




**COLORADO DIVISION OF RECLAMATION, MINING AND SAFETY**  
**MINERALS PROGRAM INSPECTION REPORT**  
**PHONE: (303) 866-3567**

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.

<b>MINE NAME:</b> Pit 29	<b>MINE/PROSPECTING ID#:</b> M-1980-183	<b>MINERAL:</b> Sand and gravel	<b>COUNTY:</b> Adams
<b>INSPECTION TYPE:</b> Monitoring	<b>INSPECTOR(S):</b> Tyler V. O'Donnell	<b>INSP. DATE:</b> December 7, 2015	<b>INSP. TIME:</b> 14:30
<b>OPERATOR:</b> Brannan Sand and Gravel Company, L.L.C.	<b>OPERATOR REPRESENTATIVE:</b> Alex Schatz and Josh Oliver	<b>TYPE OF OPERATION:</b> 112c - Construction Regular Operation	

<b>REASON FOR INSPECTION:</b> Normal I&E Program	<b>BOND CALCULATION TYPE:</b> None	<b>BOND AMOUNT:</b> \$1,377,450.00
<b>DATE OF COMPLAINT:</b> NA	<b>POST INSP. CONTACTS:</b> None	<b>JOINT INSP. AGENCY:</b> None
<b>WEATHER:</b> Clear	<b>INSPECTOR'S SIGNATURE:</b> 	<b>SIGNATURE DATE:</b> February 22, 2016

**GENERAL INSPECTION TOPICS**

This list identifies the environmental and permit parameters inspected and gives a categorical evaluation of each. No problems or possible violations were noted during the inspection. The mine operation was found to be in full compliance with Mineral Rules and Regulations of the Colorado Mined Land Reclamation Board for the Extraction of Construction Materials and/or for Hard Rock, Metal and Designated Mining Operations. Any person engaged in any mining operation shall notify the office of any failure or imminent failure, as soon as reasonably practicable after such person has knowledge of such condition or of any impoundment, embankment, or slope that poses a reasonable potential for danger to any persons or property or to the environment; or any environmental protection facility designed to contain or control chemicals or waste which are acid or toxic-forming, as identified in the permit.

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

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

## **OBSERVATIONS**

This inspection was conducted by Tyler O'Donnell of the Division of Reclamation, Mining and Safety (Division). Brannan Sand And Gravel Company, L.L.C., the Operator, was represented by Alex Schatz and Josh Oliver during the inspection.

Pit 29 is a 176.24-acre 112c Construction Materials Reclamation Permit. Pit 29 is located in Adams County approximately .75 miles northeast of Henderson Colorado, just southwest of E-470, and east of the South Platte River. The approved post-mining land use is developed water resource.

The inspection was conducted to observe the construction progress of the French Drain. This inspection was also conducted to verify construction was being completed in compliance with an Order issued by the Mined Land Reclamation Board (Board), the Board issued the Board Order on November 13, 2014. The Board Order required the Operator to provide a Permanent Groundwater Mounding Mitigation Plan (permanent plan). The Board Order required the Operator to submit the permanent plan to the Division no later than December 12, 2014. The permanent plan shall be submitted as a Permit Amendment Application to permit number M-1980-183; implementation of that permanent plan shall commence ("Permanent Plan Commencement") within thirty (30) days of the Division's approval of the permanent plan, construction of the permanent plan must be completed within one hundred eighty (180) days after permanent plan commencement.

The Operator submitted the required permanent plan as Permit Amendment Application No. 2 (AM-02) on December 12, 2014. Through AM-02 the Operator planned to construct a french drain within the permit boundary of Pit 29 parallel to the Einspahr pasture. The Division approved AM-02 on October 14, 2015; therefore, the Operator was required to begin implementation of the permanent plan no later than November 13, 2015, and completion of the permanent plan construction must be completed no later than April 11, 2016.

The inspection began at the eastern corner of Pit 29 along Brighton Road, the Division conducted the inspection to observe the construction of the french drain. At the time of the inspection approximately half of the french drain paralleling the Einspahr pasture had been constructed (see photos 1 and 2). Construction began at the furthest upgradient side, progressing down gradient. At the time of the inspection the french drain had been constructed to the mid-point man hole (see photos 3 and 4). The Operator was in the process of constructing the french drain from the mid-point manhole to the manhole at the northwest corner of the Einspahr pasture and Brighton Road. The Operator was using an engineer's level to control the gradient of the french drain. The Operator had also installed sections of the french drain that run parallel to Brighton Road. At the time of the inspection the Operator had not constructed the pipe bore underneath Brighton Road.

During the inspection, the Division also observed the present conditions in the Einspahr pasture via looking over the fence from Pit 29 (see photos 7 and 8). It appears that the Einspahr pasture had nearly completely dried out; however, the Operator had a dewatering system that had artificially lowered the groundwater level lower than the elevation of the french drain (see photos 1, 2, and 6). It appears that the Einspahr pasture had begun to dry out, only a few low spots had standing water, the standing water appeared to be residual water collecting in the low spots that had not evaporated or infiltrated yet. The Division believes it will take several months for the soil in the pasture to dry out entirely. The Division will need to continue to monitor the conditions through the spring and summer.

### **CONCLUSION**

The Operator had begun construction of the french drain in accordance with the Board Order. Following this inspection, on February 11, 2016, the Operator provided the Division with the engineering certification for the french drain. The construction of the french drain was completed prior to the Board Order deadline of, April 11, 2016. Based on the observations made during the inspection it appears that the construction of the french drain had been completed within the time frame specified in the Board Order. The Division will need to continue to monitor the conditions throughout the spring and summer, the Division may conduct a monitoring inspection in the future to verify operation of the French drain and observe the effects of the french drain on the surrounding lands. The Operator is advised to continue to monitor groundwater elevations in MW-04 and make observations of the surrounding lands.

### **Inspection Contact Address**

Alex Schatz  
Brannan Sand and Gravel Company, L.L.C.  
2500 East Brannan Way  
Denver, CO 80229

cc: Wally Erickson, DRMS



## **PHOTOGRAPHS**



**Photograph 1:** View looking west at the construction of the french drain.



**Photograph 2:** View looking west at the construction of the french drain at the mid-point man hole. Dewatering system along the left hand side of the photo, the dewatering system was located between the fence and the excavation.





**Photograph 3:** Construction of the french drain on the west side of the mid-point man hole. Dewatering system along the right hand side of the photo.



**Photograph 4:** Construction of the french drain on the east side of the mid-point man hole.





**Photograph 5:** Construction of the mid-point man hole located on the section of the french drain parallel to Brighton Road.



**Photograph 6:** Dewatering system's pumps, the water was being discharged into Pit 29.





**Photograph 7:** View looking west at the Einspahr pasture taken from within the boundary of Pit 29. The Pasture appeared nearly completely dry. The Division believes it will take several months for the soil in the pasture to dry out entirely.



**Photograph 8:** View looking at the Einspahr pasture taken from within the boundary of Pit 29. The Pasture appeared nearly completely dry. Standing water was observed in the low spots, the standing water appeared to be residual water collecting in the low spots that had not evaporated or infiltrated yet. The Division believes it will take several months for the soil in the pasture to dry out entirely.