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DIVISION OF RECLAMATION  
MINING AND SAFETY

December 19, 2014

Colorado Division of Reclamation, Mining, and Safety  
Ms. Amy Eschberger  
Environmental Protection Specialist  
1313 Sherman Street, Room 215  
Denver, CO 80203

Re: M-1978-011 Buffalo Mine, Elbert County, Colorado  
Technical Revision Inert Fill Import Response to Preliminary Adequacy Review for TR-01

Dear Ms. Eschberger:

General Shale Brick, Inc. (GSB) has received your adequacy review letter dated September 30, 2014 for the Buffalo Mine (Buffalo) regarding the importation of scrap brick (grog). GSB offers the following responses to your comments:

- 1. Please provide a map which depicts the approximate location where the scrap brick will be backfilled.***

The grog will be placed on the clay stockpile pad area. Please see the attached map named Buffalo Mine Site Map.

The grog will be blended with overburden and placed at the top of the clay stockpile pad area during the next mining campaign in 3-5 years. This will provide a firm base to build clay stockpiles on and allow access to the clay stockpile during inclement weather.

- 2. Please indicate if the final contours which are depicted on the most recently approved Reclamation Plan Map will change. If so, please provide a revised Reclamation Plan Map which shows the proposed topography of the area with contour lines of sufficient detail to portray the direction and rate of slope of all reclaimed lands.***

We do not anticipate importation of the grog will change the existing reclamation plan. In fact, the grog will help GSB backfill the existing mine area to the approximate contours as shown on the existing reclamation plan map by providing additional back fill materials.

- 3. Per Construction Materials Rule 3.1.5(9)(f), please provide additional detail on how the scrap brick will be blended with overburden material so that settling of the backfilled area does not occur. In addition, describe how compaction of the backfilled material will be achieved.***

#### **Blending**

Once final reclamation of the site begins, the overburden-grog mix will be placed in 6 inch or less lifts across the mined out area. Then a six inch layer of overburden will be placed on top of the overburden-grog mix lift. Additional alternating overburden-grog mix and overburden 6 inch lifts will be built on top of the previous lifts until the lifts matches the

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TR-01 Inert Fill Import Response to Adequacy Review for Buffalo Mine M-1978-011

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reclamation plan and/or surrounding native topography. The lifts will be placed by a Caterpillar 637 scraper (scraper).

#### **Compaction**

After the placement of each overburden lift, a scraper, with a full bowl, will wheel roll each 6 inch overburden lift until the materials are tight, meaning the tires sink 1-2 inches into the fill based on visual inspection of the fill. If necessary, water may be added to the fill to assist with compaction. .

- 4. The Operator is proposing to import scrap brick over a period of ten years, with the imported material remaining in a stockpile until the operation enters final reclamation. Please note that the Division must bond for all non-product stockpiles which will be used during reclamation. Alternately, the Operator may blend and backfill the scrap brick into the pit as it is imported to the site. If the scrap brick is immediately backfilled, then an adjustment of the financial warranty will not be necessary. Please specify if the scrap brick will be stockpiled or if it will be backfilled upon importation of the material.***

The grog will have to be stockpiled and will be placed in the pit as part of final reclamation. The grog will be placed at the south end of the stockpile pad area. The anticipated grades and distances are:

Quantity: 4,500 cubic yards  
Average grade to backfill area: -18%  
Average grade backfill area: 0%  
Average grade return to grog stockpile: 2.4%  
Length of stockpile pad area cut: 500 feet  
Haul distance to backfill area: 200 feet  
Backfill area distance: 350 feet  
Return distance to clay stockpile area: 700 feet  
Equipment: Caterpillar 637 scraper

In addition, GSB would like to clarify that they will import approximately 1,500 to 3,000 tons of grog each year depending on demand for clay from Buffalo. The grog will be hauled in the next 5 years.

Please feel free to contact me with any questions at 303-783-3058 or by email at [jason.mcgraw@generalshale.com](mailto:jason.mcgraw@generalshale.com).

Sincerely,  
General Shale Brick, Inc.



Jason E. McGraw P.E.  
Mine Supervisor

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ELBERT COUNTY ROAD 150

Clay  
Stockpile  
Pad  
Area

B-06A  
Stockpile

Overburden Stockpile

Tonson Stockpile

Access Road

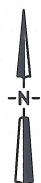
Grog  
Stockpile

Access Road

Permit Boundary Phase III  
Area: 9.8 Acres

Buffalo Pit  
Phase III

Disturbance Boundary Phase III  
Area: 8.6 Acres



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Buffalo 2014A.dwg

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1845 W. Dartmouth Ave  
Denver, Colorado 80110  
Phone (303) 783-3000

DRAWING TITLE

Buffalo Mine  
Phase III Site Map

CONTOUR INTERVAL:	DRAWING NUMBER:	—	REVISION:	A	SHT. 1 OF 1
5'	DRAWN BY:	Jason E. McInnis	DATE:	December 19, 2014	
	APPROVAL BY:		SCALE:	1"=150'	