

Rationale for Recommendation for Approval

Hard Rock/Metal Mining Regular (112d) Designated Mining Operation Reclamation Permit Amendment Application (AM-1)

**JD-7 Pit Mine
Cotter Corporation
Permit No. M-1979-094-HR**

January 16, 2014

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Introduction

Herein, all references to the Act and Rules refer to the *Colorado Mined Land Reclamation Act, C.R.S. 34-32-101 et seq.* (the Act), and to the *Mineral Rules and Regulations of the Colorado Mined Land Reclamation Board for Hard Rock, Metal and Designated Mining Operations* (Rules or Rule).

The purpose of this document is to provide a basis for the Division's recommendation to approve the 112d(3) Amendment application (AM-1), submitted by Cotter Corporation (Operator) for the JD-7 Pit Mine, Permit No. M-1979-094-HR, over the objection to the application by Information Network for Responsible Mining (INFORM).

The JD-7 Pit Mine is located approximately ten miles west of Naturita in Montrose County. The site is located on patented and Bureau of Land Management (BLM) land, within the U.S. Department of Energy (DOE) Lease Tract JD-7. The affected area includes 504 acres. The approved post-mining land use is wildlife habitat.

The JD-7 Pit Mine is an underground and surface operation that extracts uranium and vanadium bearing ore. Pursuant to House Bill 08-1161, all uranium mines are considered designated mining operations (DMO). The Reclamation Permit for every DMO must include an adequate Environmental Protection Plan (EPP). The Operator submitted the AM-1 application in order to incorporate an EPP into their permit in accordance with C.R.S. 34-32-116.5(1)(a) and Rule 6.4.21.

Objection

The Division received a timely objection, from the following, during the public comment period which closed on February 20, 2013.

<u>Commenting Party</u>	<u>Date Received</u>	<u>Representing</u>
Jennifer Thurston	February 20, 2013	Information Network for Responsible Mining (INFORM)

Issue(s) Raised by Objecting Party

The issues presented by INFORM are summarized below in bold italics. The Division's responses are also summarized, along with citations to the applicable sections of the Act and/or Rules. The Division has listed the issues it believes to be within the jurisdiction of the Board first, followed by those it believes are outside the jurisdiction of the Board.

A. ISSUES WITHIN THE JURISDICTION OF THE BOARD

- 1. "INFORM has recently filed an objection to Cotter's Dec. 15, 2012, Notice of Temporary Cessation in order to address the noncompliance of the JD-7 mines..."***

Division Response

This issue was addressed at an April 17, 2013 Board hearing, at which time the Board accepted the Operator's Notice of Temporary Cessation over the objection of INFORM, with an effective date of December 15, 2012.

- 2. "...new ideas about how to handle the final reclamation of the site are not introduced in the amendment application. The Division should take a fresh look at the JD-7 and consider the different alternatives that could be applied. Perhaps the most important option to consider is a final backfilling of the pit in order to reduce the size of the final waste pile that will be left permanently. Any final waste piles remaining on surface should be capped with sufficient topsoil prior to revegetation. While balancing the the best methods for protecting the environment and hydrology of the site, the Division should strive to achieve a reclamation plan that returns the site as much as possible to its original topography and to reduce final visual impacts. As contemplated in the application, if the mine ever produces, the size of the waste pile will expand from its current size of 61.9 acres to over 224 acres, greatly increasing the visual impacts to Paradox Valley. In this scenario, backfilling the pit should be thoroughly analyzed and seriously considered."***

Division Response

Cotter has proposed to reclaim the land as range for wildlife habitat. Pursuant to 34-32-116(7) and Rule 3.1.5, Cotter has committed to backfilling the pit highwall to create final slopes no steeper than 2H:1V, which is less steep than many of the natural slopes in the surrounding area. The pit is to be backfilled at least to a level that will allow surface drainage. Cotter has also committed to grading the final waste pile slopes, and all other

reclaimed slopes, to no steeper than 4H:1V. The final grading is to create final contours that blend with the surrounding area. The Division considers the proposed backfilling and grading adequate. Cotter has committed to salvage available growth medium so that an average thickness of twelve inches can be replaced over the disturbed areas prior to revegetation, which satisfies INFORM's concern that any remaining waste piles should be capped with topsoil. The Act requires that final grading creates a final topography that is appropriate for the final land use. The Division considers the final topography proposed by Cotter adequate for the approved final land use. Visual impacts created by the mine do not fall under the jurisdiction of the Board, and therefore were not considered by the Division.

3. ***“Cotter has proposed the installation of four additional water monitoring wells prior to the start of any excavation. These wells should be installed as soon as possible, not simply at a hypothetical time in the future, in order to gather plentiful data and establish a solid baseline analysis of hydrological conditions. A number of constituents of concern – including radium, arsenic, selenium, aluminum, molybdenum and zinc – are indicated for passive or active water treatment at the site, even though the water treatment facility has not operated since 2007. Cotter has proposed conducting an initial five quarters of water monitoring in order to establish a baseline; however, water quality monitoring should continue on a quarterly (not semi-annual) basis permanently as a preventive deterrent.”***

Division Response

Cotter has committed to submitting groundwater quality data collected during five consecutive calendar quarters, prior to any further excavation of overburden or ore, in order to adequately characterize the baseline hydrologic conditions pursuant to Rule 6.4.21(9)(b), which the Division finds adequate. Cotter has proposed semi-annual monitoring, which the Division considers to be adequate based on the current conditions presented. The monitoring interval may be modified should those conditions change.

4. ***“Although Cotter asserts in the amendment application that the potential for generating acid from the ore and waste rock at the site is minimal, it has not adequately demonstrated this in the application. Because ore is not available from the JD-7 due to lack of mining activity, geochemical testing was conducted on old ore from the JD-8 site instead. If ore becomes available at the JD-7 in future, SPLP tests should be conducted on both the ore and waste rock on a regular, quarterly basis. In any case, SPLP tests on the existing waste rock should be required. In addition, the Division should restrict the storage of ore on the clay-lined pad to 30 days, rather than 180 days, so that the potential for acid drainage is reduced.”***

Division Response

Waste rock samples were collected from on-site in February 2012 and subsequently analyzed. The results were included with the AM-1 submittal. The potential for acid mine drainage from the existing waste rock piles was quantified by Acid-Base Accounting tests. The tests do not indicate potential for acid mine drainage. In fact, the results

indicate some neutralizing potential. Therefore, INFORM's request to test the existing waste rock has been satisfied.

Ore was not available at the JD-7 site, so geochemical test results for ore from the JD-8 mine, which lies approximately one mile to the southwest, were submitted with the AM-1 application. The ore from the JD-8 mine is derived from the same stratigraphic unit as from the JD-7 site. Because of the close proximity and similar geology, it was assumed that the JD-8 ore is likely representative of the characteristics of the JD-7 ore. The potential for acid mine drainage from the JD-8 ore was quantified by Acid-Base Accounting tests. The tests do not indicate potential for acid mine drainage. In fact, the results indicate some neutralizing potential. However, Rule 6.4.21(14) requires that such geochemical evaluations be site specific. Therefore, pursuant to Rule 6.4.21(14), Cotter has committed to submitting geochemical evaluations of the ore produced from this site, from both the underground and the open pit mines, for Division review and approval, prior to any stockpiling on the surface. The Division considers this to be adequate.

The Division agrees with INFORM in that the produced ore and future waste rock generated should be analyzed on a regular basis if and when mining resumes at the site. The intervals at which the ore and future waste rock will need to be tested will be determined after the Division has reviewed a geochemical analysis of the produced ore. The Operator has committed to submitting this analysis to the Division prior to any stockpiling of ore on the surface, which the Division has determined complies with the Act and Rules.

The clay-lined ore storage pad is an environmental protection facility designed to prevent potential acid or toxic drainage issues over extended periods of time and use, by inhibiting infiltration of constituents of the ore into the underlying material. Cotter has committed to storage of ore on the ore pad for no more than 180 days. The Division considers this to be adequate.

5. ***"A full radiometric survey of the JD-7 site should be conducted as soon as possible in order to provide a more complete evaluation of existing conditions. The off-site potential for contamination should be considered as part of the Environmental Protection Plan. During the state's review of the proposed Piñon Ridge Mill located downslope from the JD-7, a soils study documented three separate areas of contamination on the mill property, potentially originating from the JD-7 or another nearby Department of Energy lease tract. The relationships between these various sites and potential source-points for contamination should be outlined in the amendment application."***

Division Response

Cotter has submitted radiometric survey maps of the site that adequately characterize the baseline conditions within the affected area, the area within the Division's jurisdiction, pursuant to Rule 6.4.21(7). Based on the survey maps submitted, the Division finds that AM-1 complies with the off-site impact requirements of the Act and Rules.

The studies and other state agency reviews referenced by the objector for the Piñon Ridge Mill are outside the jurisdiction of the Division and scope of the AM-1 review. The

Division received no comments or inquiries from the mill applicant, nor any other state agency in regard to this issue. Furthermore, INFORM has not presented, nor is the Division aware of, any data or studies that link contamination of the Piñon Ridge Mill property with the JD-7 mine site.

6. ***“INFORM notes Cotter’s assertions in the amendment application that wildlife impacts will be minimal. Yet the JD-7 is home to a number of species important to the overall health of the pinyon-sage habitats in the vicinity, including red-tailed hawks, kestrels, bald eagles, bobcat, lion, grey fox, deer, elk, badger, and coyote. The presence of wildlife is not negligible.”***

Division Response

In matters regarding wildlife, the Division defers to the Colorado Parks and Wildlife (CPW) as the experts in addressing impacts to wildlife from mining operations. The Operator submitted CPW comments, dated July 12, 2012, with the AM-1 application, in which CPW stated that impacts to wildlife by the operation should be minimal and that CPW had no further comments. On November 21, 2012, CPW submitted correspondence to the Division, which stated CPW had no additional comments regarding the proposed operation. Based on CPW’s statements, the Division finds AM-1 complies with the wildlife protection provisions in the Act and Rules.

B. ISSUES NOT WITHIN THE JURISDICTION OF THE BOARD

1. ***“Cotter should be required to demonstrate that there is adequate water available to resume mining operations. In the application, Cotter says it will haul 120,000 gallons annually to the site, yet does not include a formal agreement guaranteeing the supply.”***

Division Response

Cotter has proposed purchasing water from the town of Naturita, as the operator has done in the past for their operations. The Colorado Division of Water Resources (DWR), not the Board, is the regulatory authority regarding the Town of Naturita water rights. Notice of the AM-1 application was sent to the DWR by the Division on October 29, 2012. DWR did not submit comments regarding the AM-1 application.

2. ***“The underground section of the mine has a history of producing water and the ability to adequately treat it and comply with the requirements of the discharge permit will continue to be a concern if mining resumes.”***

Division Response

Cotter has acknowledged that it is aware of the concerns associated with satisfying discharge requirements of treated mine water, and has confirmed their plans to continue to comply with the discharge requirements of the National Pollutant Discharge Elimination System (NPDES) permit that is already in place. Cotter must also comply with all Colorado water laws regarding quantity and quality, which are regulated by the

Colorado Department of Public Health and Environment Water Quality Control Division and the Colorado Division of Water Resources, not the Board.

3. ***“The Colorado State Historic Preservation Officer has commented that a full Section 106 consultation must be conducted on the property in order to identify cultural and historic resources in need of protection at the mine, and Cotter has replied that it is not obligated to conduct a survey but will at some point in the future, prior to the commencement of mining activities. There is no valid reason to avoid conducting the appropriate survey now or to avoid addressing the presence of any resources as part of the current amendment application. Delaying this or other important studies related to the JD-7 site will only mean that the final, big-picture look at the overall Environmental Protection Plan will not be comprehensive.”***

Division Response

In the State Historic Preservation Officer’s (SHPO) comments to the Division, SHPO states that it is the responsibility of the Federal agencies (DOE and BLM), providing oversight of the mining operation, to comply with Section 106 of the National Historic Preservation Act, which applies expressly to Federal agencies. Therefore, this issue falls outside the jurisdiction of the Board. However, Cotter has acknowledged that it is aware that BLM and DOE will require a cultural resource inventory to be completed prior to additional ground disturbing activities on previously undisturbed Federal public lands. Cotter has committed to comply with this requirement.

DIVISION RECOMMENDATION

The Division has determined that the 112(d) Amendment Application (AM-1) submitted by Cotter Corporation for the JD-7 Pit Mine, Permit No. M-1979-094-HR, meets the requirements of the Act and Rules. Therefore, it is the recommendation of the Division that the Mined Land Reclamation Board approve AM-1, which incorporates the Environmental Protection Plan into the Permit in accordance with C.R.S. 34-32-116.5(1)(a) and Rule 6.4.21.