

STATE OF COLORADO

DIVISION OF RECLAMATION, MINING AND SAFETY Department of Natural Resources

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September 18, 2013

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RE: SM-18 Mine, Permit No. M-1978-116, Rationale for Recommendation to Approve a 112(d) Amendment Application with Objections

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 112(d) Amendment application (AM-2), submitted by Cotter Corporation (Operator) for the SM-18 Mine, Permit No. M-1978-116, over the objection to the application by Information Network for Responsible Mining (INFORM).

The SM-18 Mine is located approximately 1 mile north of the abandoned town of Uravan in Montrose County. A Reclamation Permit was issued for this site on October 31, 1979. The site is located on Cotter Corporation private land and on Bureau of Land Management (BLM) land and the owners of the substance to be mined are the U.S. Department of Energy (DOE) Lease Block AT(05-1)-ML-60.8-C.SM-18 and the Cotter Corporation. The currently approved affected area includes 14.90 acres. The approved post-mining land use is wildlife habitat.

The SM-18 Mine is an underground operation that extracts uranium and vanadium bearing ore. Pursuant to House Bill 08-1161, all uranium mines are to be considered designated mining operations (DMO). The Reclamation Permit for every DMO must include an adequate Environmental Protection Plan (EPP). The Operator submitted the AM-2 application in order to incorporate an EPP into their permit in accordance with Rule 6.4.21.

CHRONOLOGY

October 1, 2012	Operator submits AM-2 application
October 11, 2012	Division deems AM-2 application complete for the purposes of filing
October 25, 2012	Operator publishes first public notice in local newspaper

November 15, 2012	Operator publishes final public notice in local newspaper
December 5, 2012	Division receives timely objection letter from INFORM on the last day of the comment period
January 10, 2013	Division sends preliminary adequacy review letter to Operator, noting deficiencies in the application
February 11, 2013	Division receives Operator's response to preliminary adequacy review
March 11, 2013	Division sends second adequacy review letter to Operator, noting additional deficiencies in the application
May 1, 2013	Division receives Operator's response to second adequacy review
May 28, 2013	Division sends third adequacy review letter to Operator, noting additional deficiencies in the application
July 3, 2013	Division receives Operator's response to third adequacy review
August 13, 2013	Division determines that the AM-2 application is technically adequate

OBJECTION

The Division received a timely objection letter on December 5, 2012, during the public comment period, from INFORM.

Issues Raised by the Objector:

The issues presented by INFORM are summarized below. 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. ***"If Cotter does not immediately begin mining activities, they should no longer be allowed to retain Intermittent Status, as the SM-18 does not meet the definition of an intermittent operation in the Rules."***

Division Response

The Division has been involved in a programmatic review of all hard rock mine permit status. Once the EPP is approved, Cotter will be required to build some Environmental Protection Structures (EPF) per the approved construction schedule. Once construction is complete Cotter must either continue mining activities within 180 days of completion or place the site into Temporary Cessation.

On August 17, 2012 the Mined Land Reclamation Board issued a Board Order for permit no. M-1984-014 in which the Board granted a Motion to Limit, that excluded from the hearing the issue of whether the JD-8 Mine was lawfully in intermittent status. Due to the fact that the board granted a Motion to Limit mine status in an identical situation and the programmatic review the Division will request that the Board grant a Motion to Limit for this case.

2. *“If the EPP is approved, INFORM hopes that strong restrictions are placed on the permit to protect wildlife and habitat. Cotter has proposed building new roads over short distances, but should be prohibited from doing so. The SM-18 is located in a sensitive habitat area that provides access for elk and deer from the severe winter range and winter range of the mesa slopes above the San Miguel River below. Any road construction will increase habitat fragmentation in this area and have a detrimental impact on deer and elk as well as other species. Winter operations and haulage at the mine should be prohibited entirely between December and April. Water features and the runoff catchment basins should be fenced to prevent wildlife and grazing cattle from drinking. The mine is already possibly used by bats, including the BLM sensitive species Thompson’s Big Eared Bat, and drainage and runoff from the mining site could impact sensitive fish species in the Dolores River Basin....”*

Division Response

On October 15, 2012 the Division provided notice of the application to the Colorado Parks & Wildlife(CPW).

The application materials include documents and comments from CPW. Many of the recommendations from CPW have been incorporated into the application materials. The Office determined the amendment application satisfied the requirements of CRS 34-32-102, CRS 34-32-116(7)(j) and Rules 3.1.8, 6.4.8 and 6.4.21(18), regarding the protection of wildlife.

- Cotter has proposed to use existing roads for mine and venthole access as much as possible, and minimizing the creation of new roads unless necessary.
- Cotter has committed to limiting ore haulage activities from the site between the months of December – April to 10:00 am – 3:00 pm per the recommendation of CPW. Cotter has committed to confer with CPW to determine reasonable off-site mitigation efforts that could be done to offset the impacts to wintering big game in the immediate vicinity of the mine site.
- Cotter has committed to minimize access of the bat winter roosting site during hibernation season, and will construct exclusions to prevent the entry and use of the site by bats.
- DRMS engineering staff has deemed the existing and proposed stormwater features technically adequate. Therefore the stormwater features are considered adequate to prevent potential impact to the sensitive fish species of the Dolores River Basin.
- CPW made no recommendations for fences to restrict wildlife or grazing cattle access to water features or runoff catchment basins.

3. *“Magnesium chloride should not be used for dust control of the access and mine roads but rather a more environmentally friendly alternative”.*

Division Response

Due to the lack of water at the mine the operator has chosen to use magnesium chloride for dust suppression. The use of magnesium chloride is an accepted dust control method by other state and federal agencies and the Division has no scientific based reason to not allow the use at the SM-18 mine site.

4. *“Water concerns abound with the SM-18. The southern portion of the permit area has a documented history of problems with stormwater management and with historic heavy rains*

that have damaged stormwater control features. The proposed stormwater plan should be reviewed to make sure the controls withstand the particular nature of the storm that damaged the site in 2005 and the variation of weather in the area, not just the standard 100-year event. The haul ramp to the lower portal is in poor condition and should be improved to reduce erosion and uncontrolled drainage.”

Division Response

The Division engineering staff reviewed the Stormwater Drainage Design Plan and deemed it to be technically adequate on August 12, 2013.

The haul ramp to the lower portal was inspected on May 8, 2013 and was determined to be in good condition.

5. *“Cotter’s assertion that the ore will have no acid-leaching effects because of the area’s limited precipitation does not realistically reflect this history. Previous geochemical analysis of samples from the SM-18 have identified aluminum, selenium, lead and uranium as constituents of concern.”*

Division Response

SPLP tests were not conducted on the ore. The Operator has committed to submitting a geochemical evaluation of the ore to the Division for review and approval prior to stockpiling any ore on the surface.

Waste rock SPLP test results do indicate that aluminum, arsenic and selenium are present but only selenium and arsenic are present at levels that exceed regulatory standards. However, the EPP explains that the potential development of acid mine drainage is low due to the geochemical composition of the rock forming minerals. Salt wash sandstones are commonly calcareous which typically generate alkaline/basic conditions. If water percolates through the waste rock and ore stockpiles, alkaline rather than acidic water would be produced, which greatly minimizes the potential for acid –leaching of the constituents of concern.

6. *“Cotter should be required to remove all ore from the pad within 30 days of its placement, rather than 30 days of the end of mining, and the ore pad should have a synthetic liner to prevent ground penetration of contaminants.”*

Division Response

Cotter has committed to storage of ore on the ore pad for no more than 180 days during mining. They have also committed to removing all ore from the site within 30 days of the date that mining ceases. The Division considers these limitations to be adequate.

In their *Response to Adequacy Review 1*, which was received by the Division on February 11, 2013, the Operator committed to installing a 12 inch thick clay liner beneath the ore pad. Pursuant to Rule 7.3.1 the Operator will be required to provide “as-built” certification of the ore pad. Construction of the ore pad will be monitored by the Division as well.

7. *“SPLP testing should be conducted on both the ore and waste rock on an annual basis to continually monitor the potential for acid generation from these piles.”*

Division Response

The Division agrees with this comment. The intervals at which the rock will need to be tested will be determined after the Division has reviewed a geochemical analysis of the ore, which the

Operator has committed to submitting to the Division prior to any stockpiling of ore on the surface.

8. ***“Even though water was produced from a Wright Group drift and abandoned because of it, Cotter incredulously uses this as a basis for asserting that water will not be encountered during SM-18 mining operation. Because selenium, arsenic and radionuclide contaminants are all a concern at the SM-18, a groundwater monitoring regime should be established and five quarters of baseline data obtained before future mining activities are approved.”***

Division Response

The SM-18 is considered to be a dry mine site where the likelihood of encountering groundwater is minimal. In order to characterize the hydrology of the SM-18 site the operator installed a lysimeter in the upper Salt Wash sandstone near the mine waste rock pile where the rock outcrops along the northeast side of the San Miguel valley and is a potential ground water recharge area. The lysimeter indicated no water was collected in over four years of monitoring. The fact no water was collected by the lysimeter provides evidence that the arid climate the SM-18 mine is located in lacks a sufficient supply of precipitation to recharge potential aquifers in the area. The operator also conducted drilling to characterize the location of moist zones within the vicinity of the mine site and ore zone. The moist zones, the majority of which are located above the ore zone, do not demonstrate horizontal or vertical continuity. Moist zones above the ore zone are located within the Brushy Basin member of the Morrison Formation, which is considered an aquitard. Water found in this formation appears to be limited to isolated lenses of sandstone and conglomerate. Evidence suggests that this water is connate. Continuous sandstone beds located below the ore zone did show several moist zones. The zones of moisture are not continuous, which indicates that saturated conditions in this layer do not exist. Based on the available data, there is no indication that a continuous groundwater pathway exists in this area. However, the Division recognizes the potential to encounter unanticipated ground water. In the event that water is encountered by the operation, the Operator has committed to installing a monitoring well(s) and establishing a water quality monitoring program which must be submitted as a revision and approved by the Division.

B. ISSUES NOT WITHIN THE JURISDICTION OF THE BOARD

1. ***“It is our understanding that the relevant features of the Wright Group permitted area have already been incorporated into the SM-18 permit area and is addressed in the amendment application. This results in a less confusing process. However, the problem of the historic waste dump that descends down the steep slopes below the main Wright portal is not addressed in the reclamation plans in either permit. This waste dump should be reclaimed, as it clearly poses risks to the environment and creates a pathway for movement of radionuclides and other toxic materials toward the San Miguel River in the canyon below. Although this waste dump is referenced in the permit file as a “pre-law mining feature” and thus appears to escape any regulatory concern, its condition and danger are such that it should finally be addressed and included in reclamation requirements.”***

Division Response

The Act and Rules provide no mechanism for the Division to require an operator to reclaim areas outside the proposed affected area and undisturbed by proposed activities. The issue of reclamation of these other sites is more complicated than just work by one individual entity and outside the scope of this amendment and the EPP.

2. *“Cotter should also be required to demonstrate that it has adequate water available for mining. In the application, Cotter says it plans to purchase water from the town of Naturita and a commercial hauler will deliver it to the mine... The Division should require Cotter to provide proof regarding the Town of Naturita’s right and ability to provide water to multiple operations and companies.”*

Division Response

Colorado Division of Water Resources (DWR) is the regulatory authority regarding the Town of Naturita water rights. INFORM’s concerns should directed to that agency. Notice of the AM-2 application was sent to DWR by the Division on October 15, 2012. DWR did not submit comments to the Division regarding the AM-2 application for further review.

DIVISION RECOMMENDATION

The Division determined that the 112(d) Amendment Application (AM-2) submitted by Cotter Corporation for the SM-18 Mine, Permit No. M-1978-116, meets the requirements of the Act and Rules. Therefore, it is the recommendation of the Division that the Board approve AM-2.

CERTIFICATE OF SERVICE

I, Travis Marshall, hereby certify that on Wednesday, September 18, 2013 I deposited a true copy of the foregoing *Rationale for Recommendation to Approve a 112(d) Amendment Application with Objections* in the United States Mail, postage paid, addressed to the following:

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P.O. Box 700
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Jennifer Thurston
INFORM
P.O. Box 746
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A handwritten signature in black ink, appearing to read 'Travis Marshall', written over a horizontal line.

Travis Marshall
*Division of Reclamation, Mining and Safety
Environmental Protection Specialist*