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ENVIRONMENT DEPARTMENT

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MEMORANDUM

TO: Asimios Malliakos, Environmental Project Manager, U. S. Nuclear Regulatory Commission

FROM: Kurt Vollbrecht, Program Manager, GWQB Mining Environmental Compliance Section KV

RE: **Comments on the Draft Environmental Assessment for the Proposed URENCO USA Uranium Enrichment Facility Capacity Expansion in Lea County, New Mexico**

DATE: January 16, 2015

The Ground Water Quality Bureau (GWQB) received the draft environmental assessment (Draft EA) for the proposed URENCO USA (UUSA) uranium enrichment facility capacity expansion from the Nuclear Regulatory Commission (NRC) on December 22, 2014. NRC requested that the GWQB provide comments by January 21, 2015. In addition to the Draft EA, NRC provided the GWQB with the UUSA Supplemental Environmental Report Rev 4d (UUSA ER) to aid in review of the draft EA. NMED has reviewed the submittals and has the following comments.

The GWQB regulates stormwater discharges, cooling tower blowdown water discharges, and various other discharges at the UUSA facility pursuant to a ground water discharge permit, DP-1481. This discharge permit is referenced in several places in the documents reviewed. DP-1481 was originally issued on February 28, 2007 and renewed on February 26, 2013. The GWQB received a request for modification of DP-1481 from UUSA on March 25, 2014 to reflect the proposed expansion of the UUSA facility. At this time the GWQB has not approved the proposed modification to DP-1481.

Uranium Byproduct Container Stormwater Retention Basin

Currently, storm water from the Uranium Byproduct Container (UBC) Storage Pad is discharged to a synthetically lined UBC Stormwater Retention Basin (UBC Basin) for disposal by evaporation. In multiple locations within the UUSA ER, and within the Draft EA it is indicated that the proposed action includes construction of two additional UBC Stormwater Retention

Basins to capture and subsequently evaporate all stormwater discharge from the expanded UBC Storage Pad. The drainage system proposed includes precast catch basins and concrete trench drains; piping material is high density polyethylene (HDPE) with fused joint construction to prevent leakage. It is indicated that the two new UBC Basins will be constructed and lined in the same manner as the existing UBC Basin and stormwater conveyance systems.

This is not consistent with the March 25, 2014 proposed modification of DP-1481. In that modification UUSA proposes to discharge stormwater from the expanded UBC Storage Pads via unlined riprap armored ditches or pipes to the unlined site stormwater detention basin, where it would ultimately be disposed of by a combination of infiltration and evaporation. The unlined stormwater basin is designed with an outfall structure for discharge overland in the event stormwater flows exceed design capacity.

Uranium Byproduct Container Storage Pad

The existing UBC Storage Pad is constructed of reinforced concrete with a minimal number of construction joints. Pad joints were sealed with joint sealer and water stops as a leak-prevention measure. In the UUSA ER it is implied that similar construction techniques will be followed. The March 25, 2014 proposed modification of DP-1481 indicates that different construction techniques will be followed, including a proposal to use local caliche as a component of new UBC Storage Pad construction. The GWQB recently requested additional information from UUSA regarding the engineering design of the UBC Storage Pad and associated stormwater conveyance structures.

Specific Comments

- Table 1-3 of the Draft EA indicates that the existing permit DP-1481 is in the renewal process. As previously stated, DP-1481 was renewed on February 26, 2013, with a term of five years before requiring discharge permit renewal pursuant to the Water Quality Control Commission (WQCC) Regulations. The GWQB is currently processing a request to modify DP-1481 relative to the proposed facility expansion.

- Section 2.1.2.1.10 of the Draft EA indicates that there are currently three sources of discharge to the UBC Basin. The February 26, 2013 DP-1481 renewal authorizes the following discharges to the UBC Basin:

  a. up to 3.7 million gpd of storm water from the UBC storage pad,
  b. up to 3,750 gpd of cooling tower blow down water,
  c. up to 2,800 gpd of cooling tower back wash water,
  d. up to 75 gpd of sump water from the central utilities building (CUB),
  e. up to 1,700 gpd of sump water from the Security Diesel Generator Building,
  f. up to 1,000 gpd of water from the Fire Water Pump House,
  g. up to 200 gpd of UBC pad equipment wash water,
  h. up to 350 gpd of Centrifuge Assemble Building (CAB) side loader wash water,
  i. up to 600 gpd of CRDB and SBM floor wash water,

j. up to 120 gpd of CAB floor wash water, and
k. up to 1,000 gpd of miscellaneous non-hazardous, non-storm water generated at the facility.

- Section 2.1.11 of the UUSA ER states that the anticipated radiological concentration in runoff from the UBC Storage Pad is anticipated to be 32pCi/l. It is not clear if this is the anticipated runoff concentration from the expanded UBC Storage Pad or the existing UBC Storage Pad. The WQCC Regulation standard for radioactivity (combined radium 226 and 228) in ground water is 30pCi/l. The WQCC Regulation standard for dissolved uranium in ground water is .03 mg/l.

- Table 3.4-3 of the UUSA ER indicates that site background uranium concentrations have been determined to exceed the regulatory standards. In response to a request for additional information the GWQB received a proposal for determination of background concentrations on April 4, 2014. At this time, no official determination of background concentrations has been made.

Summary

Although the potential for release of radioactivity from the UBC Storage Pad to the UBC Basin during and following storm events is anticipated to be small, the GWQB is concerned that the Draft EA is not evaluating the same proposed action as requested in the March 25, 2014 request to modify DP-1481 with respect to UBC Storage Pad design and UBC stormwater management. Reconciliation of these discrepancies should be achieved prior to finalization of the Draft EA as well as acting on the current proposal to modify DP-1481.

If you have any questions please contact Kurt Vollbrecht of the GWQB Mining Environmental Compliance Section at 505-827-0195.

Cc: Butch Tongate, Deputy Secretary, New Mexico Environment Department
Trais Kliphuis, Director, NMED Water Protection Division
Jerry Schoeppner, Chief, NMED GWQB