

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

Minutes of Meeting #8 Approved

**Wednesday, February 4, 2014
Richmond Middle School (RMS) Library**

Attending: Tim McNamara, Dartmouth College, Community Co-Chair
Darrell Moore, USACE-NAE, Co-Chair
Katherine Connolly, Town of Hanover
Kristine McDevitt, Citizen Volunteer
Steve Gaughan, Citizen Volunteer, CRREL employee
Ken Richards, NHDES
Robin Mongeon, NHDES
Rod Rustad, Amec Foster Wheeler
Scott Calkin, Amec Foster Wheeler
David Van Wie, Amec Foster Wheeler
Larry Cain, USACE-NAE
Larry Danyluk, ERDC-CRREL

Agenda:

1. Welcome and introductions
2. Adopt minutes of Meeting #7
3. Update on Richmond Middle School sampling
4. Update on CRREL building investigations
5. Peer review (postponed) – overview of process and questions
6. Update on soil vapor extraction pilot project (if time available)
7. Next meeting: Agenda, Date and Location
8. Comments & Questions from the public
9. Adjourn

Discussions:

1. Chair, Tim McNamara called the meeting to order with welcome and Introductions. Darrell Moore noted that the Peer Review had been postponed due to weather, so the discussion will cover the format for next week, rather than any findings or recommendations.
2. Mr. McNamara asked for comments on November 21, 2014 RAB minutes. No comments were offered, and RAB voted to accept the last meeting minutes.
3. Richmond Middle School (RMS) sampling update

Scott Calkin of Amec Foster Wheeler described the RMS sampling events from December 2014 through January 2015. Sampling at the school was scheduled to be conducted during winter break on December 29 with “BottleVacs”. On December 30th, the technicians found

contamination in the equipment blanks so the results were determined to be invalid. A resampling was scheduled for January 19th over the holiday weekend using Summa Canisters. A quick turnaround of results by the lab on January 23 indicated elevated concentrations in the cafeteria, along with fuel related compounds not observed previously at CRREL. The sampling locations were retested with the Hapsite (grab samples) and all locations were non-detect. On January 24th, a complete resampling with the Summa Canisters found non-detect to very low/background levels, including sub-slab samples. Further inquiry and search for on-site sources determined that the cafeteria had new equipment (an air conditioning unit and a salad bar) delivered that was still wrapped in shrink wrap. The elevated sample result was consistent with possible compounds in the new equipment from metal cleaning, although this could not be verified. The subsequent sampling led to the conclusion that the elevated levels in the cafeteria were an anomaly due to the interior source.

Kristin McDevitt noted that the communication from USACE and the school was timely and helpful. Mr. Moore noted that Dr. Bass was informed and proactive.

The discussion turned to the schedule for the next round of sampling. Mr. Moore and Mr. Calkin noted that USACE has agreed to sample 4 times per year, twice with Summa Canisters sent to the lab, and twice with the BottleVacs (using new or disposable next time) and the Hapsite. Due to the recent resampling, the next event will likely be during April vacation rather than February vacation. The RAB members discussed the schedule and endorsed the recommended delay to April.

Ken Richards noted that NHDES does not now require sampling at the school. They consider the USACE sampling to be extra for good community relations, and he doesn't want people to think that the additional sampling is because there is a heightened concern, because the results indicate that there is no reason for further sampling. In fact, the anomalous result shows that the extra sampling brings a risk of a false alarm from other sources or an error.

4. Update on work at CRREL

Scott Calkin and Rod Rustad of Amec Foster Wheeler summarized recent work at CRREL to investigate the legacy -73° line that runs through the Main Lab. The line was purged many years ago to convert from TCE refrigerant to glycol, but apparently the glycol is still contaminated with TCE. Now that the sub-slab depressurization systems have mitigated other vapor infiltration pathways, the legacy line became apparent as a source. USACE and another contractor are exploring options to clean the line to remove TCE.

Mr. Calkin also discussed work done to eliminate pathways from the subsurface stormsewer and sanitary sewer to the roof vents. A pilot installation of a one way "duck valve" (allowing stormwater to drain down, but preventing vapors to rise up) will allow sampling both above and below the valve to see if TCE vapors are blocked.

5. Discussion of Pending Peer Review

Mr. Moore discussed the scope of the planned peer review and the team of experts who are expected to participate. A previous peer review was helpful in generating some new ideas

for the investigation. The peer review next week will evaluate the approaches and methods used, and make recommendations for improvement.

6. Soil Vapor Extraction (SVE) Pilot Project

Mr. Calkin and Mr. Rustad presented the location of the SVE wells and the preliminary results of the Pneulog sampling data. The SVE pilot test was intended to be conducted over 30 days, but the recovery of TCE was much higher than expected, so the carbon filters were exhausted in just a few days. The test was a success in showing that the Site Conceptual Model is supported by the results, and the SVE is a promising alternative for achieving a reduction in the mass of TCE in the subsurface. The pilot system will need to be re-engineered to a large scale of recovery and is planned to be re-run for a 30 day period, possibly in February and March.

7. Next Meeting Date: April 8, 2015 at 4pm, pending confirmation from the school

Next agenda/action Items:

- Briefing on the Peer Review
- NHDES discussion of inside sources of contamination
- Update on further CRREL investigations
- Update on SVE pilot
- Review schedule and what actions may be forth coming

Meeting was adjourned at 5:40 pm.