Nevada Site Specific Advisory Board

Industrial Sites Committee
Soils Committee

Nevada Support Facility
232 Energy Way, North Las Vegas, NV
3:00 p.m. – December 13, 2010

Meeting Minutes

Industrial Sites Members Present:	Robert Gamble (Nye County), John McGrail, Michael Moore, Kelly Doeller (for Helen Neill, UNLV), Michael Voegele, Jim Weeks
Industrial Sites Members Absent:	Kathleen Bienenstein, Phil Klevorick (Clark County), Harry Mortenson
Soils Members Present:	Robert Gamble (Nye County), Donna Hruska, John McGrail, Michael Moore, Kelly Doeller (for Helen Neill, UNLV), Michael Voegele, Walt Wegst
Soils Members Absent:	Kathleen Bienenstein, Robert Johnson
U.S. Dept. of Energy (DOE):	Rob Boehlecke, Kevin Cabble, Cindy Lockwood (Acting DDFO)
Navarro-Intera:	Lynn Kidman, Mark Krauss, Pat Matthews
State of Nevada Division of Environmental Protection:	Jeff MacDougall
Facilitator:	Denise Rupp, Navarro Research & Engineering, Inc.

Rob Boehlecke, Environmental Restoration Federal Project Director, briefed the Committee in response to questions asked at their November 2, 2010 meeting:

Corrective Action Unit (CAU) 547

- *Are there examples of geotextile material in place?*
  - Examples of the "cellular confinement system" were provided including the Moon Creek Reclamation Project, Idaho Panhandle National Forest, the Jefferson County Solid Waste Transfer Site, Bessemer, Alabama, and a BNSF Railway embankment, Castle Rock, Washington
- *What is the estimate for rate of decomposition of the steel pipe if no action is taken?*
  - Atmospheric corrosion rates in rural, arid setting are estimated at 0.18 mils/year
  - Soil corrosion rates range from 0.6 to 1.4 mils/year
  - Based on atmospheric corrosion rate – 1,316 years to fail
  - Based on soil corrosion rate – 169 years to fail

- *Would a crimper/cutter mounted on a bobcat work to cut the pipe?*
  - Would work best if the internal radioactive material were fixed to the interior of the pipe prior to cutting
  - requires more complex, larger glovebox configuration
  - less practical if a large number of cuts must be made
- *What is being done at other sites across the DOE complex?*
  Transuranic (TRU) waste has been disposed at various sites across the complex:
  - Idaho National Laboratory – disposed in unlined pits, trenches and soil vaults prior to 1970 with additional surface barrier
  - Oak Ridge – disposed in landfills, trenches, liquid waste tanks and piping, surface structures, and impoundments prior to 1970 with additional hydraulic isolation, in situ vitrification, monitoring, and land use controls
  - Savannah River Site – disposed in earthen trenches prior to 1970 with additional cover system, intruder barriers, and institutional controls
  - Hanford – disposed in trenches prior to 1970 with cleanup evaluation still in process
  - Los Alamos National Laboratory – disposed in four locations on 85 acres with site investigations underway and cleanup to be complete by 2015
- *What are the closure scenarios?*
  - Clean Closure
    - Removal of all piping at or above ground surface
    - Use restrictions, access controls, and monitoring required for remaining contaminated sub-surface features
  - Closure in Place
    - Geotextile soil cover in addition to existing soil cover over entire piping lengths
    - Boreholes and other subsurface structures left in place
    - Use restrictions, enhanced physical barriers, and enhanced monitoring required
- *What was the result of the risk evaluation done for the CAU 547 closure alternatives?*
  - Closure in Place with Soil Covering and Use Restriction
    - No additional radiological dose
    - Physical hazards associated with transporting soil and barriers
    - Risk related to number of work hours (~10,400)
  - Clean Closure
    - Additional radiological dose
    - Physical hazards associated with heavy equipment, power tools, and performing operations with personal protective equipment/clothing
    - Risks to site workers, vehicle operators, and general public related to excavation, preparation, and transportation
    - Risk related to number of work hours (~64,600)
- *What are the cost estimates for the closure scenarios?*
  - Closure in Place ~$2-3 M
    Monitoring (no air) ~$80 K/year
  - Clean Closure ~30-35 M
    Monitoring/Maintenance ~$28 K/year
  - DOE recommended alternative is Closure in Place with soil covering, enhanced physical controls and user restriction
    - Lowest risk to current site workers and public
    - Risk to future site workers limited as area not amenable to future industrial use
    - Consistent with past practices
    - Can be safely completed with limited future worker exposure
    - Clean closure presents minimal gain while potentially exposing workers to uptake of radioactive material

CAU 566 (rail cars)

- *What are the estimated costs associated with the alternatives for the disposition of the locomotives at the Engine Maintenance Assembly and Disassembly facility?*
  - Leave in Place ~$100 K
  - Dispose Onsite ~$300-400 K
- *What were the costs associated with the transfer of the small locomotive to the museum?*
  - Decontamination and release ~$64 K
- *How long did it take the museum to get the small locomotive transferred once it was signed over?*
  - 11 months from when museum requested transfer to locomotive release
- *How is property released?*
  - Property is designated as "available for release"
  - Radiological release surveys performed as required
  - Title transferred to State of Nevada then to receiving entity

Soils

- *What are the assumptions for each exposure scenario?*
  - Industrial Area Exposure Assumptions (2,250 hours/year)
    - 261 possible working days/year
    - 26 non-working alternate Fridays
    - 10 days vacation
    - 225 10-hour days per year
  - Remote Work Area Exposure Assumptions (336 hours/year)
    - Eight hours per day for 42 days per year
  - Occasional Use Area Exposure Assumptions (80 hours/year)
    - Eight hours per day for 20 days per year
- *Can you provide additional discussion on the corrective action scoring?*
  - Simplified relative scoring method to compare options
  - Same number of ranking points as options being reviewed
  - Higher score more desirable, but preferred option may not be the highest score
  - Five items considered as identified by Environmental Protection Agency for scoring
- *What are the costs for the closure alternatives for CAU 372?*
  - Closure in Place ~$40 K
    Monitoring (no air) ~$5 K/year
  - Clean Closure ~$110 M

Record Retention

- *What record retention policies are used for Use Restrictions (UR)?*
  - URs are held under a Real Estate Operating Permit and Facility Information Management System
  - considered "permanent records" and include disposal/cleanup records, designation/means of disposal records and waste disposal characterizations/records

Mr. Boehlecke went on to provide additional clarification in response to Committee questions/comments:

CAU 547

- Pipes have been there 47 years
- Corrosion rates for welds is not known
- A method for fixing radioactive material to the interior of the pipe must meet Waste Isolation Pilot Plant (WIPP) requirement that inside of contaminated pipes be filmed before shipping and must ensure the least amount of dispersion of contaminant pushed through the piping as a result of installing the fixative
- Clean Closure does not remove all piping; subsurface piping and structures become a source term for the Underground Test Area program
- Exposure risk is from acute contact (inhalation and ingestion)
- Different sites within the CAU may have different closure recommendations

- With Clean Closure there are additional risks to the public with transport to WIPP
- Although not required, air monitoring system is in place throughout the NNSS
- Air monitoring stations in the immediate vicinity of the Clean Slates II site at Tonopah Test Range (a site with surface plutonium contamination) have not shown air contamination
- Flyovers have not shown much migration of surface plutonium over the years
- Closure cost estimates are based on a Category 3 nuclear facility
- The Clean Closure costs do not include additional potential health impact costs

CAU 566 (rail cars)
- While not placed on EBay, numerous train museums were contacted via internet regarding interest
- Rail access is a major barrier to outside interest in the rail cars

Soils
- The Occasional Use Area Exposure is based on a military exercise scenario
- Clean Closure would require the removal, transportation, and disposal of approximately seven million cubic feet of soil

Records
- Actual records are maintained by DOE
- Records are stored at the Nevada Support Facility, in off-site storage, and at the National Archives

Industrial Sites Committee

Member Michael Voegele acted as Chair in the absence of Kathy Bienenstein.

After discussion, the Committee agreed to a recommendation of closure in place. Acting Chair Voegele will develop a draft recommendation for CAU 547 to include cost considerations and worker safety. In addition, the recommendation will address concern for soil cover stability on the crater slope wall at the Player site. The draft will be sent to the NSSAB office and distributed to the Committee for comment. The draft recommendation will be presented at the January 12, 2011 Full Board meeting for consideration.

CAU 547 is Work Plan Item 3 and is due January 2011.

It was agreed a recommendation regarding CAU 566 (rail cars) would be addressed at the next Industrial Sites Committee meeting to be scheduled prior to the February 16, 2011 Full Board meeting. CAU 566 is Work Plan Item 5 and is due March 2011.

Soils Committee

After discussion, the Committee agreed to a recommendation of closure in place with use restrictions. Chair John McGrail will develop a draft recommendation for CAU 372 similar to the NSSAB's recommendation regarding CAU 371 to include the closure recommendation, comments regarding cost, and worker standard application. The draft will be sent to the NSSAB office and distributed to the Committee for comment. The draft recommendation will be presented at the January 12, 2011 Full Board meeting for consideration.

The recommendation on CAU 372 is part of Work Plan Item 2b and is due January 2011.

It was agreed a recommendation regarding CAU 374 would not be developed until closure cost figures were received from DOE. CAU 374 is also part of Work Plan Item 2b with a revised due date of February 2011.

The combined Industrial Sites/Soils Committee meeting adjourned at 6:00 p.m.