Kickoff Call
Remedy Optimization & Validation of Bethpage OU-2, Site 1

Date: January 4, 2011 at 10am Pacific / 1pm Eastern

In Attendance:

- Karla Harre
- Arun Gavaskar
- Heather Rectanus
- Chuck Newell
- Mark Widdowson
- Paul Misut
- Rich Humann
- Lora Fly
- David Brayack
- Kent Smith
- Carol Stein
- Steve Sharf
- Josh Fortenberry

Agenda:

Welcome and introductions (Karla Harre)

- Before round table introductions, Karla explained the mission of the Naval Facilities Engineering command (NAVFAC) Engineering Service Center (ESC) (to provide technical support for the Navy's Environmental Restoration Program) as well as the Navy's history of convening independent review teams such as this one (15 years of experience in conducting independent site-specific reviews to evaluate and optimize remedies for Navy FECs).
- Conducted round table introductions. Team members provided their academic background, length of experience and roles for this effort.

Background – why we convened this expert team (Lora Fly)

- Typical Navy policy is to conduct internal optimization reviews throughout the environmental restoration process.
- Based on concerns raised by the local water districts, the Navy decided the time was right to conduct an independent optimization review to evaluate/optimize the remedy at OU 2, Site 1 and review the protectiveness of the remedy.

Site & remedy information (TetraTech)

- A PowerPoint® file (in PDF format) was provided to participants prior to the conference call and was presented during the call. It consisted of site overview, regulatory status, and a chronology of actions taken at the site.
- Key aspects of the site:
    - Multiple sources (Navy, Northup Grumman [NG], and Hooker Superfund Site)
    - Three main VOC plumes (Shallow, Eastern Deep, and Western Deep)
    - Complex hydrogeology including discontinuous clay units
    - NG production wells and subsequent groundwater reintroduction through recharge basins may have contributed to plume dispersion as well as drawing of Hooker/RUCO contamination into Navy property

    - Preferential flow paths may be present, but the sheer size of the impacted aquifer volume limits spatial understanding of plume architecture
    - Drinking water supply wells are impacted and require wellhead treatment
    - Access to off-site locations is problematic because of dense residential/commercial development of the land overlying the plume
    - A groundwater model was used in the past to predict fate and transport of VOC contamination and direct well head treatment planning
- Questions asked by participants during the presentations included:
    - How is the extracted groundwater treated to ensure well-head protection? Answer: air stripping.
    - Where is the extracted groundwater going from the on-site containment system (ONCT)? Answer: To the recharge basins
    - Was groundwater discharged to the recharge basin monitored for VOCs (assuming this is from the NG production wells)? If so, what was the permitted discharge concentration? Answer: Yes, groundwater was monitored. The maximum limit was 50 ppb of total VOCs.
    - How were the Vertical Profile Borings (VPBs) conducted? Answer: Starting at the water table, soil samples were taken every 50 ft until 200 ft bgs was reached, then samples were taken every 20 ft until Raritan clay was reached (typically 700 to 750 ft bgs).
    - Are hydrogeological and/or contaminant distribution cross-sections available? Answer: Work in progress.
    - Are potentiometeric surface maps generated? Answer: Yes, by NG.
    - What are the screened intervals of the monitoring wells and do they align with the production wells? Answer: The screened intervals vary across the site. The monitoring well screens are shorter, but generally match the screened intervals of production wells.

Pertinent documents/data to review (TetraTech)

- Site documentation is listed on the last page of the presentation
- A SharePoint site has been created to facilitate access to the documents.

Goals of the team (Arun Gavaskar)

- The goal of the Bethpage Review Team is to optimize the implementation of the groundwater remedy at the Bethpage site. The team will discuss and make recommendations on how best to evaluate (a) the effectiveness of previous and ongoing treatments and (b) the effectiveness of the current well network in monitoring the progress of the plume.
    - The Review Team will use a series of conference calls, a site visit, and a meeting to conduct its evaluation.
    - A draft report will be written and presented for review to the Ad-Hoc Members.
    - The report will document consensus conclusions and recommendations as well as points of disagreement. If technical opinions differ, both points of view will be presented in the report.
- A parallel review by EPA and USGS to evaluate the site groundwater model is currently underway. The goals of their review are to assess the applicability of the groundwater model in predicting arrival times of contamination at drinking water supply wells and to evaluate updates to the model for improving its predictability.
    - EPA does not think that the current model is adequate
    - USGS recently summarized their opinion of the model in a memo. Paul will check to see if this document can be shared with the group.

    - Arun commented that the charge of the Navy's review team is larger than the EPA/USGS mandate. For example, the Navy team will also review the monitoring network and its applicability.
- Steve Sharf commented that originally the water districts wanted total containment of the plume prior to it reaching water supply wells. However, most water districts now recognize that total containment is not feasible. Steve feels that groundwater modeling is a useful tool and the current model could be improved with additional inputs.
- Both Rich and Steve feel that it's very important for the core review team experts to independently review all the material and generate their own opinion.
- Lora reminded everyone that the focus of this team is to look at the current remedy and determine what improvements can be made to maintain protectiveness.
- Arun commented that he would like for Paul to act as a conduit between the core review team and the EPA/USGS team.
- Chuck inquired about what items should be read. Arun commented that typically the core team members review as many site documents as possible to learn about the site. During the document review, the core team members should make a list of questions/comments.

Roles & responsibilities (Arun Gavaskar/Karla Harre)

- Karla summarized the team's roles and responsibilities using an attachment provided with the meeting agenda.
- Arun charged the core review team with reviewing the site documents and generating a list of questions/comments/data gaps for the next conference call.

Schedule (Heather Rectanus)

- Given time constraints of the call, Karla also summarized the schedule as part of the roles and responsibilities.
- A tentative schedule was included in the agenda for further reference.

Summarize next steps and action items (Karla Harre)

- Document review and subsequent conference call are the next steps in January. The conference call is scheduled for Jan 21 at 10 am PST for the core review team.
- The Site Visit and Core Team Meetings will take place the second week of February.
    - Tuesday (Feb 8): Core team and ad-hoc committee members to tour site and discussion questions raised during the site visit
    - Wednesday (Feb 9): Core team to discuss and outline recommendations
    - Thursday (Feb 10): Core team to begin report drafting
- Karla will serve as main point of contact for team. Please direct all requests for information, data, etc. to Karla. She will disseminate as appropriate.
- Karla thanked everyone for participating in the team and is looking forward to working with everyone.