November 1, 2007

U.S. Nuclear Regulatory Commission

Mr. Ron C. Linton

Project Manager/Senior Groundwater Hydrologist

Superfund Site License SUA-1471

Subject: Establishing a 3rd evaporation pond at this site. We request that the following be considered in the decision on adding an evaporation pond or ponds at this site.

1. As stated in your presentation on the evaporation pond(s), they are to be used to evaporate the water from the contaminants contained in them into the atmosphere. Thus, leaving the contaminants in the pond. These will then be removed and be placed on the tailings pile prior to covering it.

   This appears to be a viable procedure with use of proper controls. However, the two ponds currently being used at this site are using high pressure sprays on the ponds to accelerate the evaporation rate. These sprays send the water into the air above the ponds surface. As this is NOT evaporated water, it is still loaded with the contaminants. The water above the pond surface is picked-up by the wind and is spread beyond the pond berms and is deposited on the soils wherever the winds blow them. Thus, the contamination is removed from the aquifer and re-deposited on the surface to be leached back into the aquifers as rain, snow and flood waters seep through the soils back into the aquifer or wash it downstream to be re-deposited from here to the Gulf of Mexico.

   These mists from the sprays are depositing residue in the neighboring residential areas. The plumes of mist on a still morning can be observed for 2-3 miles up Lobo Canyon, have been observed crossing the saddle on Grants Mesa into the Northern portion of Grants and to Western New Mexico State Prison.

   We therefore request that pressure sprays not be used on any evaporation pond where contaminants are to be controlled and collected from polluted contaminated waters.

2. Pond size: The H.M.C. site desires to treat 1,166,000 gallons per day of water removed from the contaminated aquifers on this site.

Based on this quantity of 1,166,000 gal/day divided by 1,440 min. =810 gal/min. We offer the following for consideration.
The reverse osmosis plant as per the 5 yr. plan treats 256 gal/min. 810-256=554 gal/min to be evaporated in the ponds.

Based on an average evaporation rate for this area of New Mexico of 51" per year obtained from, Mr. Terry Fletcher Project Manager of Rio Algom Remediation in Ambrosia Lake,it would require 210.25 acres of pond area to accomplish this goal. You are proposing a total pond area of approximately 54 acres. This is not adequate to handle the needed evaporation for this project at the desired rate. The pond area should be increased by 150 acres to treat the desired quantity of water and to collect the residue in the ponds

Note: We do not consider the use of irrigation as a viable option for clean-up. NRC is using the soils as a filter which results in the pollution being stored again above the alluvial to be released in time back into the water.

3. If the contaminated inflow from the Ambrosia Lake area is added to this, what you are proposing is absurdly inadequate.

4. We estimate the alluvial inflow into the H.M.C. site to be in excess of 1,500,000 gal/day or 1042 gal/min. Based on 51 in/yr. evaporation rate, one acre of pond area yields 2.635 gal/min. 1,042 gal/min divided by 2.635 = 397 additional acres of pond area to treat this inflow.

5. The total area of contaminated water at the present H.M.C. site covers in excess of seven sections of land. This equals 4,480 acres. It has been determined that the alluvial plus at least three Chinle Aquifers are contaminated. Each of these aquifers are a minimum of 20 feet in thickness for a total thickness of 80 +feet. Use 80 ft. thickness of water column. One acre foot = 325,829 gal X 80 ft. thickness yields 26,066,304 gal/acre to be treated. 26,066,304 gal/acre divided by 1,166,000 gal/day treatment will require 22.36 days of capacity to treat 1 acre of total aquifers. Therefore, 4,480 acres that need treatment will require 100,173 days to treat all the water that is contaminated. This will require 274 ½ years to clean-up at the projected rate.

6. Since mining and mine pumping started in Ambrosia Lake 52 years ago, this contamination has spread in excess of 19 miles to the Village of Milan city limits. This yields an advance rate of 2.74 years per mile of advance. Based on this rate, the contamination will be advanced to the Rio Grande River before this site is cleaned-up.

7. We have not been able to find a water balance calculation for either of the two mills on this site. Would you please furnish us with a water balance chart for this site A.S.A.P.

8. We also strongly advise that the proposed pond and any future evaporation ponds be constructed on a location that is not directly above any portion of the alluvial formation that is saturated.

9. We recommend that additional injection-collection operations be designed and implemented at locations to be determined above the Homestake, site up the San Mateo drainage and the Arroyo De Puerto drainage. This should greatly enhance the rate of remediation of these aquifers to a level of contamination that is acceptable for domestic use.

Sincerely

Milton Head

Milton Head
President
Bluewater Valley Downstream Alliance

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