



## **APPENDIX B**

### **BEST MANAGEMENT PRACTICES**



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The following Best Management Practices (BMP) are a compilation of measures taken from the guide stipulations in BLM Manual Handbook H-2801-1, site-specific stipulations developed for other projects, and site-specific stipulations developed for the Three Rivers Stone Quarry Expansion Project.

### **AIR QUALITY**

1. L&W Stone shall meet Federal, state, and local emission standards for air quality and shall submit for the authorized officer's review a technical report addressing criteria and methodology of how activities at the proposed quarry will be designed to meet said standards.
2. The holder shall furnish and apply water or other means satisfactory to the authorized officer for dust control.
3. The holder will be responsible for controlling dust by reducing travel speed and/or applying water as a dust suppressant. Dust will be considered a nuisance/hazard when a visible plume of dust extends more than 300 feet from the source and an estimated opacity exceeds 20 percent (objects partially obscured). Additional methods of dust control that may be used by the holder include, but are not limited to:
  - Application of water to gravel and dirt roads and other disturbed areas as needed to suppress dust;
  - Application of water to specific activities in the quarry that generate dust plumes (i.e., excavating or blasting);
  - Curtailing of dust-generating activities during high winds;
  - Implementation of mandatory speed limits on vehicles using access roads or traveling through the quarry; and,
  - Limitation of number of vehicles allowed in the quarry.

### **HAZARDOUS MATERIALS**

1. The holder(s) shall comply with all applicable Federal, state and local laws and regulations, existing or hereafter enacted or promulgated, with regard to any hazardous materials, as defined in this paragraph, that will be used, produced, transported or stored on or within the Three Rivers Stone Quarry or any of the quarry facilities, or used in the construction, operation, maintenance or termination of the quarry or any of its facilities. "Hazardous material" means any substance, pollutant or

contaminant that is listed as hazardous under the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA), as amended, 42 U.S.C. 9601 *et seq.*, and its regulations. The definition of hazardous substances under CERCLA includes any "hazardous waste" as defined in the RCRA of 1976, as amended, 42 U.S.C. 6901 *et seq.* and its regulations. The term hazardous materials also includes any nuclear or byproduct material as defined by the Atomic Energy Act of 1954, as amended, 42 U. S. C. 2011 *et seq.* The term does not include petroleum, including crude oil or any fraction thereof that is not otherwise specifically listed or designated as a hazardous substance under CERCLA section 101(14), 42 U.S.C. 9601(14), nor does the term include natural gas.

2. L&W Stone agrees to indemnify the United States against any liability arising from the release of any hazardous substance or hazardous waste (as these terms are defined in the Comprehensive Environmental Response, Compensation and Liability Act of 1980, 42 U.S.C. 9601, *et seq.* or the Resource Conservation and Recovery Act of 1976, 42 U.S.C. 6901 *et seq.*) in the quarry (unless the release or threatened release is wholly unrelated to L&W Stone's activity in the quarry.) This agreement applies without regard to whether a release is caused by L&W Stone, its agent, or unrelated third parties.
3. L&W Stone shall submit its contingency plan to the authorized officer prior to scheduled start-up.
  - a. Include provisions for oil or other pollutant spill control.
  - b. The agencies responsible for contingency plans in central Idaho shall be among the first to be notified in the event of any spill of oil or other pollutant.
  - c. Provide for restoration of the affected resource.
  - d. Provide that the authorized officer shall approve any materials or devices used for oil spill control and any disposal sites or techniques selected to handle oil, matter, or other pollutants.
  - e. Include separate and specific techniques and schedules for cleanup of spills of oil or other pollutants on land or waters.
4. The holder would not refuel any equipment within 500 feet of any live water source.
5. Fuel and lubricant storage areas would comply with the applicable regulations as described in 30 CFR 56.4101, 40 CFR Part 112, and the IDL BMPs.

## SEDIMENT AND EROSION CONTROL/STORMWATER MANAGEMENT

Surface water management for disturbed sites would be applied on a site-specific basis and may include any, or a combination, of the following methods:

- Water bars (mine roads);
- Rolling dips (mine roads);
- Drainage and diversion ditches;
- Berms;
- Straw bales (certified to be free of noxious weed seed); and/or
- Silt fencing.

Additional BMPs, specified by Idaho regulations for managing surface water, would include the following:

- Flow dissipaters;
- Culverts at drainage crossings;
- Sediment traps/catch basins; and
- Graveling selected road surfaces.

When used as the primary means of controlling water flow, water bars would be spaced as follows:

- 300 feet to 500 feet apart where road grades are 2 percent to 5 percent;
- 200 feet to 300 feet apart where road grades are 6 percent to 10 percent;
- 100 feet to 200 feet apart where road grades are 11 percent to 15 percent; and
- Less than 100 feet apart where road grades are 16 percent to 20 percent.

Water bars would be constructed typically by cutting each water bar into solid soil to a minimum depth of 6 inches next to the cutbank and 8 inches at the road shoulder, with an adverse grade on the downgradient side of the water bar. A continuous, firm berm of soil 6 inches above normal grade, parallel to the water bar, would be constructed on its downhill side. A bank tie-in point, cut 6 to 12 inches into the roadbed, would be included. The completed water bar would extend across the full roadway width, aligned at an angle of 30 to 40 degrees relative to the roadway. If inspections show that erosion is occurring below the water bars, riprap or a silt fence would be installed at the place of erosion. Also, inspections would include a check to be sure that the lower end is open and is clear of sediment, so that water can easily flow away from the roadway.

Where appropriate, such as on long inclines to keep stormwater from flowing down roads, and where road grades are less than 5 percent, rolling dips would be constructed in place of water bars. Rolling dips would be built into the road, following the natural contours of the land. The typical dip would be 1 foot deep, with a 23-foot long approach on the downgrade side and a 66-foot long approach on the upgrade side. Inspections of rolling dips would ensure that outflows are kept free of debris to prevent ponding of water on the road (IDEQ 2001).

The primary water control method on mine roads would be drainage ditches or sumps constructed along road edges to collect stormwater runoff. Silt fences and straw bales would be utilized where drainage ditches or sumps are inadequate to control erosion of mine roads. The silt fences and straw bales would be regularly maintained and replaced when necessary.

Silt fences would be made of burlap and/or pervious polypropylene, nylon, polyester, or polyethylene and must meet Idaho State standards (IDEQ 2001). Posts that hold up the filter fabric would be spaced no more than 10 feet apart when using a wire mesh support and no more than 6 feet apart when using extra strength filter fabric, which does not require a wire mesh support. When fabric is spliced together, there would be at least 6 inches of overlap of material. Inspection of silt fences would include checking for damage, such as rips and tears, and for the height of accumulated sediment. When the height of sediment reaches half the height of the fabric material, the sediment would be removed and stored as topsoil, if appropriate; otherwise, it would be placed in a waste rock storage area.

Straw bales would be used only where water flows and drainage areas are limited in size. The straw bales would be embedded into the soil at least 6 inches and anchored with wooden stakes, typically 2 inches by 2 inches by 36 inches, or with steel drift pins driven 18 inches into the ground. Bales would be inspected after the first runoff event, and after major runoff events thereafter. The bales would be placed in a single row lengthwise on the contour for sediment control in sheet flows. Gaps between the bales would be filled with tightly wedged straw. Inspections would ensure that runoff is flowing through the bales and not around or unimpeded under the bales. In addition, sediment would be removed when it has reached 1 foot in height behind the bales and stored as topsoil, if suitable. Otherwise, the sediment would be placed in the waste rock storage area (IDEQ 2001).

Sediment traps/catch basins and flow dissipaters (such as rip-rap) would be constructed if the water management controls described above do not adequately control the flow of water over roads and other disturbed surfaces. Berms would be constructed at the toe of the waste rock piles and other disturbed areas, such as the administration area and chemical and fuel storage facilities, to collect surface runoff and prevent sediment discharge to the East Fork Salmon

River and Salmon River. Diversion ditches would be constructed around the waste rock storage areas as necessary to divert drainage around the areas.

## SEEDING AND MULCHING

The holder shall prepare a seedbed by: (1) scarifying the disturbed area, (2) distributing topsoil uniformly, and (3) disking the topsoil, as directed by the authorized officer.

The holder shall seed all disturbed areas with a BLM-approved seed mixture(s). The seed mixture(s) shall be planted in the amounts specified in pounds of pure live seed (PLS)/acre. There shall be no primary or secondary noxious weed seed in the seed mixture. Seed shall be tested and the viability testing of seed shall be done in accordance with Idaho State law(s) and within 6 months prior to purchase. Commercial seed shall be either certified or registered seed. The seed mixture container shall be tagged in accordance with Idaho State law(s) and available for inspection by the authorized officer.

Seed shall be planted using a drill equipped with a depth regulator to ensure proper depth of planting where drilling is possible. The seed mixture shall be evenly and uniformly planted over the disturbed area. (Smaller/heavier seeds have a tendency to drop to the bottom of the drill and are planted first. The holder shall take appropriate measures to ensure this does not occur.) Where drilling is not possible, seed shall be broadcast and the area shall be raked or chained to cover the seed. When broadcasting the seed, the pounds per acre noted below, as specified by an authorized officer, are to be doubled. The seeding will be repeated until a satisfactory stand of vegetation is established as determined by the authorized officer. Evaluation of growth must be made but will not be made before completion of the second season after seeding. The authorized officer is to be notified a minimum of 14 days prior to seeding of the project.

### Seed Mixture

Species of Seed \_\_\_\_\_ Variety \_\_\_\_\_ Pounds/acre PLS (seed mix to be determined) \_\_\_\_\_

Total (to be determined) lbs/acre PLS

PLS formula: % of purity of seed mixture times % germination of seed mixture = portion of seed mixture that is PLS.

The holder will apply clean, weed-free straw mulch to all disturbed areas. Mulch will be applied concurrent with or immediately after seeding, where necessary to stabilize the soil surface and to reduce wind and water erosion. Mulch will be uniformly spread over at least 75 percent of the ground surface in disturbed areas to minimize the effects of water and wind

erosion and to preserve moisture in areas requiring vegetation. Mulch will be anchored by disking or punching, depending the percent slope.

## **RESOURCE PROTECTION**

1. Use of pesticides shall comply with the applicable Federal and state laws. Pesticides shall be used only in accordance with their registered uses and within limitations imposed by the Secretary of the Interior. Prior to the use of pesticides, L&W Stone shall obtain from the authorized officer written approval of a plan showing the type and quantity of material to be used, pest(s) to be controlled, method of application, location of storage and disposal of containers, and any other information deemed necessary by the authorized officer. Emergency use of pesticides shall be approved in writing by the authorized officer prior to such use.
2. L&W Stone shall be responsible for weed control on disturbed areas within the limits of the quarry. The holder is responsible for consultation with the authorized officer and/or local authorities for acceptable weed control methods. Weed treatments would be conducted consistent with the Challis BLM Field Office and the Custer County Noxious Weed Control Program.
3. The prevention and spread of noxious and invasive weeds is a high priority to nearby communities. Under EO 13112, Federal agencies shall not fund, or authorize actions likely to cause or promote the introduction or spread of invasive species in the United States. L&W Stone would prepare a noxious and invasive weed plan as part of the Plan of Operations. The weed plan would include pre-mining weed inventories and a post-mining monitoring plan to prevent and treat the spread of weeds. Mining equipment would be cleaned and free of weeds prior to coming onto the quarry. Only certified weed free straw and hay would be used as mulch or for temporary erosion control measures.
4. Any cultural and/or paleontological resource (historic or prehistoric site or object) discovered by the holder, or any person working on his behalf, on public or Federal land shall be immediately reported to the authorized officer. L&W Stone shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the authorized officer. An evaluation of the discovery will be made by the authorized officer to determine appropriate actions to prevent the loss of significant cultural or scientific values. L&W Stone will be responsible for the cost of evaluation, and any decision as to proper mitigation measures will be made by the authorized officer after consulting with the holder.

5. The holder shall protect all survey monuments found within the quarry. Survey monuments include, but are not limited to, General Land Office and Bureau of Land Management Cadastral Survey Corners, reference corners, witness points, United States. Coastal and Geodetic benchmarks and triangulation stations, military control monuments, and recognizable civil (both public and private) survey monuments. In the event of obliteration or disturbance of any of the above, L&W Stone shall immediately report the incident, in writing, to the authorized officer and the respective installing authority if known. Where General Land Office or Bureau of Land Management monuments or references are obliterated during operations, L&W Stone shall secure the services of a registered land surveyor or a Bureau cadastral surveyor to restore the disturbed monuments and references using surveying procedures found in the *Manual of Surveying Instructions for the Survey of the Public Lands in the United States*, latest edition. L&W Stone shall record such survey in the appropriate county and send a copy to the authorized officer. If the Bureau cadastral surveyors or other Federal surveyors are used to restore the disturbed survey monument, L&W Stone shall be responsible for the survey cost.

## PUBLIC ACCESS AND SAFETY

Gates installed by L&W Stone must include a BLM lock and a lock for the Salmon River Electric Cooperative, Inc. The BLM would provide keys to the lock to those with legal access rights such as grazing permittees and mining claimants, and others at the discretion of the BLM, but with advance notice to L&W Stone. Signs which inform the public of the location of the gate, the hours it is locked, and a phone number to call would be placed at the access road(s) to the quarry site from Spar Canyon.

## EXPLOSIVES

If blasting activities require closure of State Highway 75 or the East Fork Road, Idaho Department of Transportation procedures would be followed. In addition, the Challis BLM Field Office Manager would be notified prior to any road closures or limitations associated with the mine's activities.

Two explosives magazines would be used to store explosives safely per 30 CFR 56.6000-6201. Caps, detonators, and primers would not be stored in a magazine with explosives, including dynamite.

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