COLORADO DIVISION OF RECLAMATION, MINING AND SAFETY
MINERALS PROGRAM INSPECTION REPORT
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The Division of Reclamation, Mining and Safety has conducted an inspection of the mining operation noted below. This report documents observations concerning compliance with the terms of the permit and applicable rules and regulations of the Mined Land Reclamation Board.

MINE NAME: DDD	**MINE/PROSPECTING ID#:** M-1984-076	**MINERAL:** Clay (general)	**COUNTY:** Elbert
INSPECTION TYPE: Monitoring	**INSPECTOR(S):** Amy Eschberger	**INSP. DATE:** August 12, 2014	**INSP. TIME:** 09:30
OPERATOR: General Shale Brick, Inc.	**OPERATOR REPRESENTATIVE:** Jason McGraw	**TYPE OF OPERATION:** 112c - Construction Regular Operation	

REASON FOR INSPECTION: Normal I&E Program	**BOND CALCULATION TYPE:** None	**BOND AMOUNT:** $135,807.00
DATE OF COMPLAINT: NA	**POST INSP. CONTACTS:** None	**JOINT INSP. AGENCY:** None
WEATHER: Clear	**INSPECTOR'S SIGNATURE:** Amy Eschberger	**SIGNATURE DATE:** October 15, 2014

The following inspection topics were identified as having Problems or Possible Violations. OPERATORS SHOULD READ THE FOLLOWING PAGES CAREFULLY IN ORDER TO ASSURE COMPLIANCE WITH THE TERMS OF THE PERMIT AND APPLICABLE RULES AND REGULATIONS. If a Possible Violation is indicated, you will be notified under separate cover as to when the Mined Land Reclamation Board will consider possible enforcement action.

INSPECTION TOPIC: Hydrologic Balance
PROBLEM/POSSIBLE VIOLATION: Problem: The Division has no evidence that the Operator has a valid well permit, substitute water supply plan, or approved water augmentation plan for possible exposed groundwater at the site. This is a problem related to 34-32.5-116(4)(h) of the Colorado Revised Statutes and 3.1.6(1)(a) of the Construction Materials Rules and Regulations governing injury to existing water rights.
CORRECTIVE ACTIONS: The Operator shall demonstrate that the operation is in compliance with the Office of the State Engineer (SEO), or show evidence that the Operator is taking measures to bring the site into compliance with the SEO, or backfill the pits to at least two feet above the static groundwater level by the corrective action date specified.
CORRECTIVE ACTION DUE DATE: 12/15/14

OBSERVATIONS

This was a normal monitoring inspection of the DDD mine (Permit No. M-1984-076) conducted by Amy Eschberger of the Division of Reclamation, Mining, and Safety (Division). Mr. Jason McGraw represented the Operator, General Shale Brick, Inc. for the inspection. This mine is split into two areas, informally called the West Pit and the East Pit, which are approximately 1.5 miles apart from each other off of Co Rd 194. The sites are located approximately 19 miles north of Kiowa, Colorado in Elbert County, on land owned by D.D. Daughenbaugh. Each site is accessed from the north by Co Rd 194. The post-mining land use is pastureland for grazing purposes.

This is a 112c operation permitted for 101.40 acres to mine clay product for brick manufacturing. This is an intermittent operation. The maximum allowed disturbed acreage for this operation is 35 acres. Mining is to occur to depths of approximately 40 feet. A Succession of Operators from Robinson Brick Company to General Shale Brick, Inc. was approved for this permit on 06/02/2008. A Technical Revision (TR-02) approved on 01/24/2013 allowed for 45,000 tons of inert fill (scrap brick generated from the GSB's Denver brick plant) to be imported to the site for reclamation use.

For this report, the two mining areas, the West pit and the East pit, will be described separately:

West pit:

The West pit permit area consists of 59 acres and current disturbance consists of approximately 17 acres. According to Annual Reports submitted, it appears that the amount of disturbance at this site has not changed since 2007. The site was not active during the inspection; however, according to Mr. McGraw, product is hauled off from the site every year. A permit sign was posted at the entrance to the site (Photo 1). However, the sign should have the current Operator's name (not Robinson Brick Company), and "MLRD" should be corrected to "MLRB" for Mined Land Reclamation Board. The permit boundary was delineated with fencelines, and the affected area was marked with metal posts.

The West pit includes an excavation on the eastern portion that is approximately 750 feet in length (Photo 2), a stockpile pad area constructed out of overburden material on the western portion that includes three clay product stockpiles (Photo 3), a topsoil stockpile on the northern edge (Photo 4), and a stockpile of scrap brick fill material lining the northern and western edges of the area (see Photo 3), an overburden stockpile on the southern edge, and a settling pond in the southwestern corner to collect runoff from the mine (Photo 5). All stockpiles appeared to be stable.

The excavation area has highwalls that are up to approximately 25 feet in height, with slope gradients of 1.5H:1V to 2H:1V (see Photo 2). The northwestern portion of the excavation has standing water with a surface area of approximately 0.1 acre and a depth of approximately 1-2 feet (Photos 6 and 7). Standing water has been observed in this pit in inspections going back to 1999. A Problem was cited for this issue in the 03/23/2006 inspection report. The Operator was instructed to determine whether water in the pit is groundwater or surface runoff, and to develop an appropriate plan to deal with its management. The Problem was considered abated on 06/01/2006, when the Operator submitted a letter stating that water levels in the pit were monitored for a few months in the spring, and there appeared to be no groundwater component to the standing water. The Operator stated that the pit remains routinely dry during much of the year, but that any significant accumulation of water would be removed from the pit in a timely manner. Also, to prevent water from being retained in the pit, the Operator committed to completing some minor grading modifications to divert stormwater flow away from the pit, and to refrain from placing snow in areas that drain to the pit.

During the current inspection, Mr. McGraw stated that based on previous drilling, he believes the groundwater level in the area to be 10's of feet below the current pit floor. He also indicated that the standing water does not typically remain in the pit for very long. The Division understands that because this is a clay pit, water may be retained longer

than if the ground consisted of more permeable sediments. However, if water is retained on site for more than 72 hours, the Division of Water Resources (DWR) requires the Operator to obtain a substitute water supply plan or augmentation plan approved by water court.

The Division has no evidence that the Operator has a valid well permit, substitute water supply plan, or approved augmentation plan for this site. **A Problem will be cited in this report for failure to comply with C.R.S. 34-32.5-116(4)(h), which requires the Operator to minimize disturbances to the prevailing hydrologic balance of the affected land and of the surrounding area, and with Rule 3.1.6(1)(a), which requires the Operator to be in compliance with applicable Colorado water laws and regulations governing injury to existing water rights (see page 1)**. The Operator will need to demonstrate to the Division that the operation is in compliance with the Office of the State Engineer (SEO), or show evidence that the Operator is taking measures to bring the site into compliance with the SEO, or backfill the pit to at least two feet above the static groundwater level. The Operator should contact the Colorado Division of Water Resources for more information. Proof of action regarding this matter will need to be submitted to the Division by the corrective action due date.

The settling pond located in the southwestern corner of the West pit appears to be functioning properly. The inlet is rather steep, but is lined with a rubber liner and riprap to help control erosion (Photo 8). This erosion control structure will need some repair as it appears that water is undercutting the structure during heavy storm events. During the inspection, Mr. McGraw committed to getting this structure repaired very shortly. Water in the pond currently has a surface area of approximately 0.15 acre. The water level in the pond was well below the outlet height by approximately 2-3 feet.

Vegetation in disturbed areas appeared to consist primarily of weeds and some native grasses which have volunteered into these areas. The weeds consisted of wild sunflowers, kochia, Russian thistle, diffuse knapweed, and some common mullein (in the southern portion of the disturbed area). The Division recommends the Operator continue to monitor and control the growth of both nuisance and noxious weeds in disturbed areas, and implement the approved weed control plan for this site.

East Pit:

The East pit permit area consists of 41.5 acres and current disturbance consists of approximately 18 acres. According to Annual Reports submitted, it appears that the amount of disturbance at this site has not changed since 2007. The site was not active during the inspection; however, according to Mr. McGraw, product is hauled off from the site every year. A permit sign was posted at the entrance to the site (Photo 9). However, as with the West Pit, the permit sign should include the name of the current Operator (not Robinson Brick Company), and "MLRD" should be corrected to "MLRB" for Mined Land Reclamation Board. The permit boundary was delineated with fencelines, and the affected area was marked with metal posts.

The East pit includes a main stockpile pad that has been stripped of topsoil (Photo10), an exposed flat mine bench (Photo 11), an excavation (see Photo 11), a stockpile pad that was constructed on the northwest side of the permit area in 2007, three topsoil stockpiles located along the northern and southern edges of the permit area (Photo 12), one overburden stockpile located south of the excavation (Photo 13), and one small product stockpile and a stockpile of scrap brick fill material located on the northern portion of the pit (see Photo 10). All stockpiles appeared to be stable.

The south-facing highwall is approximately 600 feet long and up to 30 feet in height, with slope gradients of 1.5H:1V to 2H:1V (Photo 14). The excavated pit has standing water with a surface area of approximately 0.45 acre and a maximum depth of approximately 15 feet (Photos 15 and 16). According to historical imagery of this site shown in Google Earth, this pit started retaining water in 2007. As mentioned above, the DWR requires the Operator to obtain water rights for water that is retained on site for more than 72 hours. **The Problem cited in this report pertains to both the West pit and the East pit.**

It appears that stormwater runoff flows into the excavation at this site from the east and the west, but is concentrated more from the east, where a deep gully has formed (Photo 17). According to Mr. McGraw, this erosion damage will be repaired shortly when the roads are regraded for entry into the pit to resume mining. Mining is expected to resume at this pit within a year or so. Other activities to prepare the site for mining will include constructing a few sediment ponds around the mining area (most likely on the western end, which is downgradient from the pit), and constructing small diversion ditches or berms to help divert water into the sediment ponds. Mr. McGraw indicated the Operator must be out of the West pit by 2016. Therefore, the stockpiles in the West pit will need to be used up or relocated to the East pit within a year so that the West pit can be reclaimed. The Operator should be aware that any changes to the approved mining plan, reclamation plan, and/or maps, (including the addition of sediment ponds, or mining to deeper depths than previously stated) should be updated with the Division. Unless these changes include an increase in permit acreage or significant changes to the approved permit files, they can be updated through the submittal of a Technical Revision.

Vegetation in disturbed areas at this site consisted of native grasses, forbs, and annual weeds, which have volunteered into these areas. The weeds consisted of kochia, Russian thistle, diffuse knapweed, and some wild sunflowers. The Division recommends the Operator continue to monitor and control the growth of both nuisance and noxious weeds in disturbed areas, and implement the approved weed control plan for this site.

Financial Warranty:

The required Financial Warranty for this permit was increased in 2008 from $50,000.00 to $135,807.00, for a maximum disturbed area of 35 acres. No additional acres appear to have been affected since 2008. After conducting the recent inspection, the Division has determined that the current bond is adequate for reclamation of the site. However, before disturbing more than 35 acres, the Operator will need to submit a Technical Revision to increase the maximum allowed disturbed acreage. A Surety Increase may be required at that time.

PHOTOGRAPHS

Photo 1. View of permit sign posted at entrance to West pit.

Photo 2. View looking east, showing excavation present in eastern portion of permit area.

Photo 3. View looking north, showing stockpile pad, including three clay product stockpiles. Note scrap brick stockpile lining northwestern portion of stockpile pad (at left).

Photo 4. View of topsoil stockpile stable with vegetative cover, stored along northern permit boundary.

Photo 5. View of sediment pond located in southwestern portion of permit area.

Photo 6. View looking west, showing standing water in pit located in eastern portion of permit area.

Photo 7. View looking east, showing standing water in pit located in eastern portion of permit area.

Photo 8. View of eastern portion of sediment pond with plastic liner and riprap. Note how water appears to be undercutting the structure when levels are higher.

Photo 9. View of permit sign posted at entrance to East pit.

Photo 10. View looking west, showing main stockpile pad area located in northern portion of permit area. Note small material stockpile (at center, background), and portion of scrap brick fill material (at left).

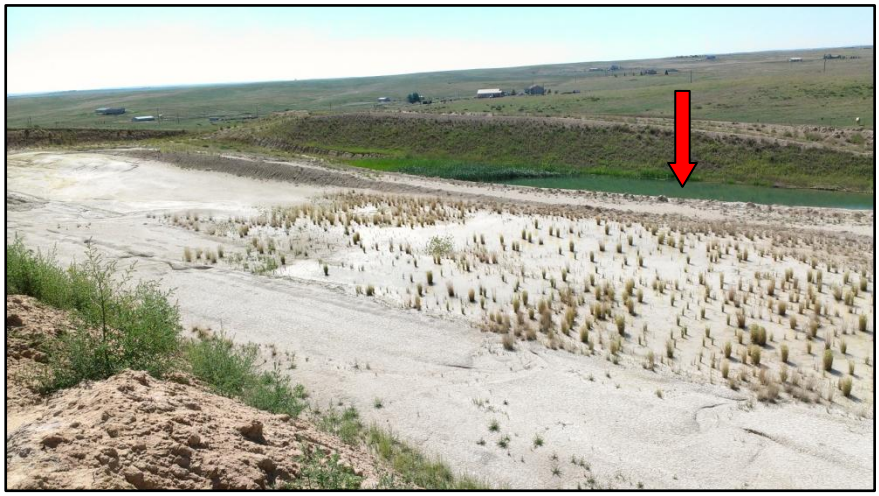

Photo 11. View looking southeast from southern edge of main stockpile pad area, showing exposed flat mine bench below. Excavation located south of bench is marked.

Photo 12. View of topsoil stockpile stable with vegetative cover, stored along northern permit boundary.

Photo 13. View of overburden stockpile stable with vegetative cover, located south of the excavation.

Photo 14. View of south-facing highwall (at left).

Photo 15. View looking east, showing water retained inside excavated pit.

Photo 16. View looking west, showing water retained inside excavated pit.

Photo 17. View looking east, showing gully forming (marked) where stormwater runoff flows into excavated pit.

GENERAL INSPECTION TOPICS

The following list identifies the environmental and permit parameters inspected and gives a categorical evaluation of each

(AR) RECORDS---------- Y	**(FN) FINANCIAL WARRANTY-------- N**	**(RD) ROADS---------- Y**
(HB) HYDROLOGIC BALANCE---------- PB	**(BG) BACKFILL & GRADING---------- Y**	**(EX) EXPLOSIVES--------- NA**
(PW) PROCESSING WASTE/TAILING---- Y	**(SF) PROCESSING FACILITIES------- NA**	**(TS) TOPSOIL---------- Y**
(MP) GENL MINE PLAN COMPLIANCE- Y	**(FW) FISH & WILDLIFE---------- N**	**(RV) REVEGETATION---- Y**
(SM) SIGNS AND MARKERS---------- Y	**(SP) STORM WATER MGT PLAN---- Y**	**(SB) COMPLETE INSP---- Y**
(ES) OVERBURDEN/DEV. WASTE--------- Y	**(SC) EROSION/SEDIMENTATION--- Y**	**(RS) RECL PLAN/COMP-- Y**
(AT) ACID OR TOXIC MATERIALS------- NA	**(OD) OFF-SITE DAMAGE---------- Y**	**(ST) STIPULATIONS------- NA**

Y = Inspected and found in compliance / N = Not inspected / NA = Not applicable to this operation / PB = Problem cited / PV = Possible violation cited

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