

April 30, 2013



MAY 0 3 2013 GRAND JUNCTION FIELD OFFICE

**DIVISION OF** 

RECLAMATION MINING & SAFETY

Dustin Czapla Colorado Division of Reclamation, Mining and Safety Grand Junction Field Office 101 S. Third St, Room 301 Grand Junction, Colorado 81501

RE: JD-7 PIT Response to Adequacy Review 1

Mr. Czapla:

Attached is Cotter Corporation's (N.S.L.) Response to Adequacy Review 1 for the JD-7 Pit Amendment, Permit# M1979-094HR.

If you have any questions or concerns regarding the information submitted please call me at the number shown below.

Respectfully,

**Glen Williams** Vice President, Mining Operations

## JD-7 Mine Permit Amendment Application Permit File No. M-1979-094HR

### **Response to Adequacy Review 1**

**April 2013** 

## **Prepared by Cotter Corporation (N.S.L.)**

1

Cotter Corporation (N.S.L.) ("Cotter") submits this response to the February 26, 2013, letter from Dustin Czapla, Division of Reclamation, Mining and Safety ("DRMS") to Glen Williams, Cotter. The DRMS's comments are in italics and Cotter's responses are in bold.

#### JD-7 Mine, File No. M-1979-094HR, Amendment (AMI) Application Adequacy Review 1

 On page 81 of the EPP - section 10.1.1 - paragraph 2, it is stated that drilling of monitoring wells will commence at least six months prior to any future excavation of ore or overburden. Pursuant to Rule 6.4.21 (9) (b), five successive quarters of groundwater quality data must be submitted to the Division. Please commit to submitting groundwater quality data collected during five successive calendar quarters, in order to adequately characterize the baseline conditions, prior to any further excavation of overburden or ore.

Cotter commits to submitting groundwater quality data collected during five successive calendar quarters prior to any further excavation of overburden or ore.

2. On page 85 of the EPP - section 10.1.3 - Table 33, the second column under Quarterly Sampling reads "Water Level." Please confirm that this should read "Water Quality."

#### The second column should read "Water Quality."

3. Geochemical analysis was conducted on ore from a nearby site, which is likely similar in composition to the ore that will be encountered at this site. However, pursuant to Rule 6.4.21 (14), such analysis and accompanying evaluation shall be site specific. Please commit to submitting geochemical evaluations of the ore from this site, from both the underground and the open pit mines, for Division review and approval, prior to any stockpiling on the surface.

# Prior to ore being stockpiled on the surface, Cotter will submit to DRMS a geochemical evaluation of the ore to be mined from that mine for its review and approval.

4. In order to establish baseline conditions in accordance with Rule 6.4.21 (7), please conduct a radiometric survey of the affected area and submit the results to the Division along with an evaluation of the expected effectiveness of the proposed EPP, which specifically addresses the risks, from uranium, uranium byproducts, and any other radionuclides expected to be encountered during this operation.

The baseline radiometric survey is included as Attachment 2 in this response to DRMS comments. Cotter's procedures for separating ore from waste rock are designed to minimize the addition of uranium ore to the waste rock pile—an approach that makes sense from an economic and environmental standpoint. The EPP addressed several issues that evaluate the risks to human health and the environment. The potential of acid mine drainage from the waste rock piles was quantified by the SPLP tests, which indicated that this was not an issue. The hydrogeologic evaluation presented in the EPP showed that factors of low precipitation, low permeability, and geochemical conditions restricted potential leachate from the waste rock piles from impacting groundwater resources. A detailed Drainage Design Plan included in the Response to Adequacy Review 2 routes off-site surface runoff around the open pit and the waste pile and captures and contains on-site runoff from a 10-year 24-hour precipitation event.

5. Please inform the Division of the specific plan(s) for reclaiming the ore storage areas that will ensure that radionuclide levels will not exceed the baseline conditions to be established during this amendment process.

Cotter commits to doing representative soil samples and a radiometric survey of the proposed ore pad location prior to construction of the ore pad and placement of the ore pad liner. Cotter proposes during final reclamation to collect representative soil samples to determine the amount of underlying liner to remove and place at the toe of the waste pile prior to re-contouring it to the proposed 4:1 slope. This ore pad clean-up material will then be covered by up to 50 feet of mine waste material in a dry environment, minimizing concerns regarding potential leaching of the ore material. Cotter proposes to use a clean-up standard of 5 pCi/g Ra226 above the background in the first 6 inches of soil. The reason for the soil samples is to eliminate the potential impact of extraneous gamma 'shine' from the surrounding mine waste material on radiometric survey results during reclamation.

If necessary Cotter can place 6 - 18" of clay-based soils over the ore pad area as a final step in the reclamation process to minimize potential radiation exposures and potential leaching of uranium constituents into the surrounding area.