Exhaust Shaft - Water and Lead

Kent Hunter
Carlsbad Area Office
July 24, 1996
Water Sources

- Condensation
- Liner Leakage
Condensation

- Can produce large quantities but only during summer when relative humidity is high.
- Intake air contribution may reach 75% or more of water introduced when surface relative humidity is high, depending on amount of diesel equipment in use.
Liner Leakage

- Small, consistent flow first noted May, 1995. It may not reach shaft bottom except when ventilation flow rate is low or condensation rate is high.
- Leakage is technically insignificant.
- Ventilation reduced on weekends starting October 1994.
Liner Leakage

- Evaluating possible leakage from domestic and fire water systems.
- Precipitation infiltration and establishment of local hydrologic equilibrium. Large infiltration areas available in immediate vicinity.
Liner Leakage

- Muck at base of Exhaust Shaft removed and analyzed on 3/1/96.
- Catch basin installed on 3/12/96
Lead

- First noted any lead - August, 1993
- First reached maximum concentration of contaminants for the hazardous characteristics in June, 1995, according to the RCRA Standard (40 CFR 261.24).
Disposal of Brine

- Commercially disposed of at a permitted Treatment Storage Disposal Facility (TSDF) located at Deep Water, New Jersey.
Lead Sources

- Construction Materials (e.g. lead wool).
- Lead as impurity in galvanizing zinc on chain link mesh used for support.

Probably galvanizing due to high Zinc as well as Lead. Taking mesh samples for analysis and corrosion (leachate) tests.
MARKER BED IS 4'-5' BELOW THE FLOOR AND 1'-2' THICK. BOREHOLES WERE DRILLED IN 1993 TO DEWATER. ORIGINAL BOREHOLE DEPTHS WERE 6'-0" DEPTH MEASUREMENTS RECENTLY TAKEN BY WDO ENGINEERING.

S400 Boreholes