

Minutes
Oversight Committee Meeting
December 10, 2008
Conductorlab Site, Groton, Massachusetts

Project Team Participants

Maria Kaoris – Honeywell
Kerry Tull – MACTEC
Jay Peters – MACTEC
Mike Scott – Nutter McClennen & Fish
Stewart Pearson –

Conductorlab Oversight Committee Members

Arthur Black (Chairperson)
Michelle Collette
Robert Hanninen
Kim Henry
Dave Hopper

1. Meeting Purpose

Provide a periodic update to the Committee on the status of the Site, including completed tasks and investigations, the proposed path forward and anticipated schedule for upcoming Site activities, and to solicit input from the Committee.

3. Discussion Topics

- **Update Since Last Meeting**
 - Met with various remediation vendors. (Shaw is no longer working on this project.)
 - Evaluated additional technologies.
 - Comprehensive groundwater sampling round. Average concentrations in the overburden are below groundwater cleanup standards, as are concentrations in off-property monitoring wells. Bedrock contamination is the focus of remaining cleanup at the Site.
 - Formulated full scale implementation plan.
 - Met with MassDEP (Mark Baldi of Central Region).

- **Remedial Approach**
 - Reduce average trichloroethylene (TCE) concentrations to below Upper Concentration Limits (UCLs) in bedrock. (Concentrations must meet UCLs in order to reach a Permanent Solution under the governing state regulations, the Massachusetts Contingency Plan.) Kim Henry asked whether the bedrock aquifer is classified GW-3 and Jay Peters confirmed that it is.
 - Perform Method 3 Risk Characterization. Arthur Blackman questioned whether reducing average concentrations to below the cleanup standards was

sufficiently protective of human health. Jay Peters explained that the Massachusetts Contingency Plan allows for averaging and that the cleanup standards are sufficiently conservative to allow for this averaging approach. Dave Hopper noted that the concept of risk-based cleanup had not been discussed by Honeywell in previous presentations to the committee.

- Determine need to remediate hexavalent chromium based on findings of Risk Characterization.
- In situ chemical oxidation (ISCO) has been selected as the remediation technology because it is effective for high contaminant concentrations and the reaction time is short compared to other technologies. ISCO will consist of an initial treatment with Fenton's reagent, followed by iron-catalyzed persulfate.

- **Remedy Implementation**

- MACTEC will team with ISCO vendor.
- MACTEC and ISCO vendor will refine the design for injecting the oxidants.
- Fracture pattern in the bedrock will be characterized to make sure that the oxidant can be successfully delivered to the contaminants.
- Remedy implementation will require multiple rounds of injection and interim monitoring.
- Groundwater treatment will be shutdown during remedy implementation to allow fracture characterization during non-pumping conditions and to minimize interference with ISCO. Groundwater treatment will be restarted if needed.
- Monitoring will be conducted after completion.

- **Remedy Development and Design**

- Three dimensional modeling will be performed to assist with the design.
- Additional wells and a trench will be installed for injecting the oxidant into the bedrock.
- Distribution of TCE and hexavalent chromium in the fracture network in the bedrock will be evaluated.
- Ability to deliver ISCO reagent to contaminants in the fracture network will be evaluated.

- **Measures of Success**

- The goal of ISCO is reduce contaminant concentrations such that the groundwater treatment system can be permanently turned off.
- Average contaminant concentrations must be reduced below UCLs in order to achieve a Permanent Solution under the Massachusetts Contingency Plan (Class A Response Action Outcome [RAO]).
- Allow future development and use of the property.

- **Next Steps**

- Work with ISCO vendor.
- Install additional injection points.
- Shutdown groundwater treatment system.

- Implement ISCO injections (mid to late 2009 into 2010).
- Monitoring (Four quarters of monitoring demonstrating contaminant concentrations below the cleanup goals would be necessary to achieve a Permanent Solution.)
- Submit RAO Statement to the MassDEP, once a Permanent Solution has been achieved. Arthur Blackman asked whether Honeywell maintains liability for the Site even after a Permanent Solution achieved. Mike Scott indicated that Honeywell would retain liability in accordance with the “joint and several liability” provisions of Chapter 21E.

3. Items Requested by the Committee

- Updated fact sheet.
- Summary report from Honeywell to assist the Conductorlab Oversight Committee in preparing its annual report for 2008.