

October 28, 2008

Mr. Ken Milmine
Manager of Environmental
and Regulatory Affairs, Wyoming
Uranium One
907 N. Poplar Street
Suite 260
Casper, WY 82601

SUBJECT: SEPTEMBER 25, 2008 MEETING REGARDING ENERGY METALS
CORPORATION'S MOORE RANCH IN SITU LEACH URANIUM RECOVERY
PROJECT

Dear Mr. Milmine:

On September 25, 2008, a public meeting was held at Uranium One's offices in Casper, Wyoming to discuss Energy Metals Corporation's (EMC's) application for a license to construct and operate an *in situ* leach (ISL) uranium facility at its Moore Ranch site. EMC is a wholly owned subsidiary of Uranium One. The U.S. Nuclear Regulatory Commission (NRC) had completed a review of EMC's application and transmitted a request for additional information to EMC by letter dated May 14, 2008. By letter dated July 11, 2008, EMC provided a partial response to the NRC request. The meeting was held to discuss questions and issues arising from NRC's review of EMC's July 11th response. A summary of the meeting is enclosed.

If you have any questions concerning this letter, please contact me, either by telephone at (301) 415-6629, or by e-mail at myron.fliegel@nrc.gov.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice for Domestic Licensing Proceedings and Issuance of Orders," a copy of this letter will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records (PARS) component of NRC's document system (ADAMS). ADAMS is accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html>.

Sincerely,

/RA/

Myron Fliegel, Senior Project Manager
Uranium Recovery Licensing Branch
Division of Waste Management
and Environmental Protection
Office of Federal and State Materials and
Environmental Management Programs

Docket No. 40-9073

Enclosure: Meeting summary

cc: G. Mooney, WDEQ

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Manager of Environmental
and Regulatory Affairs, Wyoming
Uranium One
907 N. Poplar Street
Suite 260
Casper, WY 82601

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Docket No. 40-9073

Enclosure: Meeting summary

cc: G. Mooney, WDEQ

Distribution:

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J Webb

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DATE	10 / 16/08	10/ 23 /08	10 / 27 /08	10/ 28/08

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Energy Metals Corporation Moore Ranch ISL Meeting Summary

Date of Meeting: September 25, 2008

Location of Meeting: Uranium One
907 N. Poplar Street
Suite 260
Casper, WY 82601

Agenda: Attachment 1

Attendees: Attachment 2

Summary:

The meeting was held to discuss Energy Metal Corporation's (EMC's) application to construct and operate an *in situ* leach (ISL) uranium facility at its Moore Ranch site in Wyoming. EMC is a wholly owned subsidiary of Uranium One. The U.S. Nuclear Regulatory Commission (NRC) staff had completed a review of EMC's application and transmitted a request for additional information (RAI) to EMC by letter dated May 14, 2008. By letter dated July 11, 2008, EMC provided a partial response to the staff's request. The meeting was held to discuss questions and issues arising from the staff's review of EMC's aforementioned response.

The meeting began at 9:00 a.m. The NRC project manager, Myron Fliegel, stated that the meeting was open to the public and that members of the public would be allowed to ask questions or make comments at the end of the meeting. Several members of the public were in attendance. Issues were discussed by technical discipline.

HEALTH PHYSICS – JAMES WEBB

James Webb, NRC health physicist, participated by telephone. A summary of the issues raised with EMC's responses is presented below.

RAI 2-9 Technical Report (TR) Section 2.9 Air Particulate Monitoring

EMC indicated in its July 11, 2008 response that air particulate station locations were "slightly different" from "associated" radon monitoring stations due to logistical issues related to the availability of hard line electrical power for long-term site monitoring. Mr. Webb requested that the term "slightly different" be quantified in terms of distance (i.e., feet, yards, or miles).

EMC responded that air particulate sampling and radon sampling locations may be located several hundred yards apart from each other and referred to figure 2.9-25 of the TR. EMC stated that air particulate sampling locations were located based on the availability of electricity.

RAI 4-1.a TR Section 4.1 Gaseous and Airborne Particulates

EMC indicated in its response that the discharge stacks will be located on the leeward side of the building and ventilation intakes will be on the upwind side of the building to ensure that exhausted radon is not reintroduced into the facility from prevailing winds. Mr. Webb stated that this response is interpreted to mean that if the hypothetical winds are from the west, the stack

will be located on the east side of the building or leeward side and the ventilation will be located on the west side of the building or upwind side. He asked how the applicant will ensure that exhausted radon from the discharge stacks is not reintroduced into the facility if the winds are from the east (now upwind side) and moving west towards the ventilation side (which is now leeward).

EMC responded that it will expand the discussion in TR section 4.1 to address this issue.

RAI 4-1.b TR Section 4.1 Gaseous and Airborne Particulates

EMC indicated in its response that the ventilation system fans will have a capacity of 10,000 gallons per minute (gpm). Mr. Webb noted that when units are given in gpm, they usually represent a liquid or dry volume. He asked EMC to confirm that the units are gpm and not cfm (cubic feet per minute). He asked EMC to show how the exchange rate of 1.25 was derived and whether the flow rate represents the flow rate for each fan or for the total of four fans.

EMC responded that the units are cfm and not gpm and that the flow rate is for each fan. EMC will revise TR section 4.1 to respond to NRC's comments.

RAI 5-5.c TR Section 5.7.1 Effluent Control Techniques Section
(also TR Section 4.1 Gaseous and Airborne Particulates)

EMC stated in its response that monitoring for combined plant and wellfield releases at the site airborne monitoring stations will be accomplished through the use of Track-Etch radon cups as discussed in Section 5.7.7. Mr. Webb stated that there is a major concern with the manner in which EMC is going to comply with 10 CFR 40.65, "Effluent monitoring reporting requirements." 10 CFR 40.65 states that the required reports must specify the quantity of each of the principal radionuclides released to unrestricted areas in liquid and gaseous effluents. Mr. Webb asked how, if no monitoring is to be conducted at the point of discharge of the gaseous effluent, EMC will specify the quantity of each of the principal radionuclides released to unrestricted areas from gaseous effluents.

EMC also stated in its response that monitoring for radon gas releases from the plant building and ventilation discharge points is not practicable. Mr. Webb asked EMC to justify why this is not practicable.

EMC responded by stating that no technology was available to measure radon releases at the gaseous release point. Upon further discussion, EMC stated that it had misunderstood the RAI and that it will provide a response to address the issue.

RAI 5-6.c TR Section 5.7.2 External Radiation Exposure Monitoring Program

The last sentence of EMC's response stated, "Determination of the CEDE is discussed in further detail in Section **Error! Reference source not found.**" Mr. Webb asked EMC to correct this sentence.

EMC stated that it will correct its response.

RAI 5-6.d TR Section 5.7.2 External Radiation Exposure Monitoring Program

EMC stated in its response that beta surveys will be performed using a Ludlum Model 2224 portable scaler/ratemeter with a Ludlum 43-1-1 alpha/beta scintillator probe or equivalent. According to the vendor's specification, the output for this detector is measured in counts per minute. The units in the figures identified in EMC's response (Figure 1 and Figure 2) are in mrem per hour. Mr. Webb asked EMC to explain how the beta surveys will be converted from counts per minute to mrem per hour.

EMC stated that it will re-evaluate its response.

RAI 5-7.a TR Section 5.7.3 Airborne Radiation Monitoring Program

EMC did not respond to RAI 5.7(a).

EMC stated that it will provide a response.

RAI 5-9 TR Section 5.7.5 Bioassay Program

EMC noted in its response that bioassays will not be used for exposure determination. Mr. Webb stated that the NRC staff does not concur with this response and asked EMC to justify not using bioassays for exposure determinations.

EMC stated that most bioassays at ISLs are below the detection level (i.e., 5 ug/L) and no dose assessment can be made based on those results. Mr. Webb asked about bioassays that yield positive results and how they will be evaluated from a dose perspective. EMC stated that it would re-evaluate the issue and provide a response.

RAI 5-10.b TR Section 5.7.6 Contamination Control Program

RAI 5-10.b requested additional information regarding contamination control of material during maintenance activities (i.e., interior surfaces of pipe, drain lines, or duct work as well as potentially contaminated equipment and scrap). Mr. Webb stated that EMC's response addressed contamination control for personnel and does not address the RAI.

EMC responded that the information is in TR chapter 6, but that it will also put it in chapter 5.

FACILITY AND OPERATIONS – DANIEL GILLEN

Daniel Gillen, NRC consultant, participated by telephone. A summary of the issues raised with EMC's responses is presented below.

RAI 4-2.d TR Section 4.2 Liquid Effluents

Mr. Gillen stated that EMC's liquid waste disposal plans will remain an open issue until such time as it provides the details of the Wyoming deep well injection permit for which EMC indicated it has applied.

EMC stated that it is working with Wyoming on the permit.

RAI 4-3 TR Section 4.2 Solid waste

Mr. Gillen stated that EMC's solid waste disposal plans will remain an open issue until EMC provides evidence of an acceptable 11e.(2) byproduct material disposal agreement.

EMC stated that it understood.

RAI 5-1 TR Section 5.1 Corporate Organization and Administrative Procedures

Mr. Gillen stated that three minor issues remain regarding the information provided on the corporate organization. First, contrary to what is written in the application, the organization chart does not show the Director of Environmental and Regulatory Affairs reporting to the Senior VP. Second, also contrary to what is written in the application discussion, the organization chart shows a line of reporting from the RSO to the Mine Manager (the RSO needs independence). Third, the revised corporate organization section has some incorrect numbering of its subsections and should be fixed.

EMC stated that it will correct its response.

RAI 6-2.d TR Section 6.2 Plans for Reclaiming Disturbed Lands
RAI 6-3.a TR Section 6.3 Removal and Disposal of Structures, Waste Material, and Equipment

Mr. Gillen stated that both of these issues contain aspects related to the 11e.(2) disposal agreement and will remain open until the agreement is provided.

EMC stated that it understood.

RAI 6-6 TR Appendix D Financial Assurance Spreadsheets

Mr. Gillen stated that EMC's response has generated a new issue. EMC needs to give additional explanation of the new building utility costs provided. The previous version had electricity at \$8,500/month, while the new version has the same cost item as \$1,800/month for well field #1 and \$1,200/month for well field #2.

EMC stated that the new version contains a more precise estimate and that EMC will provide more information to justify the estimate.

GENERAL – MYRON FLIEGEL

A summary of the issues raised by Myron Fliegel, NRC project manager, with EMC's responses is presented below.

RAI 2-1 TR Section 2.1 Site Location and Layout

Dr. Fliegel stated that the coordinates of the central processing plant were provided in a Wyoming coordinate system and requested that EMC also provide the location in terms of latitude and longitude. He also stated that the total restricted area was not provided and that the monitor well ring was mislabeled in figure 2.1-2.

EMC stated that it will revise its response.

RAI 7-1 TR Section 7.5 Accidents

Dr. Fliegel stated that the discussion of accidents in the TR is focused primarily on the impacts of accidents. In addition to discussing impacts, the TR should provide a clear discussion of measures to be implemented to prevent identified potential accidents, and emergency plans and training to cope with accidents. He also stated that fires should be discussed in the TR. Finally, he noted that the discussion of emergency training on page 5-20 is very general and that the discussion on page 7-50 does not provide enough details on the design of curbs around tanks.

EMC stated that it will revise its response.

HYDROLOGY – ELISE STRIZ

A summary of the issues raised by Elise Striz, NRC groundwater hydrologist, with EMC's responses is presented below.

RAI 2-4.b & c TR Section 2.7 Surface Water Hydrology

RAIs 2-4.b and 2-4.c requested EMC to provide maps that present the National Pollutant Discharge Elimination System (NPDES) permitted coal bed methane (CBM) produced water discharge points in or surrounding the proposed license area and that discharge into surface water features. In its response, EMC provided latitude/longitude locations, flow rates, and water quality information on CBM outfall discharge and impoundment locations within and around the proposed license area. However, it did not provide a map that showed these locations so they could be matched to outfall numbers or water quality at individual locations in and around the permit area. It also did not provide the size or location of CBM impoundments on a map or address if such impoundments are designed to allow infiltration of groundwater. Dr. Striz asked EMC to provide the map with the CBM outfall and impoundment requested information.

EMC indicated that it had created a similar map and would edit it to be sure it shows the location, size and permit name of all CBM discharge points and impoundments within and around the license area.

RAI 2-5.a & b TR Section 2.7 Groundwater Hydrology

RAI 2-5.a asked the applicant to provide a comprehensive description and explanation of the presence of the "72 sand" aquifer that is the overlying aquifer at the site. It was not clear to NRC staff if the "72 sand" aquifer was historically present across the license area or if it was a product of CBM produced water infiltration. EMC was asked to provide information on the presence or absence of this perched aquifer including the potentiometric surface in the "72 sand" over time, as discussed in NUREG-1569. RAI 2-5.b asked EMC to provide information on the possible infiltration of CBM produced water to the "72 sand" in the past or explain why no CBM produced water would have entered or will enter the "72 sand" from CBM NPDES discharge points on the surface.

In its RAI response, EMC provided "72 sand" groundwater levels in Table 2.5.a recorded from one well, OMW-2, measured on 2/9/2007 and for two piezometers, 35N-6 and 35N-7C, measured on 5/15/80. All of these wells were located in the center of Wellfield 2, near a CBM

water outfall at waypoint 70 that feeds the Upper Wash #2, surface drainage, and a wetland pond. In 1980, the groundwater levels in piezometers 35N-6 and 35N-7C, translated into a saturated thickness in the “72 sand” of 3.13 feet and 1.91 feet, respectively. In 2007, the saturated thickness was measured at 10.38 feet in OMW-2. EMC stated that the 1980 water level data show that the “72 sand” aquifer was historically present in this location before CBM operations began in the permit area. However, when comparing the values, the increase in saturated thickness from 1980 to 2007 is 6.26 ft to 8.47 feet. EMC stated that the increase in saturated thickness was “likely a relic of completion methods,” and not because of any CBM water infiltration. EMC did not support this statement by any discussion or data. EMC also did not provide any other historical water levels for the “72 sand” in any other location in the permit area although it stated that 35 piezometers were installed in the permit area.

Dr. Striz stated that, considering the generally acknowledged absence of recharge from precipitation in the proposed license area, the data indicate an increase in saturated thickness, which appears to indicate that CBM water discharged at the outfall entered the surficial aquifer. This discharge might have occurred in sufficient quantities to alter water levels and, potentially, water quality. Dr. Striz requested that EMC provide an estimate of the volume of CBM discharge that could have infiltrated in the license area and perhaps install more wells to evaluate water levels and impacts to water quality.

EMC generally acknowledged that water levels indicate CBM discharge could have infiltrated the “72 sand”; however, it believed the “72 sand” had been present in the license area historically. EMC stated that it would try to estimate volumes of infiltration and may install more wells to evaluate CBM impacts to the “72 sand.”

RAI 2-5.c TR Section 2.7 Groundwater Hydrology

RAI 2-5c requested that EMC evaluate any influence on water quality at various locations if the “72 sand” had received infiltration from CBM produced water discharge, EMC should evaluate how it may influence the water quality at different locations which receive the infiltration. EMC was asked to explain how it would monitor surface water, spill impacts, and the “72 sand” to separate CBM impacts from ISL impacts, including how excursion indicators would be chosen and upper control limits would be determined. Alternatively, EMC should justify why CBM discharges would not cause monitoring problems and that the proposed indicators would be sufficient.

In its RAI response, EMC stated that there was and is no impact on the surficial overlying aquifer from CBM produced water discharge in the permit area. In addition, to support its conclusion of no impact from CBM produced water on the surficial aquifer, EMC stated that the groundwater in the “72 sand” surficial aquifer is calcium-sulfate geologic unit. This was verified with water quality data in the TR. EMC also stated that the CBM produced water is sodium-bicarbonate type. EMC concluded that if CBM produced water had impacted the “72 sand” by infiltration, the “72 sand” would have evolved from calcium-sulfate to become sodium-bicarbonate type.

Dr. Striz explained that NRC staff is concerned that CBM water has infiltrated into the “72 sand” surficial aquifer and will continue to do so. She stated that NRC staff needs assurance that EMC will be able to clearly distinguish impacts to the overlying “72 sand” surficial aquifer due to ISL excursions or surface and pipe spills from CBM produced water discharge impacts. Dr. Striz explained that according to Table 2.8.a of EMC’s July 11, 2008 response, five WDEQ permitted Devon Energy CBM discharge points and impoundments exist in Section 35, within

Wellfield 2, and two in Section 34, within Wellfield 1. Each discharge point has its own flow rate and water quality.

These outfalls appeared to operate from 2000 to the present, as shown in Table 2.8.a.1. The total amount of CBM water discharged to surface drainages and impoundments in the proposed license area, and Wellfield 2 specifically, total tens of millions of gallons. Water levels measured near an outfall in Wellfield 2 indicate an increase in saturated thickness in the “72 sand” from 1980-2007.

Dr. Striz also stated that impacts to water quality in these areas could have occurred without changing the “type” of water as EMC argued. First, the quantity of water and mixing that would be required to complete this conversion in the surficial overlying aquifer is unknown. Second, any amount of infiltration could impact water quality in localized areas without altering the type of water. In addition, Dr. Striz noted that infiltrating CBM water, which is depleted with respect to calcium and sulfate, may have dissolved calcium and sulfate as it infiltrated into the surficial “72 sand” aquifer from the same calcium and sulfate sources (e.g., gypsum) that originally created the calcium-sulfate type water in this “72 sand” aquifer. Dr. Striz stated that it would be helpful if EMC could separate impact from CBM water infiltration by identifying some specific constituent in the CBM produced water, which is significantly different in concentration or is not found in the “72 sand” groundwater or lixiviant, to act as a clear marker. For example, the water quality in OMW-2, which may be impacted by the CBM outfall in Upper Wash 2, has higher levels of iron, sodium, manganese, total dissolved solids (TDS), bicarbonate and conductivity than other OMW wells in the “72 sand” within the permit area.

EMC stated that it understood NRC staff's concern regarding how to separate ISL impacts to the “72 sand” from CBM water infiltration impacts. EMC stated that it would review CBM water constituents to see if some could be used to distinguish between the two impacts. EMC would also consider adding more wells to evaluate if backgroundwater quality in the “72 sand” was significantly different in areas of CBM outfalls and impoundments as opposed to areas where no outfalls were present.

RAI 2-7.b TR Section 2.7 Groundwater Hydrology

RAI 2-7.b asked EMC to explain how it will prevent excursions into the “68 sand” and monitor for excursions in the “68 sand” in Wellfield 2 considering the acknowledged absence of the underlying shale between the “70 sand” and “68 sand” in a large portion of Wellfield 2. In its response, EMC acknowledged that the 70 and 68 sand coalesce in Wellfield 2 over a large area. EMC stated that there will be no potential for excursions with normal injection/production well operations. However, no justification or analysis was provided to support this assertion.

Dr. Striz explained that the NRC staff is concerned that ISL operations in the “70 sand” in this wellfield will significantly impact the water quality in the “68 sand”. She stated that excursions are inevitable into the “68 sand” considering the lack of a confining layer between them. She also stated that any excursions into the “68 sand” would require corrective actions such as pumping in the “68 sand” that would draw even more lixiviant from the mining zone into the “68 sand” and exacerbate the situation. Dr. Striz stated that EM should consider including the “68 sand” as part of the mining zone in the region where the “70 sand” and the “68 sand” coalesce in Wellfield 2.

EMC stated that it was aware that excursions into the “68 sand” may occur, but that it would complete mining wells only in the “70 sand” in an attempt to prevent them. EMC stated that

it understood that correcting an excursion in the “68 sand” could draw lixiviant down from the “70 sand” mining zone. EMC stated it would consider combining the two as the mining zone and using the “60 sand” as the underlying aquifer.

RAI 2-7.d TR Section 2.7 Groundwater Hydrology

In RAI 2-7.d, NRC staff asked EMC to provide an explanation for the unexplained drawdown of 25 feet in UMW 3 in Wellfield 1 in the “68 sand”, which started in February 2007 and continued until mid-August 2007. In its response, EMC stated there were no CBM wells in the deeper coal layer that could be responsible for this drawdown. Dr. Striz stated that NRC staff is concerned that a nearby unidentified pumping well, other than a CBM well, may be located nearby, which is impacting the “68 sand,” considering the characteristics of this drawdown and recovery. She asked that EMC evaluate all possible well permits and operations in the area to determine if pumping wells in the 60, 68, or 70 sand, other than those operated by EMC, could be responsible for this drawdown.

EMC stated that it had made every effort to find a reason for the drawdown in UMW3. It had checked all available well permits and spoken with other well permit holders to no avail. EMC stated that it did not believe the geology was different near the well, but that the completion of the well may be bad. It stated that it may plug this well and drill another to see if the issue could be resolved.

RAI 2-8.b TR Section 2.8 Backgroundwater Quality

In RAI 2-8.b, NRC staff asked EMC to explain how it can assess baseline surface water and surficial aquifer groundwater quality when CBM discharge could have impacted these resources. According to Table 2-8.a of EMC’s July 11, 2008 response, as previously stated, five WDEQ permitted discharge points exist in Section 35 and in Section 34. According to the TR, one of these CBM outfalls discharges water to surface water drainages and ponds from one location in Wash #1 at waypoint 39 on Figure 2.8.5-2. CBM produced water is also discharged at three locations in Upper Wash #2 that passes north–south through the middle of Wellfield 2. These CBM discharge points are located at waypoints 71, 70 and 90 on Figure 2.8.5-2 of the TR. The discharge at waypoint 90 is located within Wellfield 2 near the northern boundary. According to Figure 2.8.5-2, significant water ponding associated with CBM discharge occurs at waypoints 70 and 90.

In the TR, EMC stated that CBM water affects surface water quality in the permit area, and it has measured the effect on surface water quality. EMC stated that there was no impact to the surficial overlying aquifer. Dr. Striz stated that sufficient evidence that the infiltration of CBM water on the site has impacted the surficial overlying aquifer exists, and EMC has not adequately evaluated this groundwater impact. Because of the acknowledged impact to surface water baseline quality and likely impact to the “72 sand” surficial overlying aquifer baseline water quality, EMC should provide an approach to be able to distinguish between impacts from ISL operations and CBM produced water. This could be done using constituents specifically found in CBM water or at higher levels as was discussed previously.

EMC agreed that there may be CBM water infiltration impacts to the “72 sand” aquifer as discussed earlier in the meeting, and would attempt to quantify and separate this impact from ISL mining impacts. EMC stated that it had provided information on the impact to surface water in the TR.

RAI 5-12.c TR Section 5.7.8 Groundwater and Surface Water Monitoring Programs

In RAI 5-12.c, EMC was asked to either provide a justification for the use of chloride, conductivity, and total alkalinity for excursion indicators in the overlying “72 sand, or provide an alternate set of constituents to be used as excursion indicators for the “72 sand.” NRC staff raised this issue because of previously expressed concerns regarding CBM discharge issues. In its RAI response, EMC stated there had been no impact from CBM water to the surficial overlying aquifer.

Dr. Striz once again stated that there are indications that the infiltration of CBM water on the site may have impacted the surficial overlying aquifer and that EMC had not adequately evaluated this groundwater impact. CBM water exhibits high alkalinity and conductivity similar to ISL fluids. Its presence in the “72 sand” may therefore mimic an excursion. Because of the acknowledged impact to surface water baseline quality and potential impact to the surficial overlying aquifer baseline water quality, NRC requested that EMC provide indicators that can be used without interference from CBM impacts to distinguish between excursions to the “72 sand” truly arising from the mining zone and CBM produced water. Otherwise NRC may hold EMC responsible for monitoring and correcting “excursions” taht are derived from CBM infiltration and not mining operations.

EMC once again indicated that it understood NRC’s concern regarding the need to distinguish ISL impacts to the “72 sand” from CBM water infiltration impacts. EMC stated that it would review CBM water constituents to determine if some could be used to distinguish between the two impacts.

RAI 6-1.a TR Section 6.1 Plans and Schedules for Groundwater Quality Restoration

In RAI 6.1.a, NRC staff asked EMC to demonstrate that it will be able to return the groundwater quality to the NRC required restoration standard of baseline water quality or the standards listed in Criterion 5B(5)(b) of Appendix A to 10 CFR Part 40. In its response, EMC stated that it will return groundwater quality to WDEQ “Class of Use” standards.

Dr. Striz stated that this does not meet NRC’s regulatory requirement of a return to baseline water quality or the standards listed in Criterion 5B(5)(b) of Appendix A to 10 CFR Part 40. Dr. Fliegel noted that NRC cannot issue a license for an application that does not propose to meet NRC standards.

EMC disagreed about the appropriateness of applying the standards in Criterion 5B(5)(b) to restoration of ISL well fields but agreed to address this issue.

RAI 6-1.b TR Section 6.1 Plans and Schedules for Groundwater Quality Restoration

In RAI 6.1.b, NRC noted that in Wellfield 2, the “70 sand” production zone and the “68 sand” coalesce in a large section of almost 1000 linear feet on cross section E-E’. NRC staff asked EMC to explain, considering the absence of a confining layer between these sands, how it would prevent lixiviant and restoration fluids from moving freely from the “70 sand” into the “68 sand.” EMC was also asked to explain how the “68 sand” in this region will be restored if it becomes apparent during operations that the “68 sand” had been significantly affected by lixiviant.

In its response, EMC acknowledged that the 70 and 68 sand coalesce in Wellfield 2 over a large area. EMC stated that there will be no potential for excursions with normal injection/production well operations using wellfield balance. However, it did not provide any justification or analysis to support this assertion. EMC stated that there is no need to adjust pore volume estimates for restoration in this area, although it indicated it will restore the “68 sand” if it is impacted using proposed restoration methods.

Dr. Striz stated NRC staff is concerned that excursions into the “68 sand” from the “70 sand” mining zone are possible, considering the lack of confining layer. NRC staff, once again, requested that EMC provide a comprehensive explanation on how it will prevent, monitor, and clean up excursions to the “68 sand” in this area of Wellfield 2.

EMC responded that it would consider combining the 70 and 68 sands as the production zone and use the “60 sand” as the underlying aquifer zone. EMC stated that it would be unlikely that lixiviant would move into the “68 sand” if they only screened the production and injection wells in the “70 sand” and carefully controlled the well flow patterns. EMC agreed it would clean up any excursions into the “68 sand” at the time of restoration, but stated that it does not need to increase the estimated number of pore volumes required for restoration because recent groundwater flow modeling indicated that excursions would be unlikely. EMC stated that it will provide the details of that modeling to NRC.

RAI 6-1.c TR Section 6.1 Plans and Schedules for Groundwater Quality Restoration

In RAI 6.1.c, EMC was asked to provide a description of the biological reduction method to be used to achieve restoration for targeted constituents in the proposed wellfield extraction zone, including: the efficacy of the chosen method; additives and rates; how progress will be monitored; estimates of pore volumes required when using biological reductants; and how the stability of water quality in zones treated with biological reductants will be monitored and established. In its response, EMC stated that it did not know which biological reduction method will be used.

Dr. Striz informed EMC that without this information NRC cannot evaluate the efficacy of the method for restoration, its stability, or how many pore volumes will be required. These issues affect the amount of surety required. She stated that NRC may need to include a condition in the license requiring this information be provided before biological reduction is applied for restoration.

EMC responded that it would be willing to provide the information under a license condition if it decides to use biological restoration.

RAI 6-1.j TR Section 6.1 Plans and Schedules for Groundwater Quality Restoration

In RAI 6-1.j, EMC was asked to provide a justification for the selection of a six-month stability monitoring time period to determine restoration success. Additionally, EMC was asked to provide the criteria that will be used to establish that the water quality in the restored zone is stable (e.g., no increasing trends that would threaten groundwater quality if left unabated).

In its response, EMC stated that it was proposing to use the six-month stability monitoring period specified in WDEQ-LQD Guideline 4. No other basis for this time period was provided. There was no discussion of what monitoring will occur if stability is not achieved after six months.

Dr. Striz stated that EMC must provide some justification based on operating experience, testing or modeling to support the assertion that restoration water quality is likely to remain stable after six months if monitoring is to be suspended. Dr. Striz also stated that EMC should provide the criteria which would be used to establish that water in the restored zone was stable.

EMC responded that six months should be sufficient although it offered no supporting evidence except field practice. EMC stated that it would develop criteria to evaluate if water quality in the restored zone was stable.

Action Items

EMC will respond to the issues discussed. Some of the responses will be included in the second RAI response promised in EMC's July 11, 2008 letter, while others will follow later.

Public Participation

Several members of the public made statements and asked questions, which were responded to by some of the participants.

The meeting concluded at 12:30 p.m.

MEETING AGENDA
Energy Metals Corporation
Thursday, September 25, 2008
Casper, WY

MEETING PURPOSE: Discuss Energy Metals Corporation's Application for License - Moore Ranch Uranium Project.

MEETING PROCESS:

<u>Time</u>	<u>Topic</u>	<u>Lead</u>
9:00 a.m.	Introductions	All
	Staff Issues and Questions Regarding the Application	NRC
	Summary of Action Items	Moderator
	Public Comments/Questions	
12:00 Noon	Adjourn	