



**Stewardship Committee Meeting Minutes
Tuesday, March 19, 2013, 5:30 p.m.
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Committee Members Present

David Martin
Fay Martin, Vice Chair
Norman Mulvenon
Lorene Sigal

Absent

Darryl Bonner
Donna Campbell
Susan Gawarecki
Lisa Hagy
Roger Macklin
Corkie Staley, Chair
Scott Stout
Curt Walker

Others Present

Sally Brown, RSI
Jason Darby, Department of Energy Oak Ridge
Office (DOE ORO)
Sid Garland, RSI
Spencer Gross, ORSSAB support office
Dick Ketelle, UCOR
Lynn Sims, UCOR/RSI

Report on the Annual Remediation Effectiveness Report

Ms. Sims began the presentation on the 2013 Remediation Effectiveness Report (RER) explaining that the purpose of the RER is to determine the effectiveness of remedial actions in achieving a stated goal and compliance with long-term stewardship requirements on the Oak Ridge Reservation.

The RER is unique to Oak Ridge as it is part of the Oak Ridge Federal Facility Agreement.

Ms. Sims explained the difference between the RER and the Five Year Review (FYR). The FYR is a requirement of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) National Contingency Plan for all sites where waste is left in place above unlimited use/unrestricted exposure. The purpose is to evaluate implementation and performance of a remedy to determine if it remains protective of human health and the environment (Attachment 1, page 3).

The FYR answers three primary questions:

1. Is the remedy functioning as intended?
2. Are assumptions used at the time of the remedy still valid?
3. Has other information come to light that calls into question the protectiveness of the remedy?

The FYR results in protectiveness statements, issues, recommendations, and actions. The FYR recommendations are tracked by EPA in a CERCLA database.

Ms. Sims said EPA looks at protectiveness statements. The statements note that a remedy is protective; will be protective if allowed to remain in place; is protective; or will be deferred if something has happened that may affect the outcome.

Ms. Sims reviewed the public involvement elements in both the RER and FYR (Attachment 1, page 5).

The Long-term Stewardship Verification Results (Attachment 1, page 6) has been part of the RER since 2006. An appendix to track slab stewardship requirements has been added. Ms. Brown explained it was added because of the number of discrepancies in slab monitoring. She said decontamination and decommissioning documents, remedial action reports, and phased construction completion reports were examined to try to determine inconsistencies in monitoring requirements between the documents.

Ms. Sims concluded her part of the presentation by saying no new recommendations were identified for tracking stewardship activities.

Mr. Ketelle reviewed the status of remedial actions at several locations on and off the Oak Ridge Reservation (Attachment 1, page 8). He said while FY 2011 was a busy one for tearing things down, 2012 was a year of catching up on paperwork related to demolition work.

He first showed a chart of rainfall amounts in the area from 2001 to 2012 (Attachment 1, page 9). During the last several years rainfall has been above average, which leads to increases in discharges of contaminants.

The list of actions taken in FY 2012 for Upper East Fork Poplar Creek (UEFPC) is noted on page 10 of Attachment 1. A map of UEFPC area is on page 10. The map indicates various types of actions that have been completed, are underway, or will be completed, sampling locations, the locations of the Alpha and Beta buildings at Y-12 National Security Complex and the related contaminant plumes. The chart on page 12 shows mercury concentrations and changes in flux from 2000 to 2012 at surface water monitoring Station 17 on the east end of Y-12 before UEFPC leaves the site. Concentration and flux tend to follow rainfall amounts. Mr. Ketelle noted that from the time the West End Mercury Area mercury reduction project began in 2011 and ended in 2012, the amount of mercury flux has gone down, but the concentrations of mercury have not.

The map on page 13 shows the East End Volatile Organic Compound Plume at Y-12. Mr. Ketelle said the sources of the plume are tetrachloroethylene and trichloroethylene that are seeping into a 400-foot extraction well. Pump and treat activities continue at the plume site, which has contained the plume and is protecting offsite groundwater. Mr. Ketelle said groundwater contaminants are monitored throughout the plume area and are below drinking water standards.

Mr. Ketelle showed a map of Bear Creek Valley (Attachment 1, page 14). He explained that Zone 3 is the waste disposal area. Zone 1 has been designated for unrestricted use, and Zone 2 is a buffer between the two. There are a number of tributaries from the north that drain into Bear Creek. There are several monitoring points along the creek.

Uranium is the primary contaminant of concern for Bear Creek. The chart on page 15 shows that uranium flux closely follows rainfall amounts. Uranium flux goals were met six of 11 years at monitoring point BCK 12.34 at the east end of Zone 3. Flux goals have never been met at BCK 9.2 at the division between Zones 2 and 3. As the chart indicates higher rainfall amounts cause increases in uranium flux particularly in the west end of Bear Creek Valley.

Mr. Ketelle said Bear Creek Burial Grounds, which contains about 40 million pounds of depleted uranium, is an area where remedial actions are needed to slow uranium discharges. Mr. Darby said an attempt was made several years ago to develop a record of decision to remediate the burial grounds but DOE, EPA, and the Tennessee Department of Environment and Conservation were unable to come to an agreement.

The chart on page 16 of Attachment 1 shows a breakdown of areas contributing contaminants to Bear Creek.

Page 17 of Attachment 1 is a list of activities completed in FY 2012 at East Tennessee Technology Park.

Mr. Martin asked if chromium levels were coming down in Mitchell Branch. Mr. Kettle said levels had dropped significantly and continue to decline gradually. Mr. Martin asked about the source. Mr. Kettle said a lot of work had been done to find the source and it seems to come from bedrock. He said the original source could be the K-1420 Building, which used sump pumps containing chromium to pump groundwater from under the building. He said that is only a theory.

The maps on page 18 show parcels in Zones 1 and 2 at ETTP and the status of characterization or remediation for each parcel. Zone 2 is the main industrial area of ETTP; Zone 1 mostly surrounds Zone 2.

Page 19 of Attachment 1 is a list of activities completed in Bethel Valley during FY 2012. Mr. Kettle said the infusion of Recovery Act money in 2009 helped complete a lot of work. The map on page 20 shows surface water monitoring locations in Bethel Valley. One of the major accomplishments was the removal and disposition of Tank W-1A.

Mr. Kettle said groundwater monitoring is being done around Solid Waste Storage Area 3 (SWSA). He said there has been a significant decrease in strontium-90 on the east side of SWSA 3.

The charts on page 21 of Attachment 1 show levels of mercury recorded over the years in White Oak Creek and in fish tissue. Mr. Kettle said mercury in fish has dropped below 3 parts per billion, which is the limit set by EPA. He pointed out that no one is catching and eating fish from White Oak Creek, but that the EPA limit was a goal to attain.

Page 23 of Attachment 1 is a list of actions completed in FY 2012 in Melton Valley. The map on page 24 shows surface water monitoring locations in Melton Valley.

The charts on page 25 show sampling results for cesium, strontium, and tritium at White Oak Dam. Mr. Kettle said a number of goals had been met even before remediation of Melton Valley was finished in 2006.

Mr. Kettle reviewed Melton Valley exit pathways and offsite monitoring (Attachment 1, page 26). Monitoring wells were installed on the west side of the Clinch River when contaminants were detected in exit pathway wells on the east side of the river in Melton Valley. Monitoring continues at 16 offsite DOE-built wells and seven offsite residential wells.

Mr. Kettle reviewed some offsite activities (Attachment 1, page 27). Mercury concentrations in fish in Lower EFPC continue to exceed EPA criteria.

PCBs in fish in Lower Watts Bar Reservoir/Clinch River/Poplar Creek continue to trend down. Mercury in Lower Watts Bar fish is below EPA criteria.

Page 28 of Attachment 1 indicates continuing issues noted in the RER. A new issue identified in FY 2012 was performance deterioration noted in piezometer 4544 at SWSA 4 in Melton Valley that is used to monitor water level fluctuations inside the capped area. Its behavior is a reflection of the effectiveness of the Melton Valley remedy at SWSA 4. Since completion of the SWSA 4 capping project the groundwater level fluctuations in 4544 have been very small. During September 2012

there was a rapid groundwater level rise of several feet in the well following intense rainfall as a tropical storm system moved northward across East Tennessee. The groundwater gradually receded in the well over several days and remained low until December. In December 2012 there was another water level spike in the piezometer. This was identified as a new issue in the 2013 RER because this well behavior is indicative of a problem with the cap and/or the completion of the well through the cap. Mr. Kettle said work is being done to find a flaw in a cap near the well. He said that while it is not desirable to have a leak in a facility cap, the detection of the leak through the monitoring approach is considered a success. If the defect in the cap is discovered an action will be taken to repair it. In the meantime monitoring of the groundwater level in well 4544 will continue.

The RER is expected to be released to the public within a week of this meeting. Comments on the RER are due July 1, 2013.

Discussion of Possible Recommendation on the Report

When the RER is received and distributed to interested committee members, comments will be sent to staff who will compile them to provide to Mr. Darby. There was some discussion about sending a more formal set of comments through ORSSAB at the May or June meeting.

Since there was a low number of committee members present at this meeting there was discussion about having the presenters do a similar report to the full board. Mr. Martin said he would talk with Dave Adler about a presentation, if not for this RER, then for subsequent years.

Discuss recommendation on re-stating a previous recommendation for a fact sheet on site transition at ongoing mission sites

Because of the low committee turnout discussion of the recommendations was tabled until the April meeting.

Discuss recommendation on test site transfer on the Oak Ridge Reservation

Tabled.

Discuss recommendation for a permanent DOE ORO point of contact for stewardship

Tabled.

Provide comments on Public Involvement Plan

There were no comments on the Public Involvement Plan provided at this meeting, however members could provide comments to staff by March 21.

Review Action Items

Open

1. Mr. Martin will check on having a presentation done on the Land Use Manager at either a bi-monthly EM SSAB Chairs' conference call or at the Fall EM SSAB Chairs' meeting. **Status.** Mr. Martin reported that the Chairs' meeting will be a webinar instead of a face-to-face meeting in Hanford, Wash., as was originally planned. He said he would try to bring up having a future presentation on the Land Use Manager at that time.
2. Mr. Martin will discuss with Dave Adler about having an RER presentation for the full board.

The meeting adjourned at 6:55 p.m.

Attachments (1) are available through the ORSSAB support office.

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