GRASSY MOUNTAIN MINE PROJECT

Waste Management Plan

Submitted to:

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CALICO RESOURCES

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ACRONYMS

°C	Celsius
°F	Fahrenheit
Calico	Calico Resources USA Corp.
CERCLA	Comprehensive Environmental Responsibility and Compensation Liability Act
CFR	Code of Federal Regulations
CIL	carbon-in-leach
CPA	Consolidated Permit Application
CRF	cemented rock fill
CWM	Chemical Waste Management of the Northwest
EPA	U.S. Environmental Protection Agency
EPCRA	Emergency Planning and Community Right to Know Act
HazCom	hazard communication
HID	high-intensity discharge
kg	kilogram
lb	pound
LED	light-emitting diode
Li-ion	lithium-ion
Li-poly	lithium-polymer
Li-SO2	lithium sulfur dioxide batteries
LQG	large quantity generator
MSHA	Mine Safety and Health Administration
Mst	million short tons (in U.S. tons or short tons)
NiMH	Nickel metal hydride
OAR	Oregon Administrative Rules
ODEQ	Oregon Department of Environmental Quality
ORS	Oregon Revised Statute
OSHA	Occupational Safety and Health Administration
Paramount	Paramount Gold Nevada Corp.
PPE	personal protective equipment
ppm	parts per million

ppmw	parts per million by weight
Project	Grassy Mountain Project
RCRA	Resource Conservation and Recovery Act
ROM	Run of Mine
SDS	Safety Data Sheets
SQG	small quantity generator
stpd	short tons per day
TSCA	Toxic Substances Control Act
TSDF	Treatment, Storage, and Disposal Facility
TSF	Tailings Storage Facility
TWRSF	Temporary Waste Rock Storage Facility
USDOT	U.S. Department of Transportation
VSQG	very small quantity generator
WMP	Waste Management Plan

1. INTRODUCTION

1.1 PURPOSE

This *Waste Management Plan* (WMP) describes the procedures for identifying and managing wastes generated at the Grassy Mountain Mine Project (Project) and means of disposal.

Other relevant Project plans include the following:

- *Detailed Design, Tailings Storage Facility and Temporary Waste Rock Storage Facility*
- *Emergency Response Plan*
- *Cyanide Management Plan*
- *Petroleum Contaminated Soil Management Plan*
- *Safety Training Plan*
- *Toxic and Hazardous Substances Storage and Transportation Plan*
- *Water and Wastewater Facilities Preliminary Engineering Design*

1.2 PROJECT DESCRIPTION

Calico Resources USA Corp. (Calico), a wholly-owned subsidiary of Paramount Gold Nevada Corp. (Paramount), proposes to construct, operate, reclaim, and close an underground mining and precious metal milling operation at the Project. In general, the proposed mining and precious metal processing operations will consist of an underground mine and ore processing facilities, including a conventional mill and Tailings Storage Facility (TSF), a Temporary Waste Rock Storage Facility (TWRSF), and other support facilities.

Calico proposes to mine approximately 2.07 million short tons (US) (Mst) of mill-grade ore and 0.27 Mst of waste rock for a Mine life of approximately 8 years; however, the TSF has been sized to contain 3.64 Mst should additional reserves be identified. The material (both ore and waste) will be extracted from an 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. Hydraulic loaders will load the ore and waste into the haul trucks. The haul trucks will transport the waste rock to the TWRSF near the TSF and transport the ore to the Run of Mine (ROM) ore stockpile adjacent to the crushing and milling facilities. The ore will be leached in a carbon-in-leach (CIL) processing plant to recover the precious metals into a “pregnant” leach solution. The pregnant solution will then be processed for metal recovery and further offsite refining.

The Project will be active for approximately 10 years, which includes 2 years of preproduction and 8 years of mining and processing. Four years of closure and reclamation are estimated, with 26 years beyond anticipated for groundwater monitoring. This schedule may be modified based on the rate of mining and future commodities prices.

1.3 PROJECT LOCATION AND ACCESS

The Project is located in eastern Oregon, in Malheur County (Figures 1 and 2). The Project consists of two claims groups that are situated near the western edge of the Snake River Plain in eastern Oregon, 22 miles south-southwest of Vale, Oregon, and about 70 miles west of Boise, Idaho.

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, including the regional Bureau of Land Management office. 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 city, is within a 90-minute drive of the Project area and has the closest commercial airport served by major airlines.

Access to the Mine will typically be from U.S. 20, south along Russell, Cow Hollow, and Twin Springs roads, to the Mine Access Road. Cow Hollow and Twin Springs roads are gravel roads, managed and maintained by the Bureau of Land Management. Calico will construct a new gravel Mine access road connecting Twin Springs Road to the Mine, and this section of the road will be managed and maintained by Calico (Figure 2). Calico plans to control access at the Mine area and Process Plant by using fencing and gating.

1.4 UPDATING PROCEDURES

This is a preliminary version of the WMP. As the Project proceeds and final information is developed concerning potential generated wastes, the WMP will be revised.

This WMP is updated as needed, e.g., as new waste streams are added, procedures or processes are changed, or in response to modifications to the applicable regulations.

2. REGULATORY REVIEW AND DEFINITIONS

The following sections provide an overview of the regulatory requirements applicable to the management of wastes and the procedures are employed at the Project to handle wastes safely and in accordance with all applicable regulations.

The waste management methods discussed in this WMP are based on the applicable regulations at the time this WMP was written. Changes to management methods may be required as regulations are modified.

2.1 REGULATIONS

Calico will adhere to federal and state regulations as applicable. Wastes are regulated under two main bodies of regulations:

The Resource Conservation and Recovery Act (RCRA) federal regulations contained in Title 40 Code of Federal Regulations (CFR), Parts 260 to 279.

The Oregon Administrative Rules (OAR) Chapter 340, Divisions 43, and 90 through 113.

- 340-043, Chemical Mining
- 340-090, Recycling and Waste Reduction
- 340-093, Solid Waste: General Provisions
- 340-100, Hazardous Waste Management
- 340-101, Identification and Listing of Hazardous Waste
- 340-102, Standards Applicable to Generators of Hazardous Waste
- 340-103, Hazardous Waste Management
- 340-109, Management of Pesticide Waste
- 340-111, Used Oil Management
- 340-113, Universal Waste Management
- 340-135, Toxic Use Reduction and Hazardous Waste Reduction Regulations

2.2 DEFINITIONS

2.2.1 SOLID WASTE

The U.S. Environmental Protection Agency (EPA) definition of solid waste is found in 40 CFR 261.2: A solid waste is any material, liquid or solid, with the exception of materials excluded from the regulations that are a discarded material, meaning a material that is:

- Abandoned, e.g., disposed of, burned, or incinerated; accumulated, stored, or treated (but not recycled) before, or in lieu of, being abandoned by disposal, burned, or incinerated.

- Recycled or accumulated, stored, or treated before recycling if it is: used in a manner constituting disposal, burned for energy recovery, reclaimed, accumulated speculatively.
- Considered inherently waste-like; or
- A military munition identified as a solid waste in 40 CFR 266.202.

There are several exclusions to the definition of solid waste, as provided in 40 CFR 261.4(a), such as domestic sewage and point source discharges subject to regulation under Section 402 of the Clean Water Act.

Oregon Revised Statute (ORS) 459.005(24) defines “solid waste" as all useless or discarded putrescible and nonputrescible materials, including but not limited to garbage, rubbish, refuse, ashes, paper and cardboard, sewage sludge, septic tank and cesspool pumpings, or other sludge, useless or discarded commercial, industrial, demolition and construction materials, discarded or abandoned vehicles or parts thereof, discarded home and industrial appliances, manure, vegetable or animal solid and semisolid materials, dead animals and infectious waste as defined in ORS 459.386. Solid waste does not include:

(a) Hazardous waste as defined in ORS 466.005 (see Section 2.2.2).

(b) Materials used for fertilizer or for other productive purposes or which are salvageable as such materials are used on land in agricultural operations and the growing or harvesting of crops and the raising of animals.

(c) Woody biomass that is combusted as a fuel by a facility that has obtained a permit described in ORS 468A.040.

2.2.2 HAZARDOUS WASTE

Hazardous wastes are regulated by the EPA, Region 10 in Oregon, in accordance with RCRA regulations, and by the Oregon Department of Environmental Quality (ODEQ).

As defined in 40 CFR 261.3, a solid waste is hazardous if:

- It is not excluded from regulation as a hazardous waste under 40 CFR 261.4(b).
- It is a characteristic hazardous waste, i.e., it exhibits one of the characteristics of hazardous waste defined in Subpart C of 40 CFR Part 261: ignitability, corrosivity, reactivity, or toxicity.
- It is a listed hazardous waste, i.e., a waste listed in Subpart D of 40 CFR Part 261 and has not been excluded in 40 CFR 260.20 or 260.22. Listed wastes include:
  - The F-list (non-specific source wastes). This list identifies wastes from common manufacturing and industrial processes, such as solvents that have been used in cleaning or degreasing operations. Because the processes producing these wastes can occur in different sectors of industry, the F-listed wastes are known as wastes from non-specific sources.
  - The K-list (source-specific wastes). This list includes certain wastes from specific industries, such as petroleum refining or pesticide manufacturing. Certain sludges and wastewaters from treatment and production processes in these industries are examples of source-specific wastes.

  - The P-list and the U-list (discarded commercial chemical products). These lists include specific commercial chemical products in an unused form. Some pesticides and some pharmaceutical products become hazardous waste when discarded. Sodium cyanide (P106) will be used at the Project.

- It is a mixture of solid waste and one or more listed hazardous wastes, and it has not been excluded from regulation as a hazardous waste by an exemption to the regulations.
- Used oil containing more than 1,000 parts per million (ppm) total halogens is presumed to be a hazardous waste because it has been mixed with halogenated hazardous waste listed in Subpart D of 40 CFR Part 261. Persons may rebut this presumption by demonstrating that the used oil does not contain hazardous waste.

Solid wastes exempt from hazardous waste regulations are listed under 40 CFR 261.4(b). Additionally, a number of exemptions are also listed in 40 CFR 261.3, which defines a hazardous waste. Some of the important exemptions that apply to the Project include:

- General refuse;
- Mining overburden returned to the Mine site;
- Solid wastes from the extraction, beneficiation, and processing of ores and minerals, also known as the Bevill Exclusion[1] (e.g., tailings);
- Non-terne-plated used oil filters that are not mixed with a "listed hazardous waste" and have been gravity hot-drained; and
- Used oil.

It is important to note that intentionally mixing a hazardous waste with a non-hazardous solid waste can render the entire mixture a hazardous waste, subject to the full RCRA regulations and is not an acceptable method of waste disposal. There are a few exemptions to the mixture rule; however, they are only applicable under very specific circumstances and must be managed carefully to maintain compliance with RCRA.

ORS 466.005(7) defines "hazardous waste" as not including radioactive material or the radioactively contaminated containers and receptacles used in the transportation, storage, use or application of radioactive waste, unless the material, container or receptacle is classified as hazardous waste under paragraphs (a), (b) or (c) of this subsection on some basis other than the radioactivity of the material, container, or receptacle. Hazardous waste does include all of the following which are not declassified under ORS 466.015(3):

1. Discarded, useless or unwanted materials or residues resulting from any substance or combination of substances intended for the purpose of defoliating plants or for the preventing, destroying, repelling, or mitigating of insects, fungi, weeds, rodents, or predatory animals, including but not limited to defoliants, desiccants, fungicides, herbicides, insecticides, nematicides, and rodenticides.

[1] The "Bevill Exclusion" is an amendment to RCRA, which provides that "mining and mineral processing wastes generated by extraction, beneficiation, and processing activities" are exempt from regulation as hazardous wastes. The Bevill Exclusion does not exempt mineral processing with significant physical/chemical processes or waste generated from laboratory or maintenance activities.

2. Residues resulting from any process of industry, manufacturing, trade or business or government, or from the development or recovery of any natural resources, if such residues are classified as hazardous by order of the commission, after notice, and public hearing. For purposes of classification, the commission must find that the residue, because of its quantity, concentration, or physical, chemical, or infectious characteristics may:

    (A) Cause or significantly contribute to an increase in mortality or an increase in serious irreversible or incapacitating reversible illness; or

    (B) Pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported, or disposed of, or otherwise managed; or

    (C) Discarded, useless, or unwanted containers and receptacles used in the transportation, storage, use or application of the substances described in paragraphs (a) and (b) of this subsection.

2.2.3 UNIVERSAL WASTE

40 CFR 273.1 defines universal waste as batteries, pesticides, mercury-containing equipment, lamps, and aerosol cans.

OAR 340-113-0020(4) defines universal waste as any waste that is a universal waste listed in 40 CFR 273.1 and subject to the waste requirements of 40 CFR Part 273 and OAR 340-113.

3. WASTE MANAGEMENT PRIORITIES

Management of wastes begins before materials are purchased by evaluating the potential environmental impacts of materials being considered. In general, the Project minimizes the overall generation of waste to the extent practical and minimizes the use of materials that would be regulated as hazardous wastes when they no longer serve their intended purpose. Materials are reused and recycled whenever possible.

Materials that cannot be managed onsite, such as liquid wastes, hazardous wastes, certain items to be recycled or reused, and wastes prohibited from disposal in the landfills, are shipped offsite for reuse, recycle, treatment, or disposal at appropriate facilities.

To prevent and/or minimize the present and future generation of wastes, decisions that may affect waste generation consider the following options, in order of priority:

1. Waste source reduction
2. Recycling (includes reuse)
3. Waste disposal, in accordance with applicable law

In order to accomplish this, the following procedures are followed:

- Operations that generate wastes are periodically reviewed to identify opportunities for waste reduction and these opportunities are implemented whenever possible.
- The properties of materials are reviewed prior to purchase and every effort is made to minimize the use of hazardous materials and those classified as hazardous wastes once they can no longer be used for their intended purpose.
- Methods for reusing and recycling materials are promoted and implemented whenever possible to reduce waste.
- Non-hazardous solid wastes are disposed of at permitted, solid waste inert landfills.
- Materials are sent to appropriate facilities for recycling, reuse, treatment, and/or disposal.

3.1 PURCHASING OF MATERIALS

The following procedures are followed when purchasing materials:

- The Safety Data Sheets (SDS) for new materials are reviewed prior to purchasing to ascertain if the materials require special management under RCRA, Emergency Planning and Community Right to Know Act (EPCRA), Comprehensive Environmental Responsibility and Compensation Liability Act (CERCLA), Clean Air Act, and Toxic Substances Control Act (TSCA) (EPA “List of Lists”).
- Whenever possible, the Project avoids purchasing materials that will be regulated as hazardous wastes once the materials are no longer required for their intended purpose.
- For materials requiring special handling or those classified as a hazardous waste if disposed of, the material is evaluated to determine if a suitable substitute is available that is considered “less hazardous.” Less hazardous can include a waste not classified as a hazardous waste if disposed of, requires no special handling under the above-noted governing acts, generates less waste when

disposed of, can be reused, or recycled, or is generally considered to have less of an impact on the environment (e.g., a material with less discharges to the environment when treated and/or disposed).

- To the extent practical, materials are purchased in containers (e.g., totes or drums) that can be returned to the vendor.

3.2 WASTE MINIMIZATION

Efforts to minimize waste begin at the purchasing phase and continue to the recycling and reuse of materials such as:

- Bulk delivery unloading into a storage tank has been incorporated into the design to eliminate waste totes and acute hazardous waste associated with residual sodium cyanide containers.
- Parts washers reuse the same solvent repeatedly, thereby reducing the amount of waste solvent generated. Using primarily low-toxicity solvents further minimizes waste as follows:
  - Pre-screen solvents. Many solvents can contain compounds that require the solvent be managed as hazardous waste and are harmful to the environment.
  - Use of low-toxicity solvents minimizes the volume of hazardous wastes generated, provided the solvent is not mixed with other wastes that would render the solvent mixture hazardous.
  - The use of low-toxicity solvents minimizes the volume of other hazardous wastes that could be generated such as rags and wipes.
- Use low-mercury, fluorescent lamps (“green end cap”):
  - The mercury levels in these lamps are sufficiently low so they are not regulated as hazardous waste when disposed.
  - Many other lamps must be regulated as hazardous waste once disposed of due to mercury and lead content.
- Return containers to vendors for reuse, preventing container disposal in the landfill.
- Managing inventory with purchasing and shelf-life monitoring.
- Appropriate container management, including the provision of secondary containment and proper labeling (see Section 4.2):
  - Proper container management is key to reducing waste volumes.
  - Unlabeled containers holding unknown materials may require testing of the materials to determine the chemical constituents of the material.
  - Containers that are left uncovered and exposed to the elements may result in the material in the container becoming contaminated and unusable.
  - Containers without proper secondary containment that become damaged can result in the contamination of other materials, such as soil, and may cause harm to the environment or personnel.

- Prevention of mixing of hazardous wastes with non-hazardous wastes through waste segregation, established procedures, and personnel training:
  - Mixing hazardous and non-hazardous wastes may result in the entire mixture being regulated as hazardous waste and should be avoided.
  - Mixing hazardous and non-hazardous waste is particularly important in the management of solvents and used oil.

3.3 RECYCLING AND REUSE OF MATERIALS

Recycling opportunities are limited in eastern Oregon. The Project will recycle materials to the extent practical and will seek opportunities to expand the recycling program on a regular basis.

Cardboard is placed in a designated dumpster and is recycled by the waste contractor (Section 7.6).

Electronics will be recycled when they reach the end of useful life (Section 7.11).

Scrap metal will be recycled by placing these materials in bins or dumpsters labeled for scrap metal.

4. WASTE MANAGEMENT POLICIES AND PROCEDURES

4.1 WASTE SEGREGATION

As noted in Section 5.1, the nearest landfill is operated by Malheur County. Waste is not segregated at the landfill, and therefore, waste segregation for the Project is limited. Waste is segregated in accordance with applicable regulations and the specific waste handling procedures described in Section 7 as follows:

- Dumpsters are marked in a manner such that personnel are able to distinguish between wood, cardboard, metal, and landfill dumpsters. All wood is placed in the wood dumpster, all cardboard is placed in the cardboard dumpster, recyclable metals are placed in the scrap metal dumpster, and all inert wastes are placed in landfill dumpster.
- Hazardous wastes are placed in containers at a satellite accumulation area near their place of use (less than 55 gallons of waste) or placed in appropriately labeled containers and brought directly to the central waste accumulation area (Section 6.4).
- Universal wastes are placed in containers at universal waste accumulation areas according to the procedures outlined in Section 6.5.
- Materials to be recycled are placed in segregated containers designated for the specific type of material and managed as outlined in Section 3.3.
- All containers are appropriately labeled and managed as described in Section 4.2.

4.2 CONTAINER MANAGEMENT AND LABELING

All containers are appropriately labeled according to hazard communication ("HazCom") standards set out by the U.S. Department of Labor Occupational Safety and Health Administration (OSHA) at 29 CFR 1910.1200), Mine Safety & Health Administration (MSHA) at 30 CFR Part 47, or EPA at 40 CFR 262.15 and 40 CFR 273.14:

- Containers in satellite accumulation areas must be labeled with words describing the contents of the container and the words "Hazardous Waste."
- Containers in the central waste accumulation areas must be labeled with the words "Hazardous Waste," and the accumulation start date.
- Containers holding universal waste must be labeled with the words "Universal Waste – waste type," "Waste – waste type," or "Used – waste type" where "waste type" is either batteries, lamps, thermostats, or mercury-containing equipment.
- Safety precautions listed in the SDS for each material stored are followed.
- Containers remain closed except when adding or removing materials as required by RCRA for hazardous wastes, or as needed to prevent contamination of the material or harm to the environment or personnel.
- Inspections are conducted as required by the regulations and as needed to manage containers appropriately.
- Containers are emptied appropriately (Section 4.3).
- Small containers of flammable materials are stored in flame-resistant containers/cabinets.

- Incompatible materials are segregated.
- The applicable training, inspection, reporting, preparedness, spill prevention, contingency planning, and emergency procedures required by RCRA and the ODEQ are implemented.

4.3 PROCEDURES FOR EMPTYING CONTAINERS

An empty container is a non-hazardous waste provided it has been emptied according to the procedures described below (40 CFR 261.7). Residues from emptying the containers must be managed according to the hazard classification.

- A container holding a compressed gas is considered empty when the pressure in the container approaches atmospheric pressure.
- Containers that held hazardous waste are considered empty when:
  - All wastes have been removed that can be removed using the practices commonly employed to remove materials from that type of container, e.g., pouring, pumping, and aspirating; and
  - No more than 1 inch of residue remains on the bottom of the container or inner liner; or
  - No more than 3 percent by weight of the total capacity of the container remains in the container or inner liner if the container is less than or equal to 119 gallons in size or no more than 0.3 percent by weight of total capacity for containers greater than 119 gallons.
- As required by the vendor, 55-gallon drums and up to 500-gallon totes that are returned to the vendor are emptied to less than 1 percent residue for drums and 0.3 percent by weight residue for totes.
- Containers that have been appropriately emptied are labeled “Empty.”
- All plugs or caps are replaced to seal inlets/outlets from water or snow.
- Marking, labeling, or placarding required by the U.S. Department of Transportation's (USDOT) hazardous materials regulations are retained until the packaging is sufficiently cleaned of residue and purged of vapors to remove any potential hazards.
- Until containers have been appropriately emptied and indicated as empty, they are kept in secondary containment where required and the labels, markings, and placards are left in place.
- Although acutely hazardous waste containers are not anticipated for the site, if containers onsite held an acutely hazardous waste [P-code wastes in 40 CFR 261.7(b)(3)], those containers are considered empty when:
  - The container or inner liner has been triple-rinsed using a solvent capable of removing the material;
  - The container or inner liner has been cleaned by another method that has been shown in the scientific literature, or by tests conducted by the generator, to achieve equivalent removal; or
  - In the case of a container equipped with an inner liner that prevented contact of the commercial chemical product or manufacturing chemical intermediate with the container has been removed.

4.4 EMPLOYEE TRAINING

Employees are required to complete the mandatory 24-hour new miner training and annual 8-hour refresher course required under MSHA. See the *Safety Training Plan* for details of the MSHA-required training program. Site-specific training for employees will cover appropriate disposal practices, which will include which wastes may be placed in a dumpster and how to properly segregate waste.

Employees handling waste and hazardous materials/waste are trained in the appropriate and safe handling of these materials as required by OSHA, MSHA, RCRA, and/or USDOT based on the duties of the employees. To satisfy RCRA, these training programs must be held within six months of employment and be annually thereafter.

For small quantity generators (SQGs), employees that must be trained include:

- Employees involved in handling hazardous wastes will be trained on proper waste handling and emergency procedures relevant to their responsibilities during normal facility operations and emergencies.
- Employees handling or responsible for managing universal waste will be trained on proper handling and emergency response procedures appropriate for the type of universal waste handled.
- Personnel involved in shipping hazardous materials and wastes, including preparing packages, preparing/signing/reviewing manifests, loading/unloading materials, and transporting materials, will complete the appropriate USDOT hazardous materials transportation training (49 CFR 172.700).

If the facility becomes a large quantity generator (LQG), personnel will complete a program of classroom instruction, online training or on-the-job instruction that teaches employees to perform duties that ensure compliance with RCRA and respond to emergencies associated with hazardous waste. Examples of employees that fall in this category include anyone who performs the following tasks:

- Determines which materials are hazardous wastes;
- Adds or removes hazardous waste at accumulation containers or tanks;
- Transfers hazardous waste to or from accumulation points;
- Responds to spills, fires or explosions of hazardous waste;
- Completes hazardous waste manifests, reports or other records;
- Inspects hazardous waste accumulation areas;
- Operates or works at central accumulation points; or
- Conducts any tasks involving occupational exposure to hazardous waste.

Training records are maintained according to the applicable regulations.

5. WASTE DISPOSAL FACILITIES

5.1 SOLID WASTE LANDFILL

Calico will arrange for acceptance of its solid waste at an appropriately licensed solid waste landfill. The nearest solid waste landfill is located on Lytle Boulevard, approximately 10 miles south of Vale (see Figure 2). The landfill is operated by a private contractor. Malheur County holds the permit (#348) from ODEQ for the landfill. This landfill is also permitted to receive petroleum contaminated soil. Ontario Sanitary Services is the only contractor in the area with the capacity to provide transportation of solid waste from the Project to the landfill.

5.2 HAZARDOUS WASTE DISPOSAL FACILITY

Calico will have hazardous waste approved for acceptance prior to shipment to an appropriately licensed hazardous waste treatment, storage, and disposal facility (TSDF). Chemical Waste Management of the Northwest (CWM), located in Arlington, Oregon, is the nearest TSDF. The facility has a Hazardous Waste Permit from ODEQ and is RCRA-permitted. ODEQ and EPA provide oversight of the facility. CWM provides transportation services for hazardous and non-hazardous waste shipments (see Figure 1 for location of CWM facility).

5.3 TEMPORARY WASTE ROCK STORAGE FACILITY AND TAILINGS STORAGE FACILITY

Waste rock generated from the mining operation will be hauled to the surface and stored in a TWRSF prior to being utilized as supplementary cemented rock fill (CRF) in the underground workings. Waste rock not used for CRF will be transferred to the TSF at the end of operations. A single TWRSF will be constructed to temporarily store the approximately 0.27 million tons of waste rock material while the TSF at 108 acres will provide approximately 3.64 Mst of permanent tailings storage. Refer to the CPA appendix, *Detailed Design, Tailings Storage Facility and Temporary Waste Rock Storage Facility,* for details.

6. HAZARDOUS WASTE

6.1 REPORTING AND RECORDKEEPING

Recordkeeping includes guidelines, standard operating procedures, and forms/checklists necessary to accurately maintain records and meet reporting requirements. Inventories of all hazardous materials used and stored at the site are maintained with warehouse records.

Calico will obtain a Hazardous Waste Identification Number from EPA and notify ODEQ via the RCRA Subtitle C Site Identification form.

The Project is expected to be an SQG of hazardous waste under 40 CFR 260.10, generating more than 100 kilograms (kg) / 220 pounds (lbs) but less than 6,000 kg / 13,200 lbs of non-acute hazardous waste and less than or equal to 1 kg / 2.2 lbs of acute hazardous waste in a month.

As an SQG of hazardous waste, the Project is subject to 40 CFR 262.44, and as such, Calico will:

- Keep a copy of each signed manifest for three years from the date the waste was accepted by the transporter or until a signed copy from the facility that received the waste is received [40 CFR 262.40(a)].
- Keep a copy of records supporting hazardous waste determinations for three years from the date the waste was sent offsite for treatment, storage, or disposal [40 CFR 262.40(c)].
- If a signed copy of the manifest from the designated facility is not received within 60 days of the date the waste was accepted by the transporter, submit a legible copy of the manifest with indication the generator has not received delivery confirmation to the EPA Regional Administrator [40 CFR 262.42(b)].
- Renotify ODEQ of SQG status by reviewing and updating the information on the RCRA Subtitle C Site Identification form every four years by September 1, starting in 2021.

As an SQG, the Project is required to submit annual reports to the ODEQ using the ODEQ's form (OAR 304-102-00410) or HazWaste.net. The form will be submitted by March 1 and will cover the previous year's activities. Calico will keep a copy of the annual reports submitted to ODEQ for at least three years from the due date of the report.

As a small quantity handler of universal waste (see Section 6.5), Calico is not required to notify EPA of universal waste handling and is not required to track shipments of universal waste (40 CFR 273.12).

If Calico becomes a LQG of hazardous waste by monthly generation of more than 6,000 kg /13,200 lbs of non-acute hazardous waste, 1 kg /2.2 lbs of acute hazardous waste or 100 kg/220 lbs of acute spill debris, an annual report must be submitted to the ODEQ by March 1. In addition, biennial reports must be submitted to EPA by March 1 of even numbered years, based on the odd-numbered years' waste activity, and include information about transporters, TSDF, DOT hazard class of materials shipped offsite, efforts made to reduce the volume and toxicity of waste generated, description of changes in volume and toxicity of waste achieved during the year.

If Calico becomes a Large Quantity Handler of Universal Waste (accumulating 5,000 kg or more at any time), ODEQ will be notified of these universal waste activities and an EPA Identification Number obtained, if one has not already been obtained for hazardous waste activities.

6.2 SAFETY DATA SHEETS

Calico maintains SDS for each hazardous material onsite; the SDS are kept up-to-date and made readily available to employees and contractors employed at the Project.

6.3 HAZARDOUS WASTE DETERMINATIONS

As required by 40 CFR 262.11, hazardous waste determinations are made on all solid wastes generated including process waste streams. Determinations are made by reviewing the regulations, and, if required, testing the waste, or applying generator knowledge.

When a material can no longer be used for its original purpose, or otherwise meets the definition of solid waste as defined in Section 2.2.1, a determination must be made as to whether the solid waste is a hazardous waste or not as defined in Section 2.2.2. Once a waste determination has been made, the appropriate management method for the waste can be identified. If process upsets or changes occur, the waste determination for the specific waste stream will be reviewed and updated to confirm disposition. Waste determinations will be made using a waste determination checklist. An example blank checklist is included as Appendix A in this WMP.

6.4 HAZARDOUS WASTE ACCUMULATION AND STORAGE

In general, hazardous waste is accumulated in satellite accumulation areas. Up to 55 gallons of hazardous waste and/or 1 quart of liquid acute hazardous waste or 1 kg / 2.2 lbs of solid acute hazardous waste can be accumulated in satellite accumulation areas (40 CFR 262.15). Containers must be at or near the point of generation of the wastes; under the control of the operator of the process generating the waste; in good condition; made of or lined with materials that are compatible with the waste.

Containers are managed as described in Section 4.2. Waste is allowed to accumulate without a time limit until a container becomes full. Once a container in a satellite accumulation area becomes full, the date must be written on the label. Full containers will be transferred to a central hazardous waste accumulation area within three days of becoming full.

Hazardous wastes not accumulated in satellite accumulation areas, such as wastes generated infrequently, are delivered to the central waste accumulation area immediately upon generation.

All wastes are shipped offsite within the required timeframe from their accumulation start date based on the generator status during the month the waste was generated, set at 180 days for SQG and 90 days for LQG.

If Calico becomes an LQG, additional requirements must be instituted for ignitable and reactive wastes. Namely, the waste must be at least 50 feet from the facility's property line within the facility's boundary. Containers holding ignitable or reactive wastes must also be separated and protected from sources of ignition, such as open flames, smoking, cutting and welding, hot surfaces, frictional heat, sparks, spontaneous ignition, and radiant heat. "No Smoking" signs must be placed wherever there is a hazard from ignitable or reactive wastes.

Hazardous waste storage in tanks is not currently planned. Furthermore, if tanks are used for storage of hazardous waste, they will be provided with secondary containment systems designed, installed, and operated to prevent migration of hazardous waste to soil, groundwater, or surface water. In addition, releases or accumulated liquids must be detectable and contained. Secondary containment for hazardous waste storage tanks, if used onsite, may include one or more of the following: an external liner designed to contain 100 percent of the capacity of the largest tank; a vault designed to contain 100 percent of the capacity of the largest tank; or a double-wall tank designed such that a release from the inner tank will be detected and contained by the outer shell.

6.5 UNIVERSAL WASTE MANAGEMENT

The universal waste regulations (40 CFR Part 273) are streamlined hazardous waste management regulations that can be applied to the management of batteries, pesticides, mercury-containing equipment, aerosols, and lamps. Generators of these wastes can choose to manage them as universal waste rather than under the more complex hazardous waste requirements. The intent of the universal waste regulations is to promote and facilitate the recycling and proper handling of these widely-generated hazardous wastes.

The main types of universal wastes generated at the Project include batteries, mercury-containing equipment, and mercury-containing lamps. The Project is a small quantity handler of universal waste, meaning less than 5,000 kg / 11,000 lbs of universal waste is accumulated onsite at any time.

Universal waste is managed in accordance with regulations at 40 CFR Part 273 and OAR 340-113. This includes accumulation in appropriate containers that are labeled as specified in 40 CFR 273.14, using a method that clearly demonstrates the length of time the universal wastes are accumulated from the date it became a waste or was received. Universal waste can be stored for no longer than one year from the date that waste was first added to the container.

6.6 SHIPMENTS OF HAZARDOUS WASTE

Hazardous wastes are shipped offsite to appropriate facilities in accordance with the applicable federal and state regulations. Shipments will be accompanied by a hazardous waste manifest and the appropriate land disposal restriction notification and certification forms where applicable.

Universal waste is sent offsite to a permitted destination facility[2] within one year of the accumulation start date. Universal wastes meeting the definition of a hazardous material under the USDOT regulations are packaged, labeled, marked, and placarded, and appropriate shipping papers are prepared according to the applicable USDOT hazardous materials regulations, 49 CFR Parts 171 through 180.

6.7 INSPECTIONS

Inspections of certain hazardous materials are conducted as required to verify hazardous materials are handled appropriately, in compliance with all applicable regulations, and in accordance with the inspection requirements of applicable permits and/or plans. Both hazardous waste and universal waste are incorporated into these inspection programs. Weekly inspections will be performed for containers in the central accumulation area and include such things as confirming containers are in good condition, such that no leaks or conditions that would lead to container deterioration are present, such as corrosion. Satellite accumulation areas are not subject to inspection.

Hazardous waste storage in tanks is not currently planned. If such storage occurs, Inspection requirements for LQG where hazardous waste is stored in tanks include documentation of:

- Daily reviews of overfill and spill control equipment, aboveground portions of the tank system, data gathered from monitoring or leak-detection equipment, and signs of erosion or releases from the tank system;
- If cathodic protection systems are employed, they will be inspected within six months of installation and annually thereafter; and
- Sources of impressed current will be inspected at least every other month.

6.8 ORGANIC AIR EMISSION STANDARDS

If Calico becomes an LQG, the air emission control requirements will be evaluated for applicability in 40 CFR 265 subparts AA, BB, and CC will be followed for hazardous waste accumulation.

Subpart AA covers process vents (open-ended pipe or stack directly vented to atmosphere) that manage hazardous waste with an organic concentration of 10 parts per million by weight (ppmw) or more in processes that involve distillation, fractionation, thin-film evaporation, solvent extraction, air stripping and steam stripping. An operating record must be maintained for each source and maintained for three years.

Subpart BB covers leaks from equipment that handle hazardous waste with a volatile organic concentration of 10 percent or more by weight, including valves, pumps, compressors, pressure-relief devices, sampling connection systems, open-ended valves or lines, flanges, or a control device or system required by Subpart AA. Owners and operators must establish an inspection and monitoring program for

[2] Destination facility is defined in 40 CFR 273.9, and means a facility that treats, disposes of, or recycles a particular category of Universal Waste, with the exception of the management activities described in 40 CFR 273.13(a) and (c) and 40 CFR 273.33(a) and (c).

applicable equipment, repair detected leaks within 15 days, and maintain detailed records in the facility's operating log to demonstrate compliance with the regulations.

Subpart CC requires LQG to control emissions from containers with a capacity over 26.4 gallons, as well as tanks and surface impoundments if the units contain hazardous waste with at least 500 ppmw volatile organic compounds. Containers with capacities of 119 gallons or less and larger containers that are not in light material service, must be equipped with Container Level 1 controls. Containers with capacities greater than 119 gallons and that are in light material service must be equipped with Container Level 2 controls. Containers having a design capacity of more than 26.4 gallons that are used for treatment of hazardous waste by a waste stabilization process must be equipped with Container Level 3 controls. LQG must demonstrate that control devices achieve 95 percent efficiency by documented design analysis or performance tests. All documentation for demonstration of performance must be retained and provided to regulatory agencies upon request. A written plan and schedule, maintained on-site and available for inspection, must be developed that includes all inspection and monitoring activities the LQG will conduct to maintain compliance with Subpart CC.

6.9 LQG RESPONSE TO LEAKS OR SPILLS

Hazardous waste storage in tanks is not currently planned. If the facility is an LQG and stores hazardous waste in tanks and there is a leak or a spill from the tank, or the tank is deemed unfit for use, the following actions will be completed:

- The tank will be removed from service immediately, and waste emptied within 24 hours.
- A visual inspection of the release and the immediate surrounding area will be conducted.
- Further migration of released material onto soil or into water will be prevented and visibly contaminated soil or water will be removed and properly disposed.
- The regional EPA will be notified within 24 hours for spills of more than one pound and a written follow-up report submitted within 30 days of detecting the release.

7. SITE-SPECIFIC WASTE HANDLING METHODS AND DISPOSAL

Specific wastes and their management methods are described below. Adherence to these methods by employees and contractors is essential in order to operate in compliance with all applicable regulations and permits and to protect the safety of employees, contractors, and the environment.

Covered waste bins provided by the waste contractor will be labeled for wood only, cardboard only, and landfill for refuse/general waste. All contents of the landfill dumpsters will be disposed of in the Malheur County landfill.

Some waste streams will be segregated outside of the three dumpster categories; these are described below.

Recycling capability is limited and is not available for most waste streams.

Hazardous waste, including universal waste, cannot be disposed of in the landfill, and must be transported to an approved TSDF. See Section 5.2.

7.1 ABSORBENTS AND RAGS

Absorbent pads, socks, and booms; absorbent granules; and floor sweep are commonly used to collect spilled liquids. Rags are commonly used to wipe up spilled liquids. The disposal of absorbents and rags is dictated by the material spilled and collected:

- Absorbents/rags used to collect petroleum products are considered non-hazardous waste once no free liquid can drain from the rag and are placed in the landfill dumpster. Collected oil is managed as used oil (Section 7.31).
- Absorbents/rags managed as non-hazardous waste are those contaminated with a material that is not a hazardous waste if disposed. Excess liquid is removed from these rags, and they are placed in the landfill dumpster. Collected liquids that cannot be reused or managed onsite are shipped offsite to a TSDF.
- Absorbents/rags contaminated with a material classified as hazardous waste if disposed of are shipped offsite to a TSDF. Any collected liquid that cannot be used for its original purpose is also shipped offsite to a TSDF.

7.2 AEROSOL CANS

Aerosol cans (i.e., cleaners, disinfectants, etc.) may be punctured and drained using aerosol can puncturing units. If cans are punctured with a non-sparking puncture pin, the liquid is collected in a drum. A filter is attached to the drum to collect volatile organic compounds. The punctured and drained aerosol cans are considered non-hazardous waste and are placed in the landfill dumpster.

Residues and filters from puncturing aerosol cans are tested to determine if they are hazardous waste; if so, these wastes are managed as a hazardous waste and shipped to a TSDF.

Alternately, aerosol cans may be placed in an appropriate container once the aerosol can is no longer in use. The actuator may be removed, if desired. There is no need to puncture the can, but the container that is used for these non-punctured cans must be compatible with the contents, structurally sound, no evidence of leakage, spillage or damage and protected from heat. The container must be labeled as Universal Waste – Aerosol Cans and the date the first aerosol can was placed in the container noted. The container must be closed at all times, except when placing additional aerosol cans into it. These aerosol cans must be sent to a Universal Waste handler within one year of the accumulation start date.

7.3 ANTIFREEZE

Used antifreeze at the site will be recycled following best management practices and in accordance with 40 CFR Parts 262 through 270 and OAR Chapter 340 Divisions 100 through 106. Although antifreeze is unlikely to be hazardous, when it is mixed with other waste or material, a waste determination will be necessary and proper disposal methods will apply. Best management practices will include, but not be limited to:

- Used antifreeze will be stored in compatible containers that are in good condition and labeled "Used Antifreeze";
- Antifreeze collection, storage and transport containers must be dedicated to the transfer and storage of antifreeze to minimize risk of cross-contamination;
- Used antifreeze containers will remain closed except when emptying or filling to minimize potential for spillage;
- Used antifreeze containers will be located in a secure area, properly maintained to prevent leaks, rupture, or tipping over when being opened, handled, or stored;
- Spills of antifreeze will be cleaned up promptly and appropriately managed;
- Used antifreeze will be stored no longer than 12 months prior to recycling;
- Proof of recycling will be maintained by Calico and the recycling facility; and
- Employees who assist with the collection of used antifreeze will be trained in proper used antifreeze handling and spill response.

7.4 BATTERIES

Non-hazardous waste batteries are placed in the landfill dumpster:

- Alkaline batteries - commonly used disposable batteries.
- Nickel metal hydride (NiMH) batteries - commonly used, rechargeable batteries.

Hazardous batteries are managed as Universal Waste (see Section 6.4):

- Rechargeable lithium-ion (Li-ion) and lithium-polymer (Li-poly) batteries and disposable lithium batteries such as lithium sulfur dioxide batteries (Li-SO2).
- Nickel cadmium batteries, also known as NiCad batteries, are rechargeable batteries.

- Lead-acid batteries used in vehicles and equipment; smaller, sealed lead-acid batteries used in miner lights.

7.5 BUILDING MATERIALS

Wood is placed in the designated wood dumpster. Other building materials are placed in the landfill dumpster.

7.6 CARBON FINES

A Waste Determination is performed prior to initial placement of carbon fines in the TSF and if process upsets or changes occur, as described in Section 6.3.

There are several points in the process where carbon fines may be generated. After completion of the elution process, barren carbon is fed into the kiln feed hopper then metered into the carbon regeneration kiln. Carbon fines generated from the barren-carbon sizing screen are disposed with the tailings slurry stream to the TSF.

Carbon movement in the elution and regeneration circuits are accomplished using carbon transfer water. This transfer water picks up carbon fines and must be periodically drained to the tailings slurry stream to the TSF.

Coarse carbon collected on the carbon safety screen are returned to the process while carbon fines are disposed with the tailings slurry to the TSF.

Disposal of carbon fines contaminated with mercury is discussed in Section 7.17.

7.7 CARDBOARD

Cardboard is placed in the designated cardboard dumpster for recycling.

7.8 CHEMICAL REAGENTS

Any spilled or expired chemicals, reagents or wastes are managed on a case by case basis and according to both federal and state waste regulations. Refer to the SDS for specific disposal instructions.

7.9 COMPRESSED GAS CYLINDERS

Compressed gas cylinders include those containing acetylene and propane. The majority of large cylinders are returned to the vendor and refilled. Propane cylinders will be refilled onsite whenever possible.

Cylinders are segregated by type and are managed according to safe handling procedures for compressed gas cylinders, which include ensuring they are stored in a secured upright position in a dry, cool, well-ventilated, secure area, protected from the weather, away from combustible materials.

Smaller cylinders with the valve inside the top fitting are depressurized through use; valve stems are then removed, and the cylinders are placed in the landfill dumpster.

7.10 CONTAINERS/PACKAGING

All containers and packaging must be emptied appropriately prior to disposal, reuse onsite, or return to vendor, following the requirements in Section 4.3, including applying an "empty" label or tag. Following assessment of contents and achievement of empty status, containers that are not reused or returned to the vendor are non-hazardous waste and are placed in the landfill dumpster.

7.11 DRUMS AND TOTES (EMPTY)

Drums and totes are emptied according to provisions identified in Section 4.3. To the extent possible, drums and totes will be returned to the vendor. If drums and totes that stored acute hazardous materials cannot be returned to the vendor, they must be triple-rinsed prior to disposal, as described in Section 4.3. Following assessment of contents and achievement of empty status, drums and totes that are not reused, recycled, or returned to the vendor are non-hazardous waste and will be placed in the landfill dumpster.

7.12 ELECTRONICS

It is illegal in Oregon to dispose of computers, monitors, and televisions in landfills. Electronic equipment (computers, laptops, tablets, cell phones, etc.) that has reached the end of its useful life will be stored in a covered location until it is transported to the Oregon E-Cycles collection site at the Ontario Transfer Station in Ontario, Oregon. Up to seven computers, monitor, and TVs at a time can be taken to the collection site for free recycling. Computer peripherals (keyboards and mice) are also accepted free of charge.

7.13 FILTERS

Filters include those from vehicles, buildings, aerosol can puncture devices, assay lab, etc. In general, filters classified as non-hazardous waste are placed in the landfill dumpster. Filters classified as hazardous waste are shipped to a TSDF.

Procedures for managing filters:

- Filters from aerosol can puncturing units are typically hazardous waste and are managed as described in Section 7.2.
- The majority of the filters from vehicles, equipment, and buildings onsite are non-hazardous waste and are placed in the landfill dumpster.
- Used oil filters include oil filters from vehicles or equipment and fuel filters from diesel equipment:
  - Used oil filters are considered exempt from hazardous waste regulations if they are gravity hot-drained according to one of the methods described below and if they are non-terne-plated:

  - › Puncturing the filter anti-drain back valve or the filter dome end and hot-draining (EPA recommends minimum hot-drain time of 12 hours);
  - › Hot-draining and crushing; or
  - › Dismantling and hot-draining.

- Note that hot-draining means the oil or diesel must be near engine-operating temperature and above room temperature 64°F - 73°F (20°C - 25°C).
- Once appropriately gravity hot-drained, used oil filters are placed in the landfill dumpster.

- Drained oil or diesel is collected and managed as used oil. Containers are marked "Used Oil."
- Used oil filters that cannot be managed according to the above procedures are shipped offsite to a TSDF.

7.14 HOUSEHOLD-TYPE WASTE

Household-type waste is placed in the landfill dumpster. These wastes include but are not limited to:

- Scraps from food brought to site by employees and contractors; no food preparation/kitchen on site. As required by 30 CFR 56.20013, covered trash cans will be placed at suitable locations and used for waste food and associated materials. These trash cans will be kept clean and sanitary with frequent emptying and regular cleaning.
- Wastes generated by maintenance and housekeeping activities.
- Plastics, paper, glass, batteries, and beverage cans.

7.15 LAB WASTE

Hazardous wastes generated in the assay laboratory are shipped offsite for disposal or recycled in a TSDF. Other non-hazardous wastes are placed in the landfill dumpster.

The assay laboratory is expected to produce the following waste streams:

- Lead contaminated waste in the form of used lead cupels from fire assay will be transported to a company specializing in hazardous waste management.
- Sample residue solids and pulps will be returned for reprocessing through the process plant.
- Solution waste streams (dilute acid and cyanide waste streams) will each be returned to appropriate locations in the process. Approximately one gallon of concentrated acid waste will be generated each day and collected into a satellite accumulation drum in the laboratory. The concentrated waste will be pH adjusted, following the elementary neutralization protocols for hazardous waste as incorporated into the Oregon Administrative Rules and returned with the plant tailings stream. A waste determination will be performed on personal protective equipment (PPE), i.e., gloves, masks, respirator cartridges, etc. to determine disposal status, as described in Section 6.3. If determined to be hazardous waste, PPE will be shipped offsite to a TSDF. Non-hazardous waste PPE is placed in the landfill dumpster.

7.16 LIGHT BULBS/LAMPS

Hazardous Lamps:

- Lamps containing mercury may include fluorescent bulbs (except as described in Section 3.2), high-intensity discharge (HID) bulbs, and neon/argon lamps. Examples of HID bulbs include mercury vapor, metal halide, high-pressure sodium bulbs, and blue plasma vehicle headlights. The lamps may be classified as hazardous waste when disposed.
- Many lamps contain lead in the solder, which cause them to be classified as hazardous waste when disposed, including incandescent lamps.
- Used bulbs that are intact and classified as hazardous waste are managed as universal waste and shipped offsite for disposal.
- Used bulbs classified as hazardous waste that are intentionally broken or crushed are managed as hazardous waste and shipped offsite for disposal.

Non-Hazardous Lamps:

- Environmentally friendly, low-mercury, fluorescent lamps ("green end cap") and light-emitting diodes (LED) are currently available and classified as non-hazardous waste when disposed. Calico purchases environmentally friendly fluorescent bulbs whenever possible. Halogen lamps are also typically non-hazardous waste. Non-hazardous lamps are placed in the landfill dumpster.

7.17 MERCURY

Mercury is extracted from the ore during the gold refining process. Mercury will be stored onsite in 80-lb flasks prior to reuse, offsite recycling, or storage. Prior to removal from the facility, the mercury will be appropriately containerized, and waste acceptance forms will be completed. Shipment will be handled by the waste hauler for the licensed recycler or storage facility.

Elemental mercury collected by the retort condenser will be securely contained and temporarily stored for transport to a mercury waste processing facility for cleaning. Thereafter the elemental mercury will be temporarily stored and transported to Department of Energy site for permanent storage. The amount of elemental mercury collected is estimated at 176 pounds per year.

Mercury control carbon from the gas scrubbers will be transported to a TSDF. The amount of carbon requiring disposal is estimated at 2,200 pounds per year containing a concentration of 2 percent by weight of mercury.

7.18 MISCELLANEOUS MATERIALS

Miscellaneous materials are placed in a landfill dumpster. These include:

- Styrofoam packaging and products;
- Plastic materials;

- Hoses (must be drained to the extent they would not drip any previous contents prior to placing in the dumpster); and
- Rubber products, unless contaminated with product. Contaminated rubber is evaluated, a waste determination is made, and the material is handled accordingly.

7.19 OILY WASTE AND OILED MATERIALS

Oil- or grease-contaminated rags, pads, gloves, and absorbents are considered non-used oil. Once the free-flowing used oil has been removed from these materials, they are not considered used oil and are managed as solid waste as long as they do not exhibit a hazardous waste characteristic. These materials are placed in the landfill dumpster. The collected liquid is managed as used oil.

7.20 PAINTS AND PAINT THINNER

Any unused water-based, latex or acrylic paint in solid form or related painting materials (e.g., rags, brushes, rollers), are non-hazardous waste and are placed in the landfill dumpster; unused paint in liquid form is shipped offsite to a TSDF.

Oil-based paints in solid form, or related painting materials, are considered non-hazardous waste and are placed in the landfill dumpster; unused paint in liquid form may be hazardous waste and is characterized and managed appropriately.

Thinners and solvent-based or lead-based paint in liquid or solid form, or related painting materials, may be hazardous waste and are characterized and managed appropriately.

7.21 PAPER

Paper products are placed in the landfill dumpster.

7.22 PETROLEUM-CONTAMINATED SOIL

Addressed in the CPA appendix, *Petroleum Contaminated Soil Management Plan*.

7.23 PETROLEUM PRODUCTS

Brake fluid is managed as used oil (see Section 7.31).

Grease that cannot be used onsite is shipped offsite for disposal. Grease buckets and other containers with less than 3 percent residue remaining in the container are considered empty and are crushed and placed in the landfill dumpster. Grease-contaminated trash is placed in the landfill dumpster once any excess grease has been removed.

7.24 PROCESS STREAMS

A Waste Determination is performed prior to initial placement of process stream material in the TSF and if process upsets or changes occur, as described in Section 6.3.

Following the crushing and grinding steps, the process plant accepts the ore and processes it via several circuits that generate waste streams. These circuits include hybrid leach-CIL with pre-aeration, elution, carbon regeneration, mercury removal, and cyanide detoxification. Discharges from these process streams, as well as process sumps and various process water sources, are discussed in this section. Disposal of carbon fines was discussed in Section 7.6.

The leach-CIL circuit is responsible for gold leaching and carbon adsorption of the main slurry stream from the grinding circuit. Precipitates form during CIL pre-aeration, including gypsum or similar metal-sulfate precipitates which are disposed with the tailings slurry stream to the TSF.

Acid washing with hydrochloric acid occurs after the leach circuit and is used to remove acid soluble foulants on the carbon. Following the acid solution contact, the carbon is rinsed with process water to remove residual acid and the rinse solution is sent to the cyanide detoxification tank, then with the tailings slurry stream to the TSF.

During cyanide detoxification, the process slurry is treated for removal of ferrous cyanide through precipitation with copper, nickel, or zinc. This metal-ferrocyanide precipitate is disposed with the tailings slurry stream to the TSF.

Process sumps are located in the acid wash area, the desorption area, CIL area, carbon regeneration area, alkaline reagent area, tailings area, lime storage area, and acid reagent area. The sumps from these areas are periodically emptied to the cyanide detoxification tank, then to the tailings slurry stream to the TSF.

Gland water is supplied by the raw water tank, while process water is supplied from decant water from the TSF, contact water from the collection pond and raw water make-up. After use, gland water, process water, and transfer waters are cycled back to the TSF via the tailings slurry stream.

7.25 RECOVERED OIL

In the event of a large oil spill, oil may be recovered by the spill response contractor. The oil will be pumped into drums or portable storage tanks for temporary storage. The oil will be characterized and then shipped to the appropriate disposal facility in accordance with federal, state, and local regulations.

7.26 SCRAP METAL

Scrap metal is placed in bins or dumpsters specifically identified for scrap metal only and recycled accordingly.

7.27 SEWAGE SLUDGE

Domestic sewage and potable water backflush are treated onsite via a large scale absorption system, designed for a total flow of 4,320 gpd. See the CPA appendix, *Preliminary Engineering Report, Wastewater Facilities*.

7.28 SLAG

Slag from the smelting process is returned to the process via the Mill feed.

7.29 SOLVENTS

Solvents from the parts washers are reused and must be periodically replaced. Solvents from parts washers are sampled and characterized to determine if they are hazardous waste. Sludge from the parts washers is also sampled and characterized. Hazardous parts washer solvents and sludge will be shipped offsite to a TSDF.

Eco-friendly, non-toxic, "green" solvents are available to be used at the Project. These solvents are non-hazardous. Provided they are appropriately managed and not mixed with other wastes or materials, the solvents can be disposed of as non-hazardous waste.

7.30 TIRES

Worn out tires will be picked up for recycling or exchanged when new ones are purchased.

7.31 USED OIL

The federal definition of used oil is "any oil that has been refined from crude oil, or any synthetic oil, that has been used and as a result of such use is contaminated by physical or chemical impurities" and is regulated under 40 CFR Part 279, Standards for the Management of Used Oil.

The State of Oregon defines used oil in OAR 340-111-0020(c) as any oil that has been refined from crude oil, or any synthetic oil that has been used as a lubricant, coolant (non-contact heat transfer fluids), hydraulic fluid or for similar uses and as a result of such use is contaminated by physical or chemical impurities. Used oil includes but is not limited to used motor oil, gear oil, greases, machine cutting and coolant oils, hydraulic fluids, brake fluids, electrical insulation oils, heat transfer oil and refrigeration oils. Used oil does not include used oil mixed with hazardous waste except as allowed in 40 CFR 279.10(b), oil (crude or synthetic) base products used as solvents, antifreeze, wastewaters from which the oil has been recovered, and oil contaminated media or debris.

Mixing used oil with other hazardous wastes may render the mixture a hazardous waste, in which case, the mixture could no longer be managed as used oil. Mixtures of used oil are regulated as follows:

- A mixture of used oil and a listed hazardous waste is regulated as hazardous waste.

- A mixture of used oil and a characteristic hazardous waste, or a listed hazardous waste that is listed solely because it exhibits one or more hazardous waste characteristic, is regulated as:
  - Hazardous waste if the mixture exhibits any characteristic of hazardous waste; and
  - Used oil if the mixture does not exhibit a characteristic of hazardous waste.

  Note that used oil containing more than 1,000 ppm of halogens is presumed to be hazardous waste (referred to as the "rebuttable presumption for used oil"). This presumption can be rebutted if the generator can prove the used oil was not mixed with hazardous waste.

Used oil will be stored at the truck workshop in secondary containment until it is shipped offsite to a TSDF for proper handling and disposal.

The general requirements for managing used oil include:

- Records of used oil shipped offsite as specified in 40 CFR Part 279.
- Containers are in good condition and are closed, covered, or located under cover to prevent rainwater from coming in contact with the used oil.
- Containers are labeled with the words "Used Oil."
- Any records produced as part of the management of used oil are kept on file for at least three years.
- Containers are provided with secondary containment as required under applicable regulations (40 CFR 112.8).

7.32 VEHICLE WASH BAY

The vehicle wash bay will be used for routine water wash of mine vehicles. Fluid will collect in a sump in the wash bay concrete slab, allowing solids to settle out and fluid to pass through an oil-water separator prior to returning to the wash bay tank for reuse. Solids will be periodically removed from the sump, containerized, assessed, and appropriate disposal arranged. Hydrocarbons recovered from the oil-water separator will be containerized and shipped offsite for disposal according to applicable environmental regulations.

7.33 SEDIMENT

Sediment that accumulates within the Collection Pond will be periodically removed when 20 percent or more of the pond capacity has been filled with sediment. A Waste Determination will be performed on the sediment, including laboratory characterization to determine if the sediment can be disposed in the TSF. If the Waste Determination indicates the sediment cannot be placed in the TSF, appropriate offsite disposal will be arranged.

8. REFERENCES

Mine Safety and Health Administration (MSHA). Hazardous Communication (HazCom), 30 CFR Part 47.

Occupational Safety and Health Administration (OSHA). HazCom, 29 CFR 1910.1200.

Oregon Administrative Rules (OAR). Chapter 340 Division 43, Chemical Mining.

----------. Chapter 340 Division 90, Recycling and Waste Reduction.

---------. Chapter 340 Division 93, Solid Waste: General Provisions.

---------. Chapter 340 Division 100, Hazardous Waste Management.

---------. Chapter 340 Division 101, Identification and Listing of Hazardous Waste.

---------. Chapter 340 Division 102, Standards Applicable to Generators of Hazardous Waste.

---------. Chapter 340 Division 103, Hazardous Waste Management.

---------. Chapter 340 Division 111, Used Oil Management.

---------. Chapter 340 Division 113, Universal Waste Management.

Oregon Revised Statute (ORS). Chapter 459 - Solid Waste Management.

----------. Chapter 466, Hazardous Waste and Hazardous Materials II.

----------. Chapter 468A.040, Air Quality.

U.S. Department of Transportation (USDOT). Hazardous Materials Regulations, 49 CFR Parts 171 through 180.

U.S. Environmental Protection Agency (EPA). Oil Pollution Prevention, 40 CFR Part 112.

----------. Hazardous Waste Management System: General, 40 CFR Part 260.

----------. Identification and Listing of Hazardous Waste, 40 CFR Part 261.

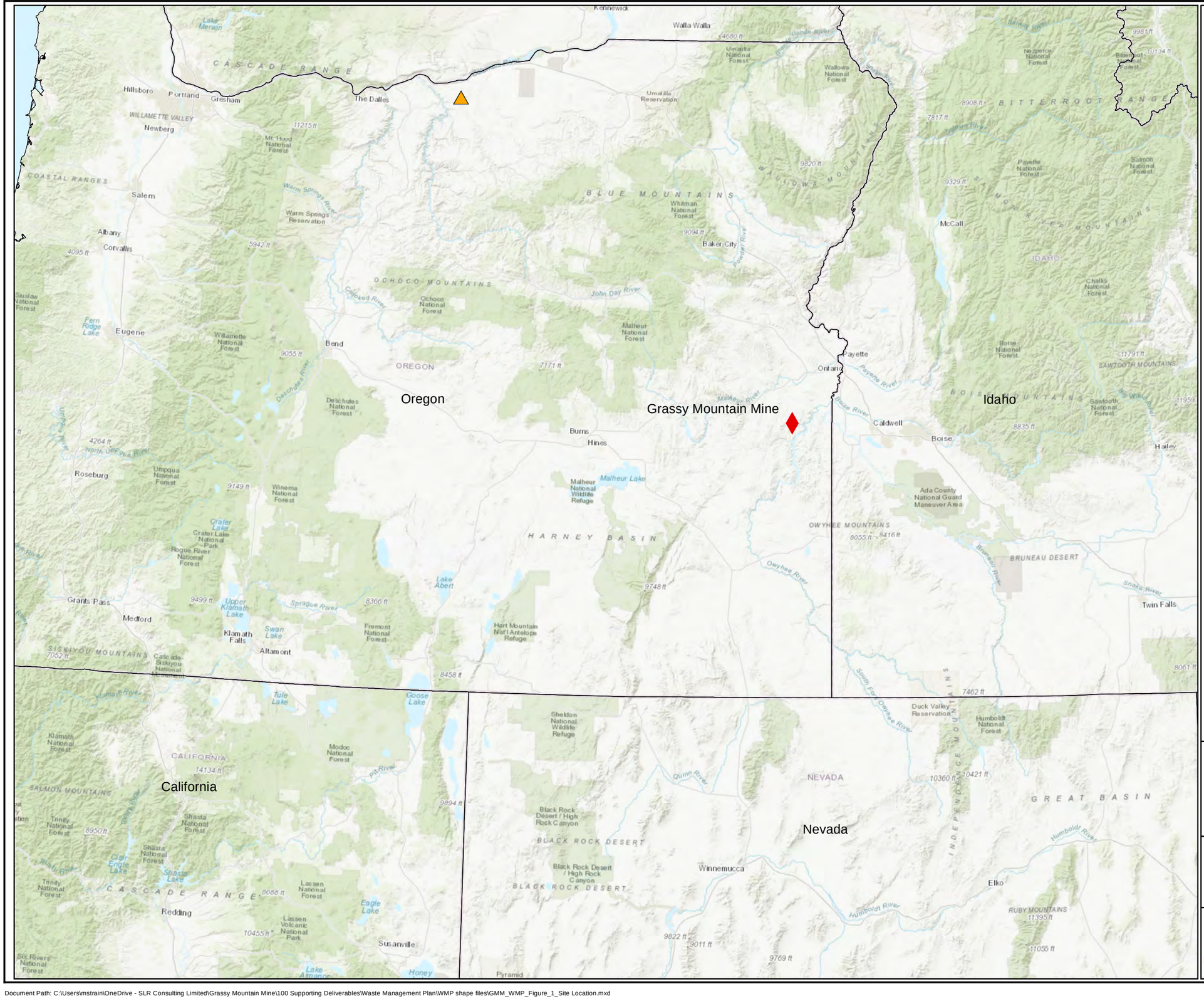
----------. Standards Applicable to Generators of Hazardous Waste, 40 CFR Part 262.

----------. Standards for Universal Waste Management, 40 CFR Part 273.

----------. Standards for the Management of Used Oil, 40 CFR Part 279.

----------. List of Lists, Consolidated List of Chemical Subject to EPCRA, CERCLA, and Section 112 of the Clean Air Act. EPA 550-B-12-003.

FIGURES



Legend

- Site Location
- Treatment Storage and Disposal Facility (TSDF)

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

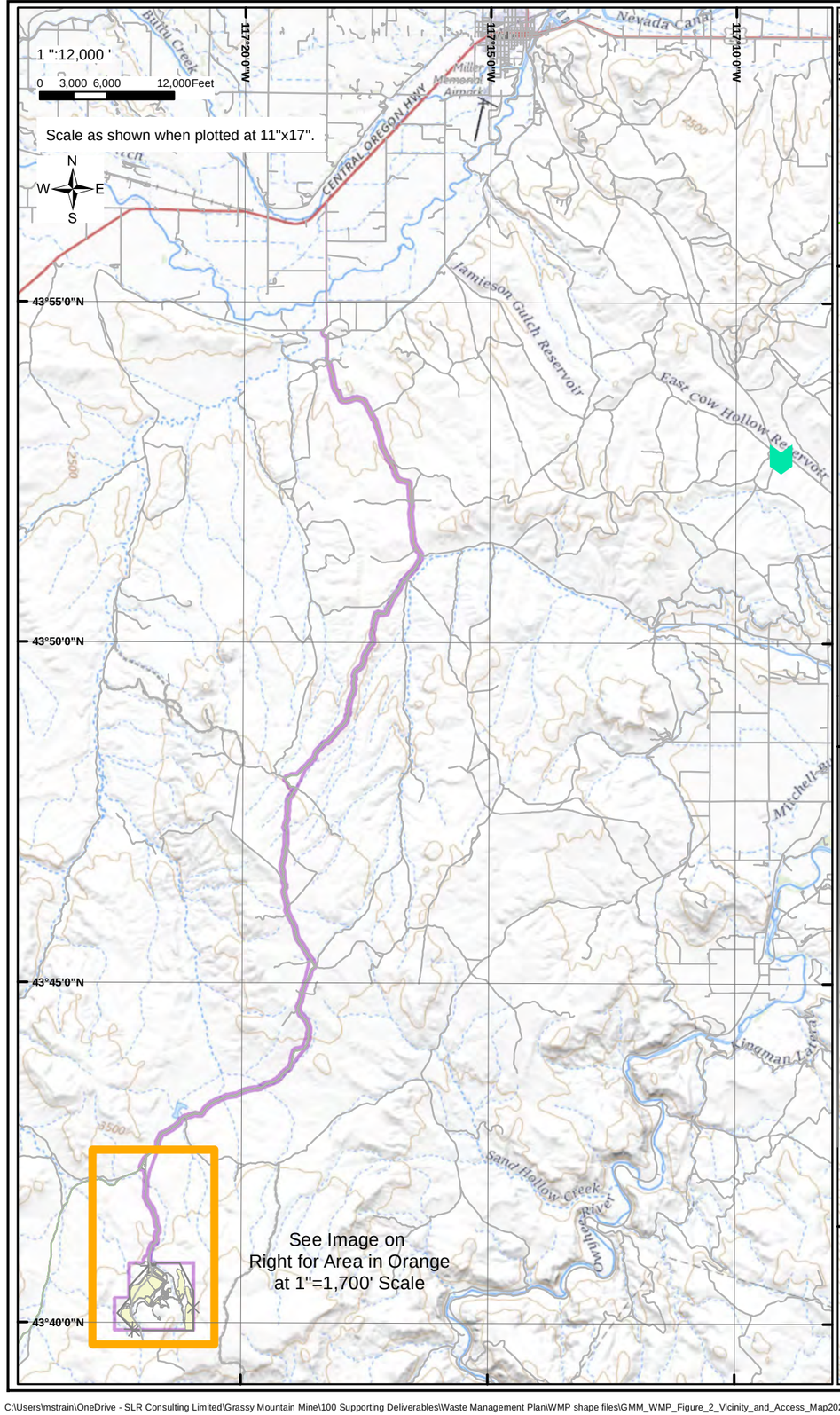
Waste Management Plan

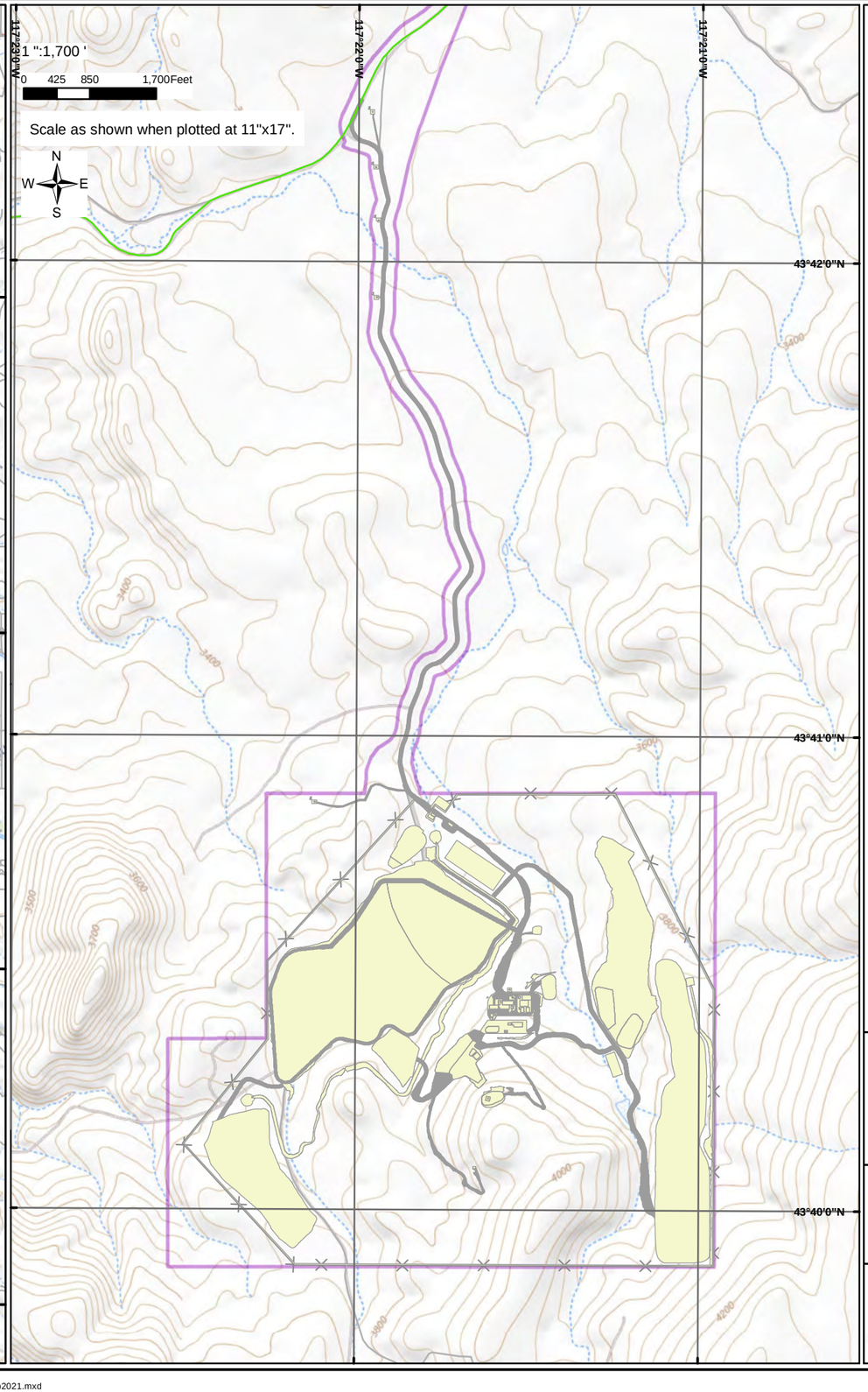
Figure:

Site and TSDF 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\Waste Management Plan\WMP shape files\GMM_WMP_Figure_1_Site Location.mxd





Legend

- PoO Boundary
- Fence Line
- Russell Road
- Cow Hollow Road
- Twin Springs Road
- Roads
- Local Solid Waste Landfill

Notes:
1. Figure references 1983 UTM zone 11N datum.
2. Road and highway system was referenced from the Bureau of land Management.
3. Topography and facility layout provided by others.

Site/Report:

Calico Resources USA Corp.
Grassy Mountain Mine

Waste Management Plan

Figure:

Mine Vicinity and Access Map and Solid Waste Landfill Location

SLR / CALICO RESOURCES	Date: December, 2021		Figure: 2
	Project No: 108.02203.00001		
	By: MS	Chk'd: TM	

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APPENDIX A

WASTE DETERMINATION CHECKLIST

Waste Determination Form

Date:	
Waste Description:	
Waste/Process Source [(1)]:	
Approximate Volume and Frequency of Generation:	
Storage Location and Container Type:	
Waste State:	☐**Solid** ☐**Liquid** ☐**Gas**
EPA Waste Codes:	
LDR Restrictions [(2)]:	

Part 1: Hazardous Waste Classification		
1. Is the waste a solid waste?	☐Yes	☐No
If no, why?		
2. Is the waste an excluded waste? Found in 40 CFR section 261.4(a) and 40 CFR section 261.4(b) (e.g., Bevill Exclusion)	☐Yes	☐No
If yes, what exclusion?		
3. Is the waste a U, P, K ,or F listed waste? Use SDS and process knowledge. Found in 40 CFR 261.31, 40 CFR 261.32., 40 CFR 261.33.	☐Yes Code_____	☐No
4. Is the waste ignitable? Use SDS or test flash point. Flash points below 140 °F are ignitable.	☐Yes D001	☐No
If no, why?		
5. Is the waste corrosive? Use SDS or pH meter. A pH of less than or equal to 2, or a pH greater than or equal to 12.5, is corrosive.	☐Yes D002	☐No
If no, why?		
6. Is the waste reactive? Use SDS or process knowledge. Is the waste stable?	☐Yes D003	☐No
If no, why?		
7. Is the waste toxic? Use SDS or TCLP data. Waste codes D004 through D043.	☐Yes D_____	☐No
If no, why?		

1) Include with this determination a copy of the Material Safety Data Sheet and any laboratory data or other supporting information, as applicable.

2) LDR information can be found in 40 CFR 268. Waste generated by very small quantity generators (VSQGs) as defined in 40 CFR 261.5 is excluded from the applicability of 40 CFR Part 268, if the VSQG sends its hazardous waste to a permitted hazardous waste facility, legitimate recycling facility, or other facility permitted, licensed, or registered by the state to manage municipal or industrial solid waste.