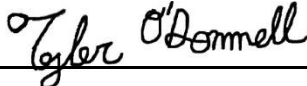




COLORADO DIVISION OF RECLAMATION, MINING AND SAFETY
MINERALS PROGRAM INSPECTION REPORT
PHONE: (303) 866-3567

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: Howe Pit	MINE/PROSPECTING ID#: M-1978-052	MINERAL: Sand and gravel	COUNTY: Adams
INSPECTION TYPE: Mineral Prospect Inspection	INSPECTOR(S): Tyler V. O'Donnell	INSP. DATE: May 14, 2014	INSP. TIME: 12:30
OPERATOR: City & County of Denver, Board of Water Commissioners	OPERATOR REPRESENTATIVE: Greg Gulley	TYPE OF OPERATION: 112c - Construction Regular Operation	

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: Cloudy	INSPECTOR'S SIGNATURE: 	SIGNATURE DATE: July 3, 2014

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>NA</u>	(SF) PROCESSING FACILITIES----- <u>NA</u>	(TS) TOPSOIL----- <u>Y</u>
(MP) GENL MINE PLAN COMPLIANCE- <u>Y</u>	(FW) FISH & WILDLIFE----- <u>Y</u>	(RV) REVEGETATION---- <u>Y</u>
(SM) SIGNS AND MARKERS----- <u>Y</u>	(SP) STORM WATER MGT PLAN---- <u>Y</u>	(SB) COMPLETE INSP---- <u>T</u>
(ES) OVERBURDEN/DEV. WASTE----- <u>NA</u>	(SC) EROSION/SEDIMENTATION--- <u>Y</u>	(RS) RECL PLAN/COMP-- <u>Y</u>
(AT) ACID OR TOXIC MATERIALS----- <u>Y</u>	(OD) OFF-SITE DAMAGE----- <u>NA</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 routine monitoring inspection conducted by Tyler O'Donnell of the Division of Reclamation, Mining and Safety (Division/DRMS). Denver Water, the Operator, was represented by Greg Gulley during the inspection. The Howe Pit is located approximately 2.5 miles south of Henderson, Colorado. The Howe Pit is a 389.20-acres 112C, permitted for the extraction of construction materials. The primary commodity mined was sand and gravel. The approved post-mining land use is developed water resource.

The sky was overcast. The ground was mostly dry. No mining equipment was present during the inspection. The Operator indicated in the last annual report that the site was last active in 2011. The Operator indicated that the Howe Pit is in final reclamation, in the annual report filled on January 25, 2013. It appears that the site has been backfilled, graded, re-topsoiled and seeded.

Availability Of Records:

It appears that the previous operator has constructed the entire revised drainage control plan as approved in TR-01 on March 18, 2002. The previous operator submitted the As-Constructed drawings of the revised drainage control on May 30, 2002.

Backfilling and Grading:

The shoreline of reservoirs A and B were both sloped to 3H:1V or flatter. All slopes appeared to be structurally stable with the exception of the western sides of reservoirs A and B that were damaged during the flood September 2013 floods.

Hydrologic Balance:

The pit is located just east of the South Platte River. The bottom of reservoirs A and B were mostly dry. There appeared to be no significant impacts to the prevailing hydrologic balance.

Gen. Compliance With Mine Plan:

All reclamation activity appeared to be within the approved permit boundary.

Recl Plan/Comp:

The Operator has successfully backfilled and graded slopes to an approximate slope of 3H:1V or flatter, creating a stable land surface. It appears that the Operator has replaced the topsoil, and seeded the site.

The Division observed numerous structures located within the approved permit boundaries that aren't in the approved reclamation plan and reclamation plan map. Structures observed were pump houses, boat ramps, access roads, bridge and shop building at the old batch plant location. The Operator shall submit a Technical Revision, the Technical Revision shall identify all structures that will remain after final reclamation.

Revegetation:

The entire site appears to have been seeded approximately 2-4 years ago. Vegetation is beginning to become established through the majority of the permitted mine site. There were a few annual weeds. The Operator will need to continue to monitor and treat annual and noxious weeds if they appear in the permitted mine site. The Operator may want to consider re-seeding portions of the permitted site where desired vegetation is sparse.

Erosion/ Sedimentation:

The floor in September 2013, damaged portions of the Line in both reservoirs. Flood water from the South Platte River flowed out of the banks and flowed into both reservoirs. The flow into the pit caused gullies, the gullies down cut and eroded the line. Reservoir A had a section of compromised line that is approximately 445 feet long. The damaged section of liner in Reservoir A is located in the northwestern corner of the reservoir. The liner in Reservoir A was also damaged underneath the spillway where water was flowing into the pit over the emergency spillway. Reservoir B had a section of compromised line that is approximately 950 feet long. The damaged section of liner in Reservoir B is located in the southwestern corner of the reservoir. The Operator commit to repairing the all of the damaged sections of the liners. Once the repairs have been made, the Operator will re-certify the liners. The Operator has committed to re-certifying the liners in accordance with the State Engineer's Guidelines for Criteria for Gravel Pits (1999) please see letter from the Operator received on May 15, 2014. If the Operator decides to armor either or both of the damaged segments after they have been repaired the armoring design will need to be incorporated into the approved reclamation plan and reclamation plan map. The Operator could incorporate the armoring design in the same Technical Revision previously requested to incorporate the permanent structures.

Signs and Markers:

A mine I.D. sign was located at the entrance to the mine site.

CONCLUSION

This Operation is in final reclamation. The majority of the reclamation work has been completed at the site. The Operator will need to complete repairs to the compromised liners in reservoirs A and B. Once the Operator has: repaired the liners of reservoirs A and B, completed all reclamation per the approved reclamation plan and established vegetation that meets the requirements of Rule 3.1.10 the Site may be eligible for final release.

Inspection Contact Address

Greg Gulley
Denver Water
1600 W. 12th Ave.
Denver, CO 80204

Enclosure: Technical Revision Coversheet

CC: Tom Kaldenbach, DRMS

PHOTOGRAPHS



Photo 1: View looking west. Damaged section of the liner in reservoirs A circled in red.



Photo 2: View looking north. Damaged section of the liner in reservoirs A, underneath the emergency spillway circled in red.



Photo 3: View looking west. Damaged section of the liner in reservoirs B circled in red.



Photo 4: View looking west. Reclaimed slope with well established vegetation.



Photo 5: View looking east from the northern edge of reservoirs B.



Photo 6: Area of sparse vegetation.



COLORADO DIVISION OF RECLAMATION, MINING AND SAFETY

1313 Sherman Street, Room 215, Denver, Colorado 80203 ph(303) 866-3567

REQUEST FOR TECHNICAL REVISION (TR) COVER SHEET

File No.: M- _____ Site Name: _____

County _____ TR# _____ (DRMS Use only)

Permittee: _____

Operator (If Other than Permittee): _____

Permittee Representative: _____

Please provide a brief description of the proposed revision: _____

As defined by the Minerals Rules, a Technical Revision (TR) is: “a change in the permit or application which does not have more than a minor effect upon the approved or proposed Reclamation or Environmental Protection Plan.” The Division is charged with determining if the revision as submitted meets this definition. If the Division determines that the proposed revision is beyond the scope of a TR, the Division may require the submittal of a permit amendment to make the required or desired changes to the permit.

The request for a TR is not considered “filed for review” until the appropriate fee is received by the Division (as listed below by permit type). Please submit the appropriate fee with your request to expedite the review process. After the TR is submitted with the appropriate fee, the Division will determine if it is approvable within 30 days. If the Division requires additional information to approve a TR, you will be notified of specific deficiencies that will need to be addressed. If at the end of the 30 day review period there are still outstanding deficiencies, the Division must deny the TR unless the permittee requests additional time, in writing, to provide the required information.

There is no pre-defined format for the submittal of a TR; however, it is up to the permittee to provide sufficient information to the Division to approve the TR request, including updated mining and reclamation plan maps that accurately depict the changes proposed in the requested TR.

Required Fees for Technical Revision by Permit Type - Please mark the correct fee and submit it with your request for a Technical Revision.

<u>Permit Type</u>	<u>Required TR Fee</u>	<u>Submitted</u> (mark only one)
110c, 111, 112 construction materials, and 112 quarries	\$216	☐
112 hard rock (not DMO)	\$175	☐
110d, 112d(1, 2 or 3)	\$1006	☐