMUNICATIONS SYSTEM

On-site communications will comprise of inter-connected mobile and fixed systems, including a land-line or cable telephone network, portable two-way radios, and internet. Access for internet and corporate network connections will be made via satellite connections or a cable line. The primary means of communication inside the mine and between the underground and the surface will be via a leaky-feeder very high frequency (VHF) radio system.

5.9 ALARM SYSTEM

A fire alarm system will be installed in the following surface facilities (per MSHA regulations 30 CFR 57.4330): administrative/security building; truck workshop; warehouse; assay laboratory;and CIL process building. A fire alarm system will be provided and maintained in operating condition in the underground mine area, per MSHA regulations 30 CFR 57.4360. These systems will be used to initiate evacuations and alert personnel of emergency situations.

Hydrogen-cyanide analyzers will activate local audible and visual alarms as well as alarms on the control system in the event hydrogen-cyanide gas is present. Personal cyanide monitoring devices will also be provided to personnel working in the leach and CIL area.

5.10 EVACUATION PLANS

Evacuation plans will be developed for structures including the administrative/security building, truck workshop, warehouse, assay laboratory, CIL process building, and other structures that might require evacuation during an emergency. Evacuation plans will outline the procedures that should be followed in the event of a fire or other emergency requiring evacuation and will definethe responsibilities of key personnel. Evacuation maps showing suggested evacuation locations and emergency response routes will be posted at appropriate locations throughout the Project site.

Two mobile emergency refuge stations will be provided in case of fire or rockfalls that would block access and prevent full evacuation of personnel. These refuges will allow the staff to remain safe in the underground mine for 48 hours. The refuges are mobile; each can accommodate up to 20 people within the protected chamber, and they will be located so that they are always no more than 1,000 feet from the areas where the mine operation personnel are located.

The primary route for evacuation will be the decline. The secondary route for evacuation will be the vent raises. All vent raises will be steel lined and equipped with an escape ladder for secondary evacuation.

5.11 ANCILLARY POWER SYSTEMS

Electrical power will be supplied to the mine via an Idaho Power overhead powerline. The power demand will be approximately five megawatts throughout the life of the mine. The Idaho Power powerline will connect to the Project substation, located near the processing facility.

One emergency diesel generator capable of producing 2,000 kilowatts will be located at the process facility. This generator will provide sufficient emergency power to operate critical components at the facility in the event of a power outage.

At the start of mining, an underground 480 volt (V) transformer will be placed near the entrance to the portal. This will supply power to electrical equipment used to develop the main decline and portable fans. Once development has advanced far enough that carrying power at 480 V becomes too inefficient, a main powerline will be installed along the rib of the decline to carry 4.16 kilovolts and will be connected to the transformer which will be moved underground.

Upon completion of the decline to the 3,224-foot level, and the initiation of production-mining activities, a second underground transformer will be purchased for use in the lower areas of the mine. Line power will also be carried up the hill to the ventilation shaft to supply power to the ventilation fan.

6. SPILL PREVENTION

6.1 OIL AND FUELS STORAGE AND USE

A fuel storage area will be located on the south side of the Processing Facilities (Figure 4). Two double-walled steel tanks will be used for diesel storage; the total combined volume of the two tanks is 8,250 gallons. Diesel storage tanks will be clearly labeled, and their locations will be made known to on-site personnel.

Diesel will be used as fuel for light, intermediate, and heavy vehicles by both underground and surface mobile equipment. The surface equipment will primarily be fueled at a fuel island near the storage tanks. The underground mining equipment includes a fuel truck that will be used to fuel underground equipment as required. This fuel truck may be used to fuel surface equipment as needed.

A variety of petroleum products will be managed and stored at the truck shop in a manner complying with MSHA requirements and other state and federal agencies. Petroleum products and expected volumes are listed in Table 3.

Mobile equipment maintenance will be performed at the truck shop (located on the south side of the Processing Facilities, see Figure 4). The maintenance area will consist of an enclosure and concrete pad of appropriate size and an oil-water separator.

A centralized oil-water separator will be installed adjacent to the truck workshop to treat water from drains located at each maintenance bay and from the wash rack. The floor drains in the truck workshop will be intended for collection of rainwater and snow melt from vehicles and equipment. Gray water from the oil/water separator will be collected in a tank within containment or a lined impoundment. The gray water will be recycled back to the wash system; excess oil-free water from the wash system will be used for dust control. The separated oil will be stored either in a double-lined tank or a single-wall tank in a concrete containment and collected by a licensed waste collection contractor.

Equipment maintenance and fueling will be performed over drip pans and equipment will be inspected for leaks regularly. Waste oil and contaminated earth from minor spills or drips will be collected for disposal. Spills will be reported in accordance with Section 3.1. Used oil and used containers will be disposed or recycled according to federal, state, and local regulations (see the *Waste Management Plan*).

6.2 SECONDARY CONTAINMENT

Diesel will be stored in double-walled tanks. Secondary containment capacity of double-walled tanks is not impacted by precipitation. Secondary containment at the truck unloading area will be designed for a minimum of 110 percent of the largest tanker within the containment. Other hydrocarbon products will be stored inside secondary containment with a capacity of 110 percent of the largest container in the area. If precipitation can fall into the containment area, the capacity will include sufficient freeboard to contain precipitation from a 25-year storm event (1.22 inches).

6.3 TRANSFER OF PETROLEUM PRODUCTS

Fuel will be delivered via highway-legal trucks directly to the site. Drivers offloading fuel will be certified and trained. Camlock fittings or other appropriate fittings will be located within the secondary containment to collect spill fuels and a sump will be located at one end of the containment so that spilled fuels can be pumped out using a portable pump. Recovered fuel will be re-used or disposed of. Fire hydrants will be located at the fuel storage area.

Employees, contractors, and other workers responsible for the transfer of petroleum products are required to remain at the fill point until fill procedures are completed and the transfer line is placed back in the proper storage location. Spillage will be reported as described in Section 3.1 and cleanup will be scheduled and implemented.

6.4 INSPECTIONS

MSHA requires an examination of working places for adverse conditions at least once per shift (30 CFR 57.18002). Miners working in the area are notified immediately of adverse conditions and action is promptly taken to correct the condition. If necessary, workers will be withdrawn from the area until the danger is abated. These examinations include fuel and reagent storage areas; the examinations will be documented.

The facility will have a Spill Prevention, Control, and Countermeasure (SPCC) Plan in place prior to start-up of operations in accordance with the requirements of 40 CFR 112, which requires inspections of oil storage tanks, piping, and secondary containment areas regularly. The SPCC Plan will specify the frequency of these inspections, typically monthly. The SPCC Plan will be stamped by an Oregon P.E.

Employees, contractors, and other workers on site will be instructed to immediately report leaks and damage to the working supervisor, who will notify the Environmental Manager, as described in Section 3.1. The working supervisor will be responsible for scheduling and implementing necessary repairs assoon as possible and will inform the Environmental Manager, in writing, of the intended schedule and manner of repair.

Monitoring of the reagent and fuel storage areas will be in accordance with the WPCF permit.

6.5 PREVENTIVE MAINTENANCE

Preventive maintenance will be performed to maintain the integrity of systems. Faulty valves, joints, elbows, and other fixtures or fittings that could result in the release of possible contaminants outside a containment structure will be repaired or replaced immediately upon identification.

7. TRAINING AND EXERCISE PROGRAM

Employees will be trained at least annually on the details of this ERP prepared for the Project. Training records will be retained in employee personnel files and in the facility operating record.

Oil-handling personnel will receive annual spill prevention training, which will include operation and maintenance of equipment to prevent discharges; spill response procedures; pollution control laws, rules, and regulations; and general facility operations.

Emergency Response Team members will receive enhanced training on spill response equipment and tactics and MSHA and HAZWOPER standards for emergency response.

New employees are informed about the Project's Emergency Action Plan (Table 2).

Employees receive CPR and first aid training annually.

See the Project's *Safety Training Plan* for more detailed information.

A full evacuation drill will take place every 60 days. Emergency firefighting drills will be held at least once every six months for persons assigned surface firefighting responsibilities. At least once every 6 months, mine evacuation drills will be held following MSHA regulations to assess the ability of all persons underground to reach the surface or designated safety point within a time limit. At least once every 12 months, all person who work underground will be instructed in the escape and evacuations plans, procedures, and warning signals for an emergency.

8. REFERENCES

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----------. 2020b. EPA 550-B-20-001. List of Lists. www.epa.gov/epcra. Accessed October 12, 2021.

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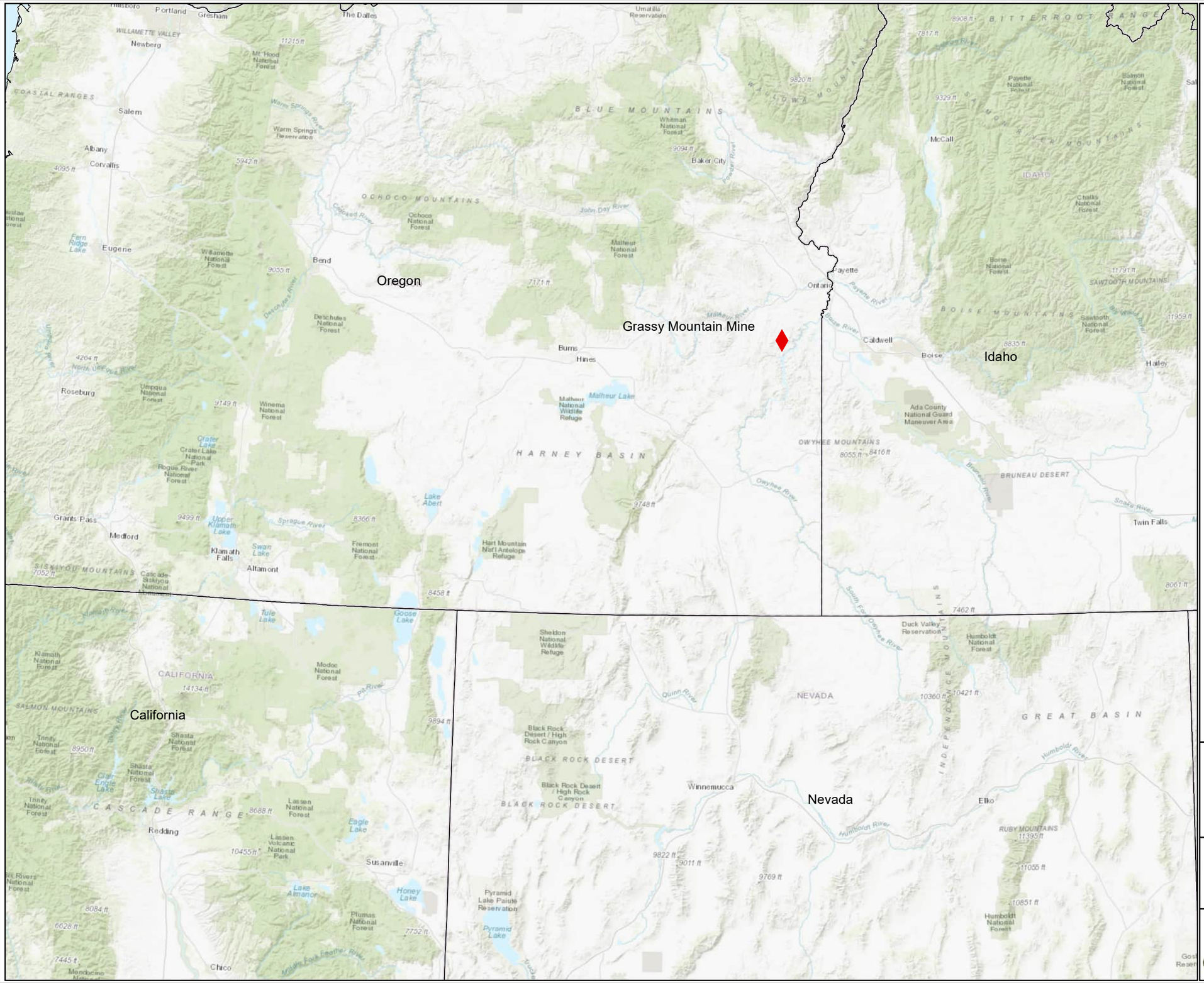
FIGURES



Legend

- Site Location

1 ":40 Miles

0 10 20 40 Miles

N W E S

Scale as shown when plotted at 11"x17".

Notes:

1. Figure references 1983 UTM zone 11N datum.

Site/Report:

Calico Resources USA Corp.
Grassy Mountain Mine

Emergency Response Plan

Figure:

Site Location Map

SLR / CALICO RESOURCES	Date: December, 2021		Figure: 1
	Project No: 108.02203.00001		
	By: MS	Chk'd: TB	

Document Path: C:\Users\mstrain\OneDrive - SLR Consulting Limited\Grassy Mountain Mine\100 Supporting Deliverables\105 Emergency Resp\Figures\Map Packages\mxds\GMM_ERP_Figure_1 Site Location.mxd

Hope
Russell Rd.
Cow Hollow Rd.
Twin Springs Rd.
Mitchell Butte Rd.
Owyhee Ave.
Grassy Mountain Deposit
Nyssa
Kingman
Owyhee
Adrian
Napton
Jamieson Gulch Reservoir
East Cow Hollow Reservoir
Mitchell Butte Lateral
Owyhee River
Sand Hollow Creek
Kingman Lateral
Snake River
Arena Canal
Riverside Canal
Boise River
Ross East Lateral
Vantress Lateral

Legend

- PoO Boundary
- Cities of Oregon_ USA
- BLM Land Vehicle Access Point
- Highway
- Major Road
- Local Road
- County Road
- Federal Road

Land Status

- Bureau of Land Management
- Bureau of Reclamation
- Private Individual or Company
- State Agency
- U.S. Fish and Wildlife Service
- Undetermined
- Water

1 ":2 Miles

0 0.5 1 2 Miles

N W E S

Scale as shown when plotted at 11"x17".

Notes:

1. Figure references 1983 UTM zone 11N datum.
2. Road and highway system were referenced from the Bureau of land Management.
3. Land status was referenced from the Bureau of Land Management database, BLM Idaho Surface Management Agency 2020 and OR BLM Status Line 2021.

Site/Report:

Calico Resources USA Corp.
Grassy Mountain Mine

Emergency Response Plan

Figure:

Vicinity and Access Map

SLR / CALICO RESOURCES	Date: May, 2023		Figure: 2
	Project No: 108.02203.00001		
	By: MS	Chk'd: TB	

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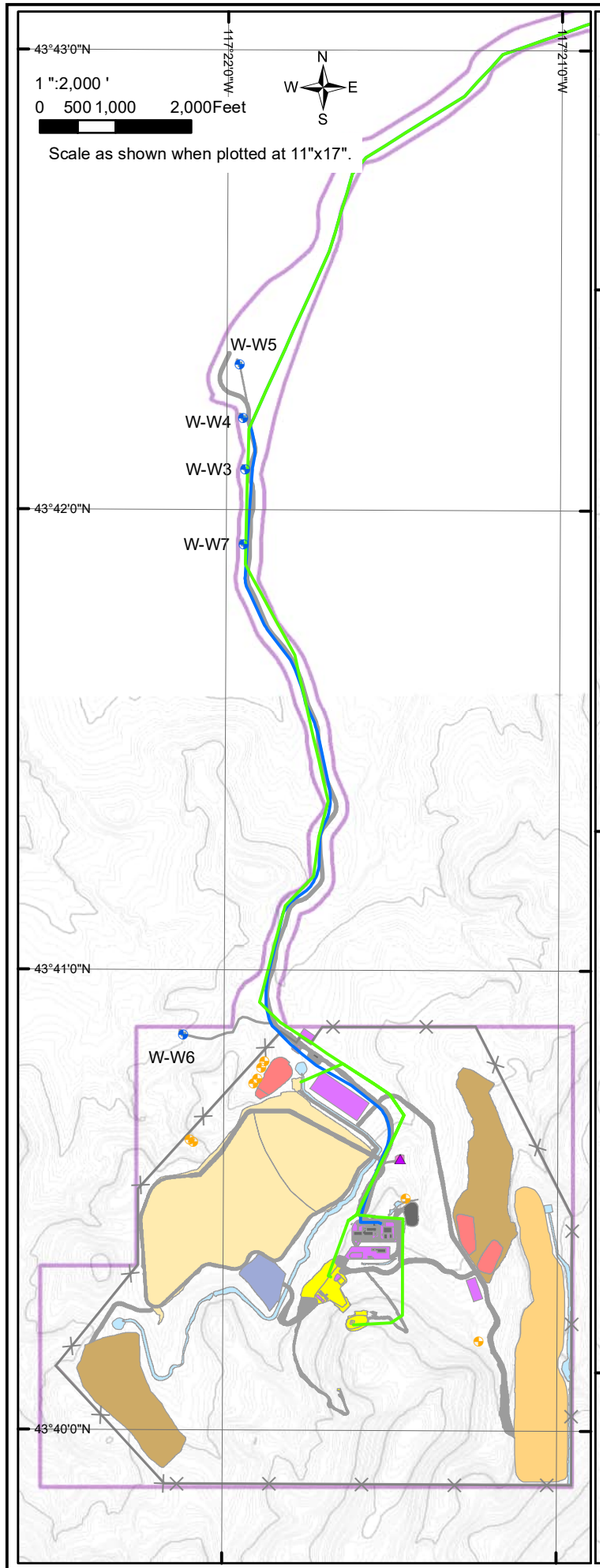

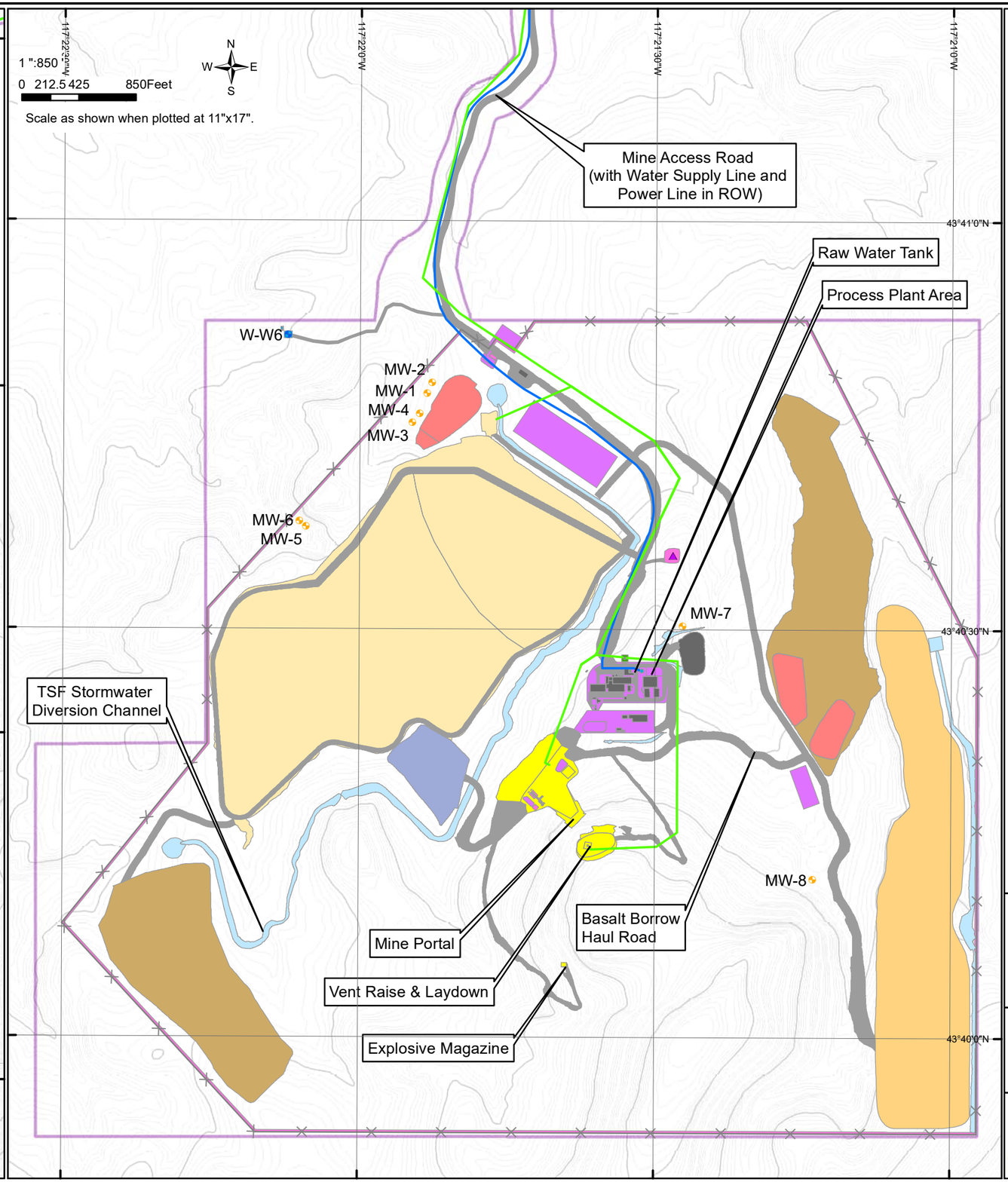

Legend

- PoO Boundary
- Fence Line
- MET Station
- Production Well
- Monitoring Well
- Water Supply Line
- Power Line
- Quarry
- Reclamation Borrow Areas
- Growth Media Stockpiles
- Yards, Laydown Areas, and Stockpiles
- Underground Mine
- Process Plant
- Infrastructure & Ancillary Facilities
- Power Supply
- Temporary Waste Rock Storage Facility
- Tailings Storage Facility
- Water Supply
- Roads
- Stormwater Diversion Channel
- Existing 25ft Elevation Contour
- Existing 5ft Elevation Contour

Notes:

1. Figure references 1983 UTM zone 11N datum.
2. Topography and facility layout provided by others.

Site/Report:

Calico Resources USA Corp.
Grassy Mountain Mine

Emergency Response Plan

Figure:

Infrastructure Layout Plan

SLR / CALICO RESOURCES	Date: May, 2023	Figure: 3
	Project No: 108.02203.00001	
	By: MS Chk'd: TB	

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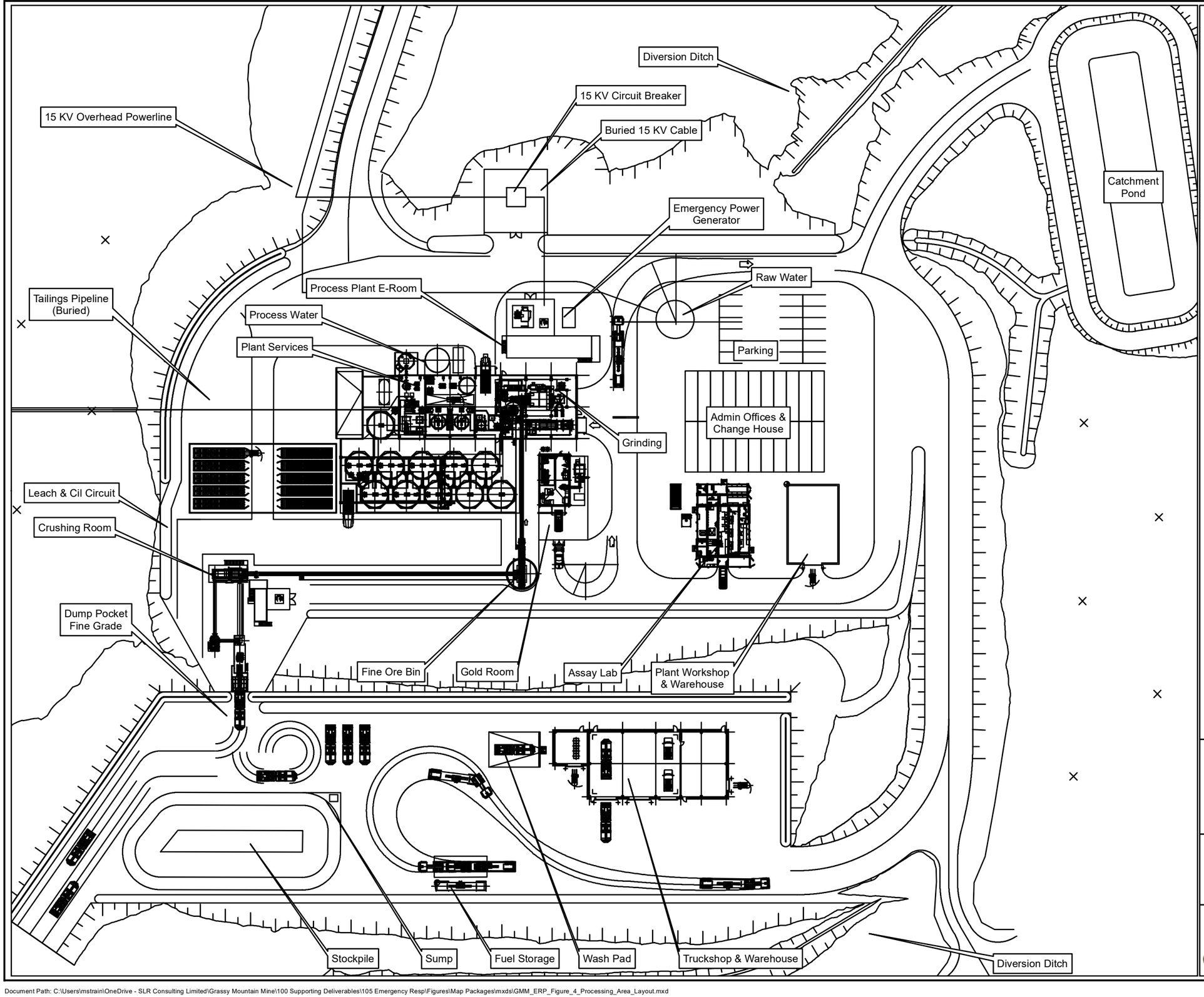

Legend

1 ":900 '

0 225 450 900Feet

N
W E
S

Scale as shown when plotted at 11"x17".

Notes:

1. Facility layout was referenced based on Ausenco site analysis, 2018.

Site/Report:

Calico Resources USA Corp.
Grassy Mountain Mine

Emergency Response Plan

Figure:

Processing Area Layout

Date: December, 2021		Figure: 4
Project No: 108.02203.00001		
By: MS	Chk'd: TB	

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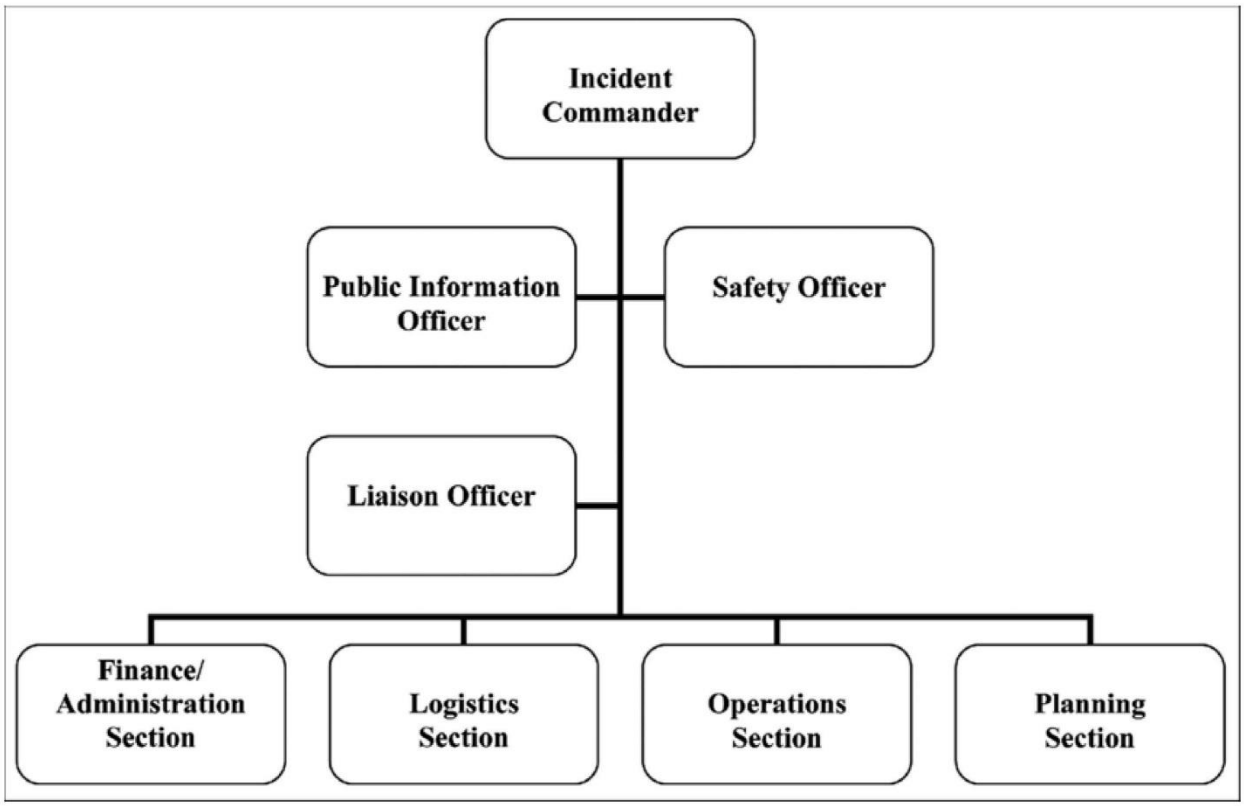

Figure 5: Incident Management Team Structure

TABLES

Table 1: Emergency Contact Information

Position or Agency	Name	24-hour Phone Number	Radio	Additional Information
Calico Emergency Contacts				
General Manager (GM)	TBD	TBD	TBD	Notify of all incidents.
Mine Superintendent	TBD	TBD	TBD	Notified by GM.
Process Superintendent	TBD	TBD	TBD	Notified by GM.
Maintenance Superintendent	TBD	TBD	TBD	Notified by GM.
Environmental Manager	TBD	TBD	TBD	Notified by GM.
Safety Officer	TBD	TBD	TBD	Notified by GM.
Off-Site Emergency Contact	TBD	TBD	TBD	Notified by GM.
Agency/External EmergencyContacts				
National Response Center (NRC)	n/a	1-800-424-8802	n/a	Report Immediately – all spills to water
Mine Safety and Health Administration (MSHA)	n/a	(800) 746-1663	n/a	Report immediately – all incidents
Oregon Emergency Response System (OERS)/ ODEQ 24-hour Emergency Notification	n/a	1-800-452-0311	n/a	Report immediately – all emergencies and spills
RHMERT #14 (OERS will contact)	n/a	911 (541) 881-3230	n/a	Hazardous material release response team.
Malheur County Sheriff's Office	On-Duty Personnel	911 (541) 473-5126	n/a	151 "B" Street West Vale, OR 97918
Malheur County Emergency Management (LEPC)	n/a	911 (541) 473-5120	n/a	
BLM Vale District Office	On-Duty Personnel	(541) 473-3144	n/a	100 Oregon Street Vale, OR 97918
Transportation incidents: Report to 911	n/a	911	n/a	
Medical Care Emergency Contacts				
Saint Alphonsus Medical Center	n/a	(541) 881-7000	n/a	351 SW 9th Street Ontario, OR 97914
Vale Valley Family Health Care	n/a	(541) 473-2101	n/a	789 Washington St W Vale, OR 97918
Life Flight Air Ambulance	On-Duty Personnel	(800) 232-0911 (509) 678-4364	n/a	599 SW 33rd Street Ontario, OR 97914
Vale Fire and Ambulance	On-Duty Personnel	911 (541) 473-3796	n/a	950 Hope Street Vale, OR 97918
Spill Response Contractors				
Olympus Technical Services, Inc.	On-Duty Personnel	(208) 562-5500	n/a	Approximately 3-4 hr response time from Boise, ID 83709
SMAF Environmental	On-Duty Personnel	1-800-875-7069	n/a	Approximately 6-8 hr response time from Prineville, OR 97754
Weather Data/Reports				
NOAA Weather	n/a	(208) 334-9860	n/a	

Table 2: Emergency Action Plan

GRASSY MOUNTAIN MINE EMERGENCY ACTION PLAN

Evacuations

Whenever the alarm sounds, the entire plant will evacuate by designated routes to predetermined assembly areas. When possible, a full evacuation drill covering all employees will be held every 60 days.

During an evacuation, entry to the facility will not be permitted until an "all clear" has sounded.

Emergency escape procedures and evacuation routes

In an emergency, employees will leave the affected work area immediately by the emergency routes posted in their work areas unless the route is blocked. An alternative route will be designated by Michael McGinnis.

All primary emergency escape routes and designated meeting locations must be approved by Michael McGinnis.

An orderly evacuation will be supervised by Michael McGinnis who will check all rooms and report any problems to Cheryl Evans.

Michael McGinnis is responsible for the safe evacuation of disabled employees.

Critical operations or processes

Michael McGinnis will determine what critical operations or processes that must be shut down during an evacuation and who will shut them down. Michael McGinnis will ensure that emergency shutdown procedures are posted for critical operations and work processes.

Critical operations or work processes that must be shut down during an evacuation: forklift.

If an identified critical operation or process cannot be shut down or requires a substantial time delay to shut down, Michael McGinnis must be notified when possible, with the full explanation of the situation.

Accounting for employees after an evacuation

After employees have evacuated and arrived at their designated meeting places, Michael McGinnis will take a head count. Michael McGinnis will account for any missing employees. The names and possible locations for all unaccounted people will be sent to Michael McGinnis.

The known location and condition of any injured people and will be reported to Michael McGinnis

Emergency coordinators

The employees listed below are the designated emergency coordinators for this facility. If designated medical coordinators are not available in an emergency, call 911**.**

Name	Phone number
Michael McGinnis	719-332-8253
Cheryl Evans	775-625-3600

Reporting emergencies

Report emergencies to a designated emergency coordinator. Call 911 to report an emergency if a designated medical coordinator is not available.

Table 3: Hydrocarbons and Chemicals/Reagents

NOTE: In the event of a discharge of any hydrocarbon or chemical:

- Notify the Environmental and Safety Departments of the spill and request special instruction for personnel safety during cleanup.
- Follow emergency response procedures as outlined in Section 4.1.
- Contact the Environmental Department for appropriate disposal options.

ACETYLENE (SDS FROM CALICO)	
Description	Compressed gas
Hazardous?	OSHA Hazardous DOT Class 2.1 (Flammable Gas)
Transportation	Not stated
Storage	Size 45 industrial acetylene cylinder; 3 in lab, 15 in shop
Consumption rate	2 cylinders/week
Worker safety while handling	Keep away from heat and ignition sources. Take precautionary measures against static charges. All equipment used when handling the product must be grounded. Use only non-sparking tools. Use only with adequate ventilation. Ventilate closed spaces before entering. Be aware of any signs of dizziness or fatigue, especially if work is done in a poorly ventilated area; exposures to fatal concentrations of this gas mixture could occur without any significant warning symptoms, due to olfactory fatigue or oxygen deficiency. Cylinders should be firmly secured to prevent falling or being knocked-over. Use explosion-proof - electrical, ventilating and/or lighting equipment. Do not attempt to repair, adjust, or in any other way modify cylinders. If there is a malfunction or another type of operational problem, contact nearest distributor immediately. Empty containers retain product residue and can be hazardous. Do not cut, weld, puncture or incinerate container.
Spill response	Eliminate all ignitions sources within a minimum of 100 meters (330 feet). All equipment must be grounded. Safely stop the leak; turn leaking containers so that gas rather than liquid escapes. Use water spray to reduce vapors; do not put water directly on leak, spill area, or inside container. Prevent spreading of vapors through sewers, ventilation systems and confined areas. Isolate area until gas has dispersed. Properly flag and mark the spill area. LARGE SPILL: Consider initial downwind evacuation for at least 800 meters (1/2 mile). Excavate contaminated soils and place on a synthetic liner.
Firefighting measures	Dry chemical or carbon dioxide for small fires; water spray or fog for large fires.

AMMONIUM NITRATE FUEL OIL (ANFO) (SDS FROM DYNO NOBEL)	
Description	White granules
Hazardous?	DOT Class 1.5 (Insensitive Explosive)
Transportation	Shipped in, monthly delivery
Storage	2,800-lb totes stored in explosive magazine
Consumption rate	20,000 lbs/month
Worker safety while handling	Wear an approved dust respirator, gloves, and boots. Ammonium nitrate is not compatible with wood, sulfur, chlorides, phosphorus, fine metals, acids, organics, or solvents.
Spill response	Contain the spill and scoop or sweep up the spilled material and place in a clean plastic container marked with the new contents. The container must not have any traces of petroleum products prior to use. Collect the spillage for reuse or arrange for appropriate disposal following the *Waste Management Plan*.
Firefighting measures	DO NOT ATTEMPT TO FIGHT FIRES INVOLVING EXPLOSIVE MATERIALS. Evacuate all personnel to a predetermined safe location, no less than 2,500 feet in all directions. Can explode or detonate under fire conditions. Burning material may produce toxic vapors.
ANTIFREEZE POLYPEPTIDE (WINTER FLOUNDER) (SDS FROM CALICO)	
Description	Solid powder
Hazardous?	No
Transportation	Delivered in tanker trucks at 50 percent ethylene glycol; weekly delivery
Storage	Up to 2000 gallons stored at truck shop in tanks/totes/bins/barrels; located inside 110% secondary containment
Consumption rate	10-15 gallons/day
Worker safety while handling	Wear PPE and face protection. Ensure adequate ventilation. Avoid contact with skin, eyes or clothing; avoid ingestion and inhalation. Avoid dust formation. Store in freezer.
Spill response	Ensure adequate ventilation. Use PPE as required. Sweep up and shovel into suitable containers for disposal. Avoid dust formation.
Firefighting measures	Typical measures

ANTI-SCALANT (SDS FROM SOLENIS)	
Description	Liquid; properties may vary by manufacturer.
Hazardous?	No
Transportation	Delivered in barrels or other containers
Storage	2 - 240-lb carboys
Consumption rate	30 lbs/day
Worker safety while handling	Recommended PPE includes gloves and eye/face protection.
Spill response	Secure area to prevent contact and slipping. Absorb with an inert material and scoop up into an appropriate container. Avoid use of iron, copper, or aluminum containers or equipment. Wash area thoroughly with water and scrub to remove slip hazard.
Firefighting measures	Water spray, foam, carbon dioxide, dry chemical.
AUTOMATIC TRANSMISSION FLUID (SDS FOUND)	
Description	Red transparent liquid
Hazardous?	No
Transportation	Delivered by tanker truck
Storage	Not stated
Consumption rate	Not stated
Worker safety while handling	Provide adequate ventilation. Wear rubber gloves, goggles, boots, and an approved respirator when necessary. No smoking or open flames.
Spill response	Remove all sources of ignition. Isolate the spill area and stop the leak without personal safety risks. Recover free product for recycling or disposal. Use sand, earth, or absorbent material to absorb from spill area. Remove contaminated soil and place in designated area for removal and disposal.
Firefighting measures	Use water fog, foam, dry chemical or carbon dioxide to extinguish flames.
BORAX (PENTAHYDRATE) (SDS FROM CALICO)	
Description	White crystalline powder
Hazardous?	No
Transportation	Not stated
Storage	Up to 20, 50-lb sacks
Consumption rate	104 lbs/week
Worker safety while handling	Use only in area provided with appropriate exhaust ventilation. Wear personal protective equipment.
Spill response	Prevent product from entering drains. Sweep up and shovel into suitable containers for disposal.
Firefighting measures	Use dry chemical, carbon dioxide, water spray or "alcohol" foam.

BUFFER SOLUTION (ACETATE) (SDS FROM CALICO)	
Description	Clear liquid
Hazardous?	OSHA Hazardous
Transportation	Not stated
Storage	Up to 10, 5-lb boxes
Consumption rate	Not stated
Worker safety while handling	Wear personal protective equipment. Ensure adequate ventilation. Do not get in eyes, on skin, or on clothing. Do not breathe vapors or spray mist. Do not ingest.
Spill response	Soak up with inert absorbent material. Keep in suitable, closed containers for disposal.
Firefighting measures	Substance is nonflammable; use agent most appropriate to extinguish surrounding fire.
CARBON (SDS FOUND)	
Description	Granular, pelletized, or powdered.
Hazardous?	DOT Class 4.2 (Spontaneous Combustion)
Transportation	Delivered by truck in containers
Storage	Up to 40, 50-lb sacks
Consumption rate	42.5 lbs/day
Worker safety while handling	Ventilate area. Wear a dust mask, gloves, and eye protection.
Spill response	Ventilate the contaminated area. Clean up spills in a manner that does not disperse dust into the air. Handle in accordance with industrial hygiene and safety practices. These practices include avoiding unnecessary exposure, and removal from eyes, skin, and clothing. Prevent product from entering drains. Sweep up or vacuum up and shovel into suitable contains for disposal.
Firefighting measures	Use water fog, foam, dry chemicals, carbon dioxide.
COPPER SULFATE (PENTAHYDRATE) (SDS FOUND)	
Description	Solid
Hazardous?	OSHA Hazardous
Transportation	Delivered in 2750-lb bulk bags at 98% purity
Storage	2750-lb bulk bags
Consumption rate	35 lbs/day
Worker safety while handling	Avoid breathing dust/fume/gas/mist/vapors/spray. Avoid prolonged or repeated exposure.
Spill response	Avoid breathing vapors and provide adequate ventilation. As conditions warrant, wear a NIOSH approved self-contained breathing apparatus, or respirator, and appropriate personal protection (rubber boots, safety goggles, and heavy rubber gloves). Contain spill and collect, as appropriate
Firefighting measures	Use alcohol-resistant foam, carbon dioxide, water, or dry chemical spray.

DIESEL (SDS FOUND)	
Description	Liquid
Hazardous?	OSHA Hazardous
Transportation	Delivered by tanker truck in large amounts, weekly delivery
Storage	Two double-walled steel tanks, total volume between two tanks is 8,250 gal. Inside 110% secondary containment (or larger). Aboveground tanks located in fuel storage depot near processing facility.
Consumption rate	6,000 gallons/day
Worker safety while handling	Stay upwind, out of fumes, and keep out of low areas. Wear rubber gloves and boots. No smoking or open flames.
Spill response	Remove all sources of ignition. Evacuate and isolate the immediate area to avoid personnel exposure. Stop the leak without personal safety risks. Dike the area to contain the spill. Remove all diesel-contaminated soil and place in a designated area for removal and disposal. All diesel liquids recovered from a spill will be placed in drums or dumpsters for proper disposal.
Firefighting measures	Small fire: Steam, carbon dioxide, dry chemical or inert gas (e.g., nitrogen). Large fire: Use foam, water fog or water spray.
FELDSPAR (SDS FROM CALICO - FELDSPAR POTASSIUM AND FELDSPAR SODIUM)	
Description	Powder
Hazardous?	OSHA Hazardous
Transportation	Not stated
Storage	Up to 5, 50-lb sacks
Consumption rate	Not stated
Worker safety while handling	Avoid contact with skin and eyes. Avoid dust formation. Do not breathe dust. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Provide local exhaust or general room ventilation to minimize exposure to dust. Wash contaminated clothing before reuse. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.
Spill response	Prevent entry to sewers and public waters. Sweep or shovel spills into appropriate container for disposal.
Firefighting measures	Not combustible; use agent most appropriate to extinguish surrounding fire.

GEAR LUBE (90WT) (SDS FOUND)	
Description	Liquid
Hazardous?	No
Transportation	Delivered via tanker truck, weekly delivery
Storage	Up to 2,000 gallons; stored at truck shop in tanks/tote bins/barrels inside 110% secondary containment.
Consumption rate	15 gallons/day
Worker safety while handling	Use in a well-ventilated area. No special eye protection is normally required. Where splashing is possible, wear safety glasses with side shields as a good safety practice. No special protective clothing is normally required. Where splashing is possible, select protective clothing depending on operations conducted, physical requirements and other substances in the workplace. No respiratory protection is normally required.
Spill response	Stop the source of the release if you can do it without risk. Contain release to prevent further contamination of soil, surface water or groundwater. Clean up spill as soon as possible. Use appropriate techniques such as applying non-combustible absorbent materials or pumping. Where feasible and appropriate, remove contaminated soil. Place contaminated materials in disposable containers.
Firefighting measures	Use water fog, foam, dry chemical or carbon dioxide to extinguish flames.
GREASE (SDS FROM CALICO)	
Description	Yellow to light green solid
Hazardous?	No
Transportation	Not stated
Storage	4 x 120-gallon totes; 4 x 30-gallon drums
Consumption rate	10 gallons/day
Worker safety while handling	When using, do not eat, drink or smoke. Use only in well-ventilated areas. Do not breathe vapors or spray mist. Avoid contact with skin, eyes and clothing.
Spill response	Dam up. Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal. Collect free product with suitable mechanical means. Keep in suitable, closed containers for disposal.
Firefighting measures	Use carbon dioxide, ABC powder, foam, water spray or fog.

HYDRAULIC FLUID (SDS FROM CALICO)	
Description	Hydraulic fluid is a blend of ingredients which may vary slightly by manufacturer. It is a clear fluid with a slight odor.
Hazardous?	OSHA Hazardous
Transportation	Delivered in containers or tanks.
Storage	2000 gallons, stored at truck shop in tanks/tote bins/barrels inside 110% secondary containment
Consumption rate	15 gallons/day
Worker safety while handling	No particular safety equipment is required, although gloves are recommended.
Spill response	Stop leak if without risk. Move containers from spill area. Dike area if needed. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Remove contaminated soils and use dry materials to soak up spills. Use appropriate tools to put the spilled solid in a waste disposal container.
Firefighting measures	Use dry chemical, CO_2, water spray (fog) or foam.
HYDROCHLORIC ACID (SDS FROM CALICO)	
Description	Clear, colorless, or slightly yellow fuming liquid with a pungent, biting odor.
Hazardous?	CERCLA (RQ 5000 lbs)and OSHA Hazardous DOT Class 8 (Corrosive)
Transportation	Delivered in 330-gallon totes at 33% solution strength. Reagent grade, delivered in 1-gallon containers.
Storage	HDPE totes. 14 totes per delivery; – total 4.620 gallons. Up to 1.5 delivery loads housed in reagent storage area. Tote housed in acid wash area in process plant Reagent grade: 4 – 1-gallon containers
Consumption rate	84 gallons/day
Worker safety while handling	Wear a self-contained breathing apparatus or an approved respirator, goggles, rubber suit, rubber gloves, and boots. Avoid contact with metals and sulfides as these will produce hydrogen gas, which is highly flammable and may cause fire or explosion; it is an asphyxiant. Stay upwind as a respirator will not provide protection from hydrogen gas.
Spill response	Evacuate and isolate the immediate area to avoid personnel exposure. Dike the area to contain the spill. Neutralize all pooled solution with water, soda ash, or lime. Verify that the solution is neutralized with a pH tester. If possible, place any neutralized solution back in the process circuit. Excavate the contaminated soil and mix with lime. Neutralized material may be placed in previously approved areas.
Firefighting measures	Substance is nonflammable; use agent most appropriate to extinguish surrounding fire.

HYDROFLUORIC ACID (HFL) (SDS FROM CALICO)	
Description	Reagent grade colorless liquid
Hazardous?	EPCRA EHS (RQ and TPQ 100 lbs), CERCLA (RQ 100 lbs), and OSHA Hazardous DOT Class 8 (Corrosive)
Transportation	Not stated
Storage	Up to 2, 1-gallon containers
Consumption rate	Not stated
Worker safety while handling	Wear personal protective equipment. Do not get in eyes, on skin, or on clothing. Use only under a chemical fume hood. Do not breathe vapors or spray mist. Do not ingest.
Spill response	Use personal protective equipment. Ensure adequate ventilation. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak. Soak up with inert absorbent material. Keep in suitable, closed containers for disposal.
Firefighting measures	Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
LEAD OXIDE (SDS FROM CALICO)	
Description	Reagent grade powder
Hazardous?	OSHA Hazardous
Transportation	Not stated
Storage	Up to 1, 80-lb pail
Consumption rate	2 lbs/day
Worker safety while handling	Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Further processing of solid materials may result in the formation of combustible dusts. The potential for combustible dust formation should be taken into consideration before additional processing occurs. Provide appropriate exhaust ventilation at places where dust is formed. Keep away from sources of ignition.
Spill response	Use personal protective equipment. Avoid dust formation. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust. Sweep up and shovel. Contain spillage, and then collect with an electrically protected vacuum cleaner or by wetbrushing and place in container for disposal.
Firefighting measures	Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

LIME – CALCIUM HYDROXIDE (SDS FROM CALICO AVAILABLE)	
Description	White, odorless, solid pebbles or powder
Hazardous?	OSHA Hazardous DOT Class 8 (Corrosive
Transportation	Delivered by trailer truck; pneumatically transferred from truck to lime silo; 3 to 4 times per month delivery
Storage	Bulk storage silo
Consumption rate	12.9 tons/day
Worker safety while handling	Wear an approved dust respirator, work gloves, goggles, and a full covering of clothing. Do not use water.
Spill response	Scoop or sweep up spilled lime and place in a suitable container. Excavate contaminated soil and place within a secured area. Do not let product enter drains. Reclaimed lime may be placed into the process circuit with approval from the Process Supervisor.
Firefighting measures	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
MERCURY (SDS FROM CALICO)	
Description	Silver liquid
Hazardous?	CERCLA (RQ 1 lb) and OSHA Hazardous DOT Class 8 (Corrosive)
Transportation	Onsite generation. Will be transported to mercury waste processing facility for cleaning and then transported to Department of Energy site for permanent storage.
Storage	80-lb flask for temporary onsite storage
Production rate	176 lb/year – Elemental mercury 2,200 lbs/year – Mercury-contaminated carbon at 2% Hg by weight
Worker safety while handling	Wear personal protective equipment in the laboratory and in the process area. Use only under a chemical fume hood in the laboratory.
Spill response	Evacuate personnel to safe areas. Ensure adequate ventilation. Use personal protective equipment. Keep people away from and upwind of spill/leak. Do not flush into surface water or sanitary sewer system. Do not allow material to contaminate ground water system. Prevent product from entering drains. Soak up with inert absorbent material.
Firefighting measures	Substance is non-combustible, but may decompose upon heating. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Do not allow run-off from firefighting to enter drains or water courses.

METHYL ETHYL KETONE (MEK) (SDS FROM CALICO)	
Description	Clear liquid
Hazardous?	CERCLA (RQ 5000 lbs) and OSHA Hazardous DOT Class 3 (Explosive)
Transportation	Not stated
Storage	Up to 1, 5-gallon pail
Consumption rate	Not stated
Worker safety while handling	Avoid contact with skin and eyes. Avoid inhalation of vapor or mist. Use explosion-proof equipment. Keep away from sources of ignition. Take measures to prevent the buildup of electrostatic charge.
Spill response	Use personal protective equipment. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas. Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal.
Firefighting measures	DO NOT USE WATER JET. Use dry powder or dry sand. Use water spray to cool unopened containers.
MOTOR OIL (30WT) (SDS FOUND)	
Description	Amber liquid.
Hazardous?	No
Transportation	Not stated
Storage	4,000 gallons stored at truck shop in tanks/tote bins/barrels inside 110% secondary containment
Consumption rate	20 gallons/day
Worker safety while handling	Smoking, eating and drinking should be prohibited in the application area.
Spill response	Persons not wearing protective equipment should be excluded from area of spill until clean-up has been completed. Prevent further leakage or spillage if safe to do so. Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Keep in suitable, closed containers for disposal
Firefighting measures	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

NITER (NANO3) (SDS FROM CALICO)	
Description	Solid, white, odorless
Hazardous?	OSHA Hazardous DOT Class 5.1 (Oxidizer)
Transportation	Not stated
Storage	Up to 5, 50-lb sacks
Consumption rate	8.6 lbs/week
Worker safety while handling	Wear personal protective equipment. Ensure adequate ventilation. Avoid contact with skin, eyes and clothing. Avoid ingestion and inhalation. Keep away from clothing and other combustible materials. Avoid dust formation.
Spill response	Use personal protective equipment. Ensure adequate ventilation. Avoid dust formation. Avoid contact with skin, eyes and clothing. Keep away from clothing and other combustible materials. Soak up with inert absorbent material. Sweep up or vacuum up spillage and collect in suitable container for disposal.
Firefighting measures	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
NITRIC ACID (SDS FROM CALICO)	
Description	Clear liquid, odorless
Hazardous?	EPCRA EHS (RQ and TPQ 1000 lbs), CERCLA (RQ 1000 lbs), and OSHA Hazardous DOT Class 8 (Corrosive)
Transportation	Not stated
Storage	Up to 10, 1-gallon containers
Consumption rate	1 lb/day
Worker safety while handling	Wear personal protective equipment. Do not get in eyes, on skin, or on clothing. Use only under a chemical fume hood. Do not breathe vapors or spray mist. Do not ingest.
Spill response	Use personal protective equipment. Ensure adequate ventilation. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak. Soak up with inert absorbent material. Keep in suitable, closed containers for disposal. Do not empty into drains. Do not flush into surface water or sanitary sewer system. Do not allow material to contaminate ground water system.
Firefighting measures	Substance is nonflammable; use agent most appropriate to extinguish surrounding fire. Carbon dioxide, dry chemical, dry sand, alcohol-resistant foam.

CONTACT OR RECLAIM WATER (HIGH PH)	
Description	pH is typically 8; may be as high as 10-10.5 for CIL process
Hazardous?	Yes, if high pH.
Transportation	In process pumps and piping
Storage	TSF- storage of contact water In CIL process – storage/use of high pH contact water
Consumption rate	Recycled as needed into CIL process
Worker safety while handling	Smoking, eating and drinking should be prohibited in the processing areas of the mill.
Spill response	In the case of a small spill, dilute with water and mop up or absorb with inert dry material. In the case of a large spill, absorb with dry earth, sand, or other non-combustible material. Stop leak if safe and dike if needed. Neutralize residue with dilute acid. Excavate the contaminated soil. Do not allow material to contaminate ground water system. Do not flush into surface water or sanitary sewer system. Avoid dust formation. Sweep up or vacuum up spillage and collect in suitable container for disposal.
Firefighting measures	DO NOT USE WATER. Use carbon dioxide, dry chemical, dry sand, alcohol-resistant foam extinguishing agents.
SILICA (SDS FROM CALICO)	
Description	Solid, light orange, odorless
Hazardous?	OSHA Hazardous
Transportation	Not stated
Storage	Up to 10, 50-lb sacks
Consumption rate	51.8 lbs/week
Worker safety while handling	Wear personal protective equipment. Ensure adequate ventilation. Avoid contact with skin, eyes and clothing. Avoid ingestion and inhalation. Avoid dust formation.
Spill response	Use personal protective equipment. Ensure adequate ventilation. Avoid dust formation. Sweep up or vacuum up spillage and collect in suitable container for disposal.
Firefighting measures	None stated.
SILVER INQUART (SDS FOUND)	
Description	Silver-colored solid
Hazardous?	No
Transportation	Not stated
Storage	10-lb package
Consumption rate	Not stated
Worker safety while handling	No special measures.
Spill response	Recover mechanically. Do not allow substance to enter drains, sewage systems, or other water courses.
Firefighting measures	DO NOT USE WATER. Use special powder for metal fires.

SODIUM CYANIDE (SDS FOR SOLUTION)	
Description	Liquid solution. Sodium cyanide is used in leaching as a lixiviant and in elution as a carbon stripping aid. Sodium cyanide is odorless when dry and emits an almond-like odor when damp. It is more likely to give off hydrogen cyanide gas when in contact with an acid. Other incompatible chemicals planned for use onsite include copper sulfate and SMBS.
Hazardous?	EPCRA EHS (RQ 10 lbs, TPQ 100 lbs), CERCLA (RQ 10 lbs), and OSHA Hazardous DOT Class 6.1 (Poisonous)
Transportation	Mixed to 30% purity, delivered in liquid form by bulk tanker in 6,400-gallon loads
Storage	13,000-gallon tank, Bulk liquid shipped monthly Reagent grade: Up to 10, 5-lb boxes, shipped 7 times per year
Consumption rate	191 gallons/day Reagent grade: 1 lb/day
Worker safety while handling	Always have on hand a cyanide antidote kit and trained medical responders who can administer first aid before beginning work with this product. Wear an approved respirator for vapors and dust, goggles, rubber suit, rubber, gloves, and boots. A self-contained breathing apparatus should be worn in the case of large spills. Eliminate all ignition sources and use water spray to reduce vapors. Avoid contact with acids and acid fumes.
Spill response	Evacuate and isolate the immediate 50-foot area to avoid personnel exposure. Dike the area to contain the spill. Prevent entry into confined areas. Use appropriate tools to put the spilled material in a waste disposal container. Excavate contaminated soil.
Firefighting measures	Not flammable. Use quenching/dry powder.
SODIUM HYDROXIDE (CAUSTIC SODA) (SDS FROM CALICO)	
Description	Solution, 50% pure
Hazardous?	CERCLA (RQ 1000 lbs) and OSHA Hazardous DOT Class 8 (Corrosive)
Transportation	Shipped to the site in 330-gallon totes at 50% solution
Storage	3,630 gallons per load delivered, up to 1.5 loads stored in reagent storage area, 1 tote in use in elution area of process plant
Consumption rate	136 gallons/day
Worker safety while handling	Wear personal protective equipment. In assay lab, use only under a chemical fume hood. Do not get in eyes, on skin, or on clothing. Do not breathe dust. Do not ingest.
Spill response	In the case of a small spill, dilute with water and mop up or absorb with inert dry material. In the case of a large spill, absorb with dry earth, sand, or other non-combustible material. Stop leak if safe and dike if needed. Neutralize residue with a dilute solution of acetic acid. Excavate the contaminated soil. Do not allow material to contaminate ground water system. Do not flush into surface water or sanitary sewer system. Avoid dust formation. Sweep up or vacuum up spillage and collect in suitable container for disposal.
Firefighting measures	DO NOT USE WATER. Use CO 2, dry chemical, dry sand, alcohol-resistant foam extinguishing agents.

SODIUM METABISULFITE (SMBS) (SDS FROM CALICO)	
Description	Off-white powder, pungent odor.
Hazardous?	OSHA Hazardous
Transportation	Delivered to site in 2,750-lb bulk bags, up to 20 ton load per delivery, twice per month.
Storage	Held in SMBS storage tank after it is mixed. Up to 1.5 loads stored in reagent storage area
Consumption rate	2,552 lbs/day.
Worker safety while handling	Wear personal protective equipment. Ensure adequate ventilation. Avoid dust formation. Do not breathe dust. Do not get in eyes, on skin, or on clothing. Keep away from acids.
Spill response	Use personal protective equipment. Ensure adequate ventilation. Avoid contact with skin, eyes and clothing. Avoid dust formation. Sweep up or vacuum up spillage and collect in suitable container for disposal.
Firefighting measures	Substance is non-flammable; use extinguishing agent most appropriate for surrounding fire.
SULFURIC ACID (SDS FROM CALICO)	
Description	Reagent grade. Liquid, colorless, odorless.
Hazardous?	EPCRA EHS (RQ and TPQ 1000 lbs), CERCLA (RQ 1000 lbs), and OSHA Hazardous DOT Class 8 (Corrosive)
Transportation	Not stated
Storage	Up to 6, 1-gallon containers
Consumption rate	Not stated
Worker safety while handling	Wear personal protective equipment. Do not get in eyes, on skin, or on clothing. Do not breathe vapors/dust. Do not ingest. Use only under a chemical fume hood in the laboratory.
Spill response	Use personal protective equipment. Wear self-contained breathing apparatus and protective suit. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak. Ensure adequate ventilation. Avoid contact with skin, eyes and clothing. Soak up with inert absorbent material. Keep in suitable, closed containers for disposal.
Firefighting measures	DO NOT USE WATER. Substance is non-flammable; use extinguishing agent most appropriate for surrounding fire.

USED ANTIFREEZE (SDS FOUND)	
Description	Green liquid
Hazardous?	OSHA Hazardous
Transportation	Not stated.
Storage	2000 gallons
Consumption rate	Not consumed
Worker safety while handling	Wash thoroughly after handling. Wear protective gloves/clothing and eye/face protection. Do not eat, drink or smoke when using this product. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Keep away from heat, sparks, or flame.
Spill response	Ventilate area and avoid breathing vapor or mist. A vapor suppressing foam may be used to reduce vapors. Contain spill away from surface water and sewers. Contain spill as a liquid for possible recovery, or sorb with compatible sorbent material and shovel with a clean tool into a sealable container for disposal. Additionally, for large spills: Water spray may reduce vapor, but may not prevent ignition in closed spaces. Dike far ahead of liquid spill for collection and later disposal.
Firefighting measures	Carbon dioxide, alcohol-resistant foam, dry chemical, water spray, or water fog. Water or foam may cause frothing.
USED OIL (SDS FOUND)	
Description	Black oil
Hazardous?	OSHA Hazardous
Transportation	Not stated
Storage	4,000 gallons
Consumption rate	Not consumed
Worker safety while handling	Observe proper industrial hygiene practices. Emergency safety showers and eye wash stations should be present.
Spill response	Clean-up personnel should be protected against contact with eyes and skin. Large spills should be diked and foam applied. Do not release into sewers or waterways. Use absorbent material such as vermiculite or sand to soak up spill. Contain material and follow normal clean-up procedures. Keep unnecessary people away. Isolate hazard area and deny entry. Stay upwind. Collect material in appropriate, labeled containers for recovery or disposal.
Firefighting measures	Extinguish using foam, dry powder or carbon dioxide.

EPCRA and CERCLA per EPA List of Lists
OSHA – per SDS
DOT Classes per 49 CFR 172.101 Hazardous Materials Table

EHS Extremely Hazardous Substance
RQ reportable quantity
TPQ threshold planning quantity

APPENDIX A

GOLDER TECHNICAL MEMORANDUM RE: CREDIBLE ACCIDENTS DATED NOVEMBER 3, 2021

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