



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.

MINE NAME: Harold Eichman Gravel Pit	MINE/PROSPECTING ID#: M-1985-105	MINERAL: Sand and gravel	COUNTY: Lincoln
INSPECTION TYPE: Monitoring	INSPECTOR(S): Amy Eschberger	INSP. DATE: August 27, 2015	INSP. TIME: 13:00
OPERATOR: Lincoln County	OPERATOR REPRESENTATIVE: John DeWitt and Rick Ashcraft	TYPE OF OPERATION: 110c - Construction Limited Impact	

REASON FOR INSPECTION: Normal I&E Program	BOND CALCULATION TYPE: None	BOND AMOUNT: \$0.00
DATE OF COMPLAINT: NA	POST INSP. CONTACTS: None	JOINT INSP. AGENCY: None
WEATHER: Clear	INSPECTOR'S SIGNATURE: <i>Amy Eschberger</i>	SIGNATURE DATE: September 22, 2015

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>Y</u>	(FN) FINANCIAL WARRANTY----- <u>NA</u>	(RD) ROADS----- <u>Y</u>
(HB) HYDROLOGIC BALANCE----- <u>Y</u>	(BG) BACKFILL & GRADING----- <u>Y</u>	(EX) EXPLOSIVES----- <u>NA</u>
(PW) PROCESSING WASTE/TAILING---- <u>Y</u>	(SF) PROCESSING FACILITIES----- <u>N</u>	(TS) TOPSOIL----- <u>Y</u>
(MP) GENL MINE PLAN COMPLIANCE- <u>Y</u>	(FW) FISH & WILDLIFE----- <u>N</u>	(RV) REVEGETATION---- <u>Y</u>
(SM) SIGNS AND MARKERS----- <u>Y</u>	(SW) STORM WATER MGT PLAN---- <u>Y</u>	(CI) COMPLETE INSP---- <u>Y</u>
(ES) OVERBURDEN/DEV. WASTE----- <u>Y</u>	(SC) EROSION/SEDIMENTATION--- <u>Y</u>	(RS) RECL PLAN/COMP-- <u>Y</u>
(AT) ACID OR TOXIC MATERIALS----- <u>NA</u>	(OD) OFF-SITE DAMAGE----- <u>Y</u>	(ST) STIPULATIONS----- <u>NA</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 was a normal monitoring inspection of the Harold Eichman Gravel Pit (Permit No. M-1985-105) conducted by Amy Eschberger of the Division of Reclamation, Mining and Safety (Division). Mr. John DeWitt and Mr. Rick Ashcraft represented the operator, Lincoln County during the inspection. The site is located approximately 19 miles southeast of Rush, CO. The affected land is owned by Harold A. and Shirley J. Eichman. Access to the site is off of Co Rd M. The approved post-mining land use is rangeland.

This is a 110c operation permitted for 9.9 acres to mine sand and gravel for use in county road construction and maintenance. This is an in-stream mining operation in which the stream banks are also mined. Pond Creek cuts east-west across the center of the permit area. This creek is dry throughout most of the year, only carrying water during large storm events. When carrying water, the creek flows eastward. A small stock pond and approximately 4 foot high earthen dam are present on the upstream side of the creek, just west of the current pit (inside the permit area). According to the approved permit application, this feature existed prior to the permitted operation, and was presumably constructed by the landowner for his livestock. The county maintains this berm for the landowner, repairing any damage caused by storm events. The maximum mining depth of the creek bed is approximately 4 feet, while the maximum mining depth of the creek banks is approximately 12-15 feet. According to the approved mining plan, mining will occur primarily on the north side of the creek.

At the time of the inspection, the weather was partly cloudy and warm. A permit sign was posted at the main site entrance off of Co Rd M (**Photo 1**). This sign includes the permit number as required; however, Rule 3.1.12(1) requires the sign to also include the name of the operator, and a statement that the permit was issued by the Colorado Mined Land Reclamation Board (MLRB). The Division recommends the operator replace this sign, including all required information. The permit boundary was adequately delineated with metal posts. The mine was not active during the inspection, and no equipment was stored on site. The county extracts, processes, and/or hauls off material from this site every year, which is in compliance with its intermittent status.

During the inspection, the creek bed was dry upstream (**Photo 2**) and downstream (**Photo 3**) of the site. However, up to approximately 1-2 feet of standing water was present in the pit (**Photos 4-8**), with a surface area of approximately 1.5 acres. According to Mr. DeWitt and Mr. Ashcraft, they have had issues with standing water in this pit after heavy storm events, especially the ones that occurred in this area last summer. The creek experienced uncommon heavy flows that damaged the southern portion of the small earthen dam on the upstream side of the pit (**Photo 9**). Judging by the erosion line around the bottom edges of the pit and stockpiles, the water level may have been approximately 4 feet deep in the pit at one time. Two potential drainages exist on the eastern and southeastern edges of the pit. However, the pit floor is approximately 5 feet below the creek bed that is upstream from the pit (**Photo 10**; also see **Photo 4**), and approximately 10 feet below the creek bed that is downstream from the pit (**Photos 11 and 12**). Therefore, stormwater is not able to naturally drain from the pit. The operator has been unable to get equipment into the pit due to the standing water. If the operator anticipates pumping water from the pit, the Division recommends first contacting the Water Quality Control Division of the Colorado Department of Public Health and Environment to determine whether a stormwater discharge permit is required for ephemeral creeks. With the lack of positive drainage, no sediment appears to be leaving the site.

The Division estimates that approximately 6.34 acres have been disturbed by the operation (see enclosed Google Earth image of site). The northern pond bank has been mined to a maximum depth of approximately 10-15 feet. This northern mined wall has been graded to slopes of 3H:1V or flatter (**Photos 13 and 14**). The southern pond bank has slope gradients of mainly 3H:1V, with some slightly steeper portions (**Photo 15**). Mined material is stockpiled on the pit floor, north of the creek (**Photo 16**). No topsoil is stored on site. According to the permit Amendment that was approved by the Division on 02/07/2000 (Revision No. AM-01),

topsoil will be imported to the site for reclamation. The haul road enters the pit from the south bank, and is currently unusable as most of it is under water. At the time of the inspection, the site appeared to be stable with blue grama and sand dropseed grasses, some forbs, and annual weeds volunteering across disturbed areas.

The approved reclamation plan calls for grading all disturbed slopes to 3H:1V or flatter, replacing an average of 6 inches of topsoil on disturbed areas, and revegetating the site to rangeland. Only the portion of the haul road located inside the permit area will be reclaimed.

The Division received a Technical Revision (Revision No. TR-04) from the operator on 09/21/2015 to update the mining and reclamation plan maps to more accurately define the permit boundary using GPS coordinates. This revision also proposes a few changes to the reclamation plan, including grading the pit so that the natural creek path is restored across the center of the site, and removing the small earthen dam from upstream. If the earthen dam belongs to the landowner, the operator will need to provide the Division with a signed and dated letter confirming his desire to have the dam removed for reclamation. This revision is currently under review and has a decision date of 10/21/2015.

No problems were observed during the inspection.

PHOTOGRAPHS



Photo 1. View of permit sign posted at main site entrance off of Co Rd M. This sign should also include the name of the operator, and a statement that the permit was issued by the CO MLRB.



Photo 2. View looking upstream from western edge of permit area, showing creek bed dry at the time of the inspection.



Photo 3. View looking downstream from southeastern edge of permit area, showing creek bed dry at the time of the inspection. Note creek bed is relatively level with surrounding topography just downstream of pit.



Photo 4. View looking northwest from southern pond bank, showing standing water in pit. Note pit floor is approximately 5 feet below upstream creek bed elevation (indicated).



Photo 5. View looking north from southern pond bank, showing standing water in pit. Note material stockpile stored on pit floor (at left).



Photo 6. View looking northeast from southern pond bank, showing standing water in pit.



Photo 7. View looking southwest from northern pond bank, showing standing water in pit. Note material stockpile stored on pit floor (at right).



Photo 8. View looking east from earthen berm located at western edge of permit area, showing standing water in pit.



Photo 9. View looking southeast, showing damage to earthen berm caused by high flow event(s) in the creek

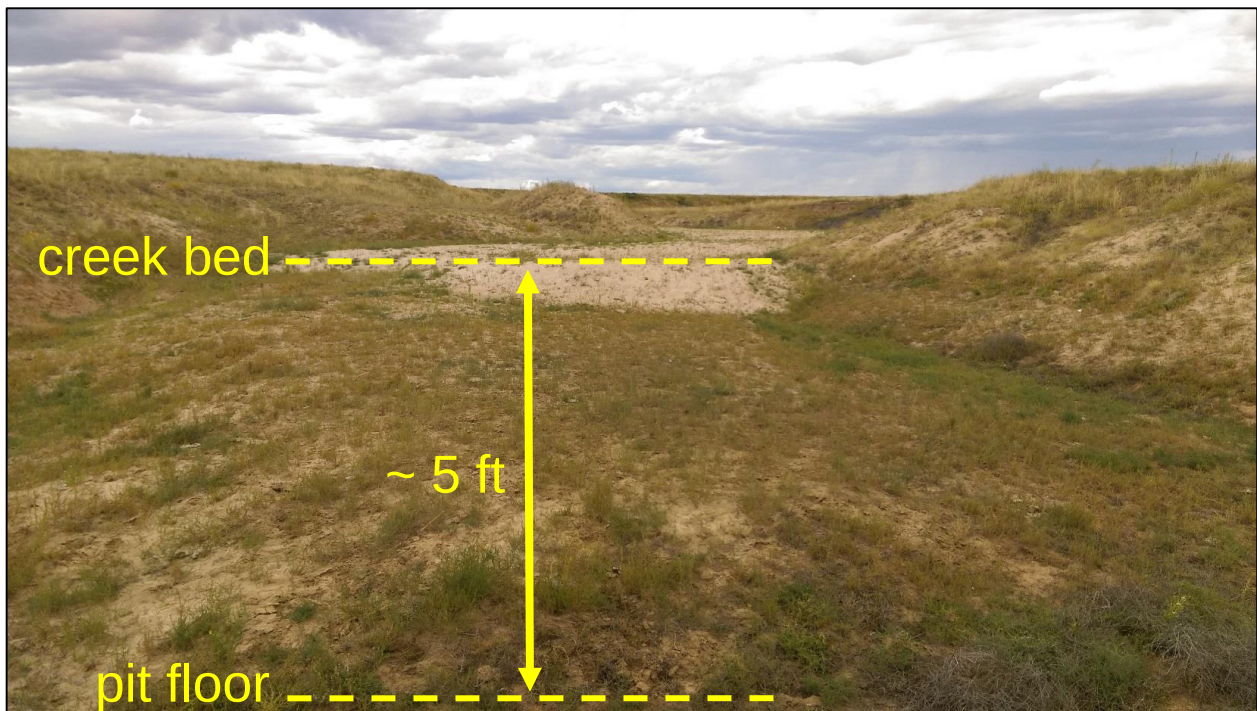


Photo 10. View looking upstream from elevation slightly above pit floor, showing elevation of creek bed upstream from site approximately 5 feet higher in elevation than pit floor (indicated). *Note indication is approximate as actual pit floor (behind photographer) is slightly lower than pit floor elevation indicated on photo.*



Photo 11. View looking east from southern pond bank, showing elevation of creek bed downstream of site approximately 10 feet higher in elevation than pit floor (indicated).



Photo 12. View looking upgradient at portion of drainage downstream of pit, located at southeastern edge of permit area. Note upward slope which does not allow for positive drainage of the pit.



Photo 13. View looking west across northern mined bank, showing slopes graded to 3H:1V or flatter.



Photo 14. View looking southwest across northern mined bank (behind material stockpile), showing slopes graded to 3H:1V or flatter.



Photo 15. View looking southeast across southern pond bank, showing slopes graded mainly to 3H:1V or flatter, with some slightly steeper portions.



Photo 16. View of material stockpile stored on pit floor at northwestern edge of pit.

Inspection Contact Address

John DeWitt
Lincoln County
P.O. Box 39
Hugo, CO 80821

Enclosure(s): Google Earth image of site with Division markings

CC: Wally Erickson, DRMS

M1985-105 / Harold Eichman Gravel Pit / Lincoln County

Red Outline = 9.9 acres = Approved Permit Area

Blue Outline = 6.34 acres = Disturbed Area (as of 8/27/2015 inspection)

