

**U.S. Army Corps of Engineers – New England District
Cold Regions Research and Engineering Laboratory (CRREL)
Restoration Advisory Board**

Minutes of Meeting #9

**Wednesday, April 8, 2015
Richmond Middle School (RMS) Library**

Attending: Darrell Moore, USACE-NAE, Co-Chair
Tim McNamara, Dartmouth College, Community Co-Chair
Katherine Connolly, Town of Hanover
Jonathan Brush, SAU 70 School District
Roelof Versteeg, Citizen Volunteer
Steve Gaughan, Citizen Volunteer, CRREL employee
Ken Richards, NHDES
Robin Mongeon, NHDES
Rod Rustad, Amec Foster Wheeler
Scott Calkin, Amec Foster Wheeler
Jeff Pickett Amec Foster Wheeler
Larry Cain, USACE-NAE
Larry Danyluk, ERDC-CRREL
Dan Groher, USAEC- NAE
Bethany Davidson, US Army Public Health Command
Brandon Sprague, USACE-NAE
Bryan Ambrust, ERDC-CRREL
Sally Shoop, Researcher CRREL employee
Jay Clausen, Researcher CRREL employee

Agenda:

1. Welcome and introductions
2. Adopt minutes of Meeting #8
3. Presentation on Peer Review II – Sally Shoop and Jay Clausen
4. Update on other technical issues
5. Update on Remedial Investigation (RI) Report
6. Next meeting: Agenda, Date and Location
7. Comments & Questions from the public
8. Adjourn

Discussions:

1. Chair, Mr. Darrell Moore called the meeting to order with a welcoming statement and introductions. Mr. Jay Clausen and Ms. Sally Shoop were introduced as CRREL employee representatives for the Peer Review process.
2. Mr. Moore asked for comments on November 21, 2014 RAB minutes.

No comments were offered, and the RAB members voted to accept the last meeting minutes from February 4, 2015.

3. Mr. Clausen, Ms. Shoop and Mr. Moore outlined the Peer Review panel members, including:
- People from industry
 - Toxicologists
 - Experts on TCE & Vapor Intrusion (VI)
 - Subject Matter Experts from ERDC, CRREL, NAE and Contractors

The peer review process was a three day event at CRREL to review efforts to address VI issues at the CRREL site. The Panel reviewed the Administrative Record. NAE presented site history, activities, data, and wide variety of information. Panel discussion covered the work that has been done at the site, but focused mostly on VI. A list of 34 questions from employees will be addressed with responses provided by April 14, 2015.

Results of Peer Review were presented as PowerPoint slides (attached). Jay indicated there were 109 recommendations in five areas:

Communication:

1. Health risk communication
2. Need for CRREL to have a clear lead individual on the installation remediation program (IRP)
3. Need to develop written policy on communicating VI data
4. Recommendation to provide slides of each presentation to CRREL employees
5. Summary of weekly calls and track the outputs and accomplishments

Human Health Effects from TCE:

1. Vapor exposures
2. Communicate results
3. Healthmate performance – testing and data
4. Health study of employees by health experts
5. Provide TCE history to new employees
6. Develop Health Risk communication to employees through a medical professional
7. Routine monitoring of indoor air at Child Development Center, Main Lab and other buildings.

TCE Project Team Organization

1. Need IRP manager at CRREL
2. Need to expand the team

Conceptual Site Model

1. Need to develop a building site conceptual model for VI
2. How does TCE get into the building air
3. How does TCE move once it is in the building
4. Use terminology consistently

Overall conclusion is that the investigation is being conducted well and is on the right technical path.

RAB questions and discussion followed the Peer Review presentation with the following points:

- RAB mission is focused on the overall site, not just VI
- Under CERCLA and within the RI, the RAB is interested in an “outside in” vs “inside out” focus.
- Regulatory agencies are focused on vapors coming into the buildings from outside
- Much of the technical information presented to the Panel had already been presented and discussed with the RAB, but not a conceptual site model for the CRREL building

4. Update on other technical issues

On February 13th a TCE Incident occurred in the Main Lab. On Friday morning, the Main Lab was evacuated when Amec Foster Wheeler technicians recorded high TCE levels. The high levels were limited in area near where contractors were working in the Multipurpose Room. Elevated levels dropped quickly, leading to the conclusion that the TCE may have been released from a product or work activity.

On February 20th, a similar event occurred and the source of the TCE was identified as an aerosol solvent containing 79% TCE and CO₂ brought on site by the contractor.

Soil Vapor Extraction (SVE) System Update- The SVE Pilot has not been running since November due to carbon exhaustion immediately following startup. Over the winter, modifications to the SVE Pilot approach were made. It is anticipated that the SVE Pilot will be re-started in late May and run for several months including a rebound test. Pilot test results are anticipated to be evaluated by end of August or early September.

5. Remedial Investigation (RI) Report

The RI report is expected in draft to the Corps in about 4 months. We expect there to be more comments from NHDES about doing some additional bedrock groundwater sampling in Vermont and potentially sampling river sediments by vibra core methods.

6. **Next Meeting Date: June 3, 2015 at 4pm**, pending confirmation from the SAU

Following the June meeting the RAB will suspend meeting through the summer months and reconvene in September 2015

Next agenda/action Items:

- Update on progress from Peer Review follow up actions
- Update on SVE pilot
- Review schedule and what actions may be forth coming
- Review the RI outline

Meeting adjourned at approximately 5:30 pm.