

GRANTS RECLAMATION PROJECT – Cibola County, NM

Response to NRC comments on:

Environmental Report (ER) support document for Review and Approval of Evaporation Pond – 3 (EP-3) and the associated amendment of Radioactive Materials License SUA-1471

Items requiring clarification:

- 1. Section 1.4 of the ER states that the pond will have a double HDPE liner with a leak detection/collection system. In addition, Section 4.8 says a groundwater monitoring program associated with EP3 will be implemented with monitoring wells installed down gradient of EP3. In each case, describe the criteria needed for corrective action and what corrective action will occur as a result of the monitoring.**

Response: The leak detection / recovery system (LDRS) for the double HDPE liner system on the pond consists of several cells that have collection sumps and leak detection ports (pipes) that enable detection of leakage through the primary liner, and also provide access to extract and retrieve the collected seepage. Should seepage in excess of 775 gallons per acre of liner per day be observed, a liner inspection will be conducted to identify the area(s) where liner repair or remediation is necessary, and the associated repairs undertaken.

With respect to the ground water monitoring system to be installed downgradient of the proposed evaporation pond, it is expected that a minimum of two (2) wells completed in the alluvial aquifer will be utilized to monitor water quality in the aquifer and assure that seepage/leakage is not occurring in evaporation pond liner system. The two wells will consist of either existing well(s), or completion of new well(s) in close proximity, and downgradient, of the pond. In the unlikely event that evaporation pond seepage/leakage is suspected based on observed increased trends in water quality constituents in the downgradient wells, an investigation will be undertaken to confirm that seepage is occurring and determine the remedial action option(s) that is necessary to correct the problem. The investigation, and remedial action(s) to be undertaken, will be completed in consultation with the appropriate project regulatory / permitting agency(s).

- 2. Is the current air monitoring station network for the project deemed adequate for the air quality monitoring / surveillance monitoring program after EP-3 becomes operational?**

Response: The existing air quality monitoring network system for the Grants site is deemed adequate for the alternative pond siting Alternative B (preferred alternative), Alternative D, and Alternative A (No Action Alternative). Should the Alternative C site location be selected as the preferred alternative, it is expected that an additional air quality monitoring station will be required to assure that adequate air monitoring is conducted to demonstrate that potential exposure to members of the public are below established regulatory and License standards. Evaporation Pond Siting Alternative C, if implemented, will also likely require that the current air monitoring station # 1 and #2 be relocated to assure that the project air monitoring system continues to be effective. Relocation or re-siting of existing air monitoring station locations associated with Alternative C will be completed in consultation with NRC staff. Attached is a location map showing the locations of the current air quality monitoring network for the Grants site as a reference to the various evaporation pond siting alternatives.

- 3. Section 3.6 of the ER states that the major point source for total suspended particulate (TSP) in the nearby region is the Coronado Generating Station. Peabody Energy's Mustang Project will add to the TSP in the near future. HMC needs to discuss impacts of increased TSP from the addition of EP3.**

Response: Some increase in local TSP levels will likely be observed during construction activities related to commissioning of EP-3. These impacts will be short-term in duration and soil and ground disturbances will be revegetated and stabilized to the extent practicable immediately after construction is complete. Longer term increases in TSP levels during operation of the evaporation pond will be minimal and will be monitored through the TSP air monitoring system discussed above in Response #2. EP-3 will be initially operated without a forced spray evaporation system, however, the pond is designed, and will be approved, with provision for addition of a forced spray system should it be required to manage water balance requirements for the project evaporation pond system during the remainder of the ground water remediation/cleanup program. The forced spray system, if required for EP-3 in the future, will have a meteorological monitoring control system to shut down the spray system during periods of adverse wind conditions to assist in management of TSP levels related to forced evaporative spraying of contained pond water. At present, a meteorological monitoring control system is being commissioned on the forced spray systems on the existing project evaporation ponds – operational parameters to assure shutdown during adverse winds is being evaluated at present for that system and will be used to determine the operational parameters for any system that would be installed on EP-3 should forced evaporative sprays be required on EP-3.

4. **Section 4.7.3 of the ER discusses the impacts of EP3 on migratory birds. Additional information should be provided to justify the claim that migratory birds will not be harmed by the addition of EP3. The absence of bird mortality in or around the existing evaporation ponds over the years likely indicates that the water is not acutely toxic, but does not conclusively indicate that it may have some longer term impacts. This section also states that “mitigation measures will be implemented ...” There should be some discussion about what criteria will trigger mitigation measures and what mitigation measure options may or will be used.**

Response: As stated in the ER, migratory bird mortalities have not been an issue with the current evaporation pond complex at the Grants site. The project site, however, has recently started to record the presence, number and frequency of waterfowl occurrences on the existing site evaporation ponds. This is being done on a routine daily inspection basis for the site facilities which include the evaporation ponds. It is expected that during the evaporation season (approximately 8 months in duration depending on seasonal freezing weather conditions), occurrence of waterfowl on the evaporation ponds should be limited based upon active forced evaporative spraying on the ponds. During the remainder of the year, observations of waterfowl use will be continued to determine occurrence of waterfowl on the ponds. If any issues are identified, the Grants site will consult with the appropriate State and Federal wildlife agencies to determine whether any identified issues are of concern and potential options for mitigation. Options for restricting or reducing waterfowl pond usage might include hazing or other deterrents methods that would be determined practical and appropriate.

5. **It is understood that Homestake is currently requesting a temporary diversionary water use approval from the New Mexico Office of the State Engineer. This request would “extend” the current temporary diversionary use that is presently utilized for the groundwater remediation program at the site. Should Homestake not be granted this diversionary approval, or it is significantly restricted or reduced, what is the environmental impact associated with not getting the diversionary approval?**

Response: Irrespective of whether the temporary diversionary water use approval is received, the EP-3 pond proposal is a necessary component of the groundwater cleanup/restoration program at the Grants site in order to maintain the current project schedule. Without added evaporative pond storage capacity, delay in the schedule is very likely. Notwithstanding this circumstance, in the event that the pending diversionary approval is not extended, or is significantly reduced or restricted, it will result in several project impacts as well— all of which would result in significant delays in the groundwater cleanup / restoration schedule to achieve applicable site aquifer cleanup standards. More specifically, it would result in impacts to:

- The cleanup / restoration program timing for the alluvial aquifer in the south Felice Acres area, and the area to the west of the large tailings pile in Section 27 and 28 would be significantly increased. Currently diversion injection water is utilized to accelerate collection of slightly contaminated aquifer water in these areas.
- Maintenance of the hydraulic barrier in the alluvial aquifer downgradient of the large and small tailings pile areas would require a significant portion of the diversionary water that is presently permitted without the temporary diversionary use increase. This would leave much less diverted water available for other groundwater cleanup activities.
- Operation of the Reverse Osmosis plant at the present 250-300 gpm throughput rate would likely have to be maintained. The ability to operate at full capacity (5-600 gpm) for supporting groundwater restoration activities would not be feasible unless other groundwater cleanup activities utilizing diverted water were curtailed.

END
