RESTORATION ADVISORY BOARD MEETING NAVAL WEAPONS INDUSTRIAL RESERVE PLANT (NWIRP), CALVERTON CALVERTON COMMUNITY CENTER CALVERTON, NEW YORK THURSDAY, APRIL 17, 2008

The twenty-sixth meeting of the Restoration Advisory Board (RAB) began at approximately 7:10 pm. Meeting attendees included representatives from the Navy (Lora Fly and Nina Johnson), New York State Department of Environmental Conservation (Henry Wilkie and Larry Rosenmann), RAB community members (Bill Gunther, Harry Histand, Ann Miloski, and Jean Mannhaupt), Peconic River Sportsman's Club (Tony Muratore and John Hall), New York State Department of Health (Jacquelyn Nealon and Renata Ockerby), Town of River Head representative (Chris Kempner), PRFRC (Bob Conklin), Suffolk County Department of Health Services (Andrew Rapiejko), Tetra Tech NUS, Inc. (David Brayack and Timothy Smith), and ECOR Solutions, Inc. (Bob Ingram, Al Taormina, Will Torres, and Matt Lapp), and TAPP Consultant (Frank Anastasi). The meeting sign-in sheet is provided as Attachment 1.

WELCOME AND AGENDA REVIEW

The Navy representative, Ms. Lora Fly, welcomed everyone to the RAB meeting and introduced herself as Susan Clarke's replacement. Ms. Fly then introduced the meeting agenda. The agenda for the meeting is included as Attachment 2. The presentations for the meeting are included as Attachments 3 and 4.

DISTRIBUTION AND APPROVAL OF MINUTES

Ms. Fly asked whether the RAB members received the November 2007 minutes, which were distributed in March 2008, and asked whether there were questions or comments on the minutes. Jean Mannhaupt (RAB member) asked if the information on Sites 2 and 6A/Southern Area activities, background, and analytes promised to SCDHS were received and if that information was sufficient. Mr. Rapiejko indicated that the information was received and was adequate. There were no other questions or comments, and the minutes for the November 2007 and August 2007 RAB meetings were approved.

TECHNICAL PROGRESS – GENERAL PROGRAM

Ms. Fly continued the meeting with a review of the Navy's program. The technical progress presentation handout is provided as Attachment 3.

Mr. Brayack (Tetra Tech) provided a general review of NWIRP Calverton activities, including the following:

- Full scale remediation is complete for Sites 1 and 9 and the property is transferred.
- Full scale remediation is under way for Site 7 (ECOR).
- Remedial Designs for soils are currently in progress for Sites 2, 6A, and 10B.

TECHNICAL PROGRESS – SITES 2 GROUNDWATER INVESTIGATION

Mr. Brayack presented the current status of the Site 2 groundwater investigation (pages 6 of the handout) and indicated that the investigation was in the Remedial Investigation/Feasibility Study stage. Mr. Brayack continued with a discussion on the planned Site 2 soil removal action (pages 7 through 9 of the handout). This action is an interim measure at the site to remove accessible contaminated soil that is acting as a continuing source of groundwater contamination. The removal action design is scheduled to be completed in April 2008. A public comment period for this action is scheduled for May 2008 and the design is anticipated to go to bid in Spring/Summer 2008. To conclude the discussion on Site 2, Mr. Brayack presented the January groundwater sampling results (page 10 of the handout).

Several questions were raised concerning the Site 2 groundwater sample results, including whether groundwater contamination had migrated to the golf course, south of Site 2. Other questions were raised regarding the presence of contamination underneath the concrete burn pad, if samples will be collected at the bottom of the proposed excavation, and if so would these results be made available to the public.

Mr. Brayack indicated that the primary residual groundwater contaminants at Site 2 are volatile organic compounds (VOCs) related to petroleum constituents and that the results would be published in an upcoming report. Mr. Brayack also indicated that the Navy has not been able to get access to the golf course to obtain samples. The golf course is reluctant to allow drill rigs on the fairways. Mr. Rapiejko indicated that the SCDHS has completed sampling groundwater on

the golf course property and that the results would be available soon. This data will be shared with the Navy and public. Mr. Brayack indicated that petroleum-related contamination and free product is expected to be present below the concrete burn area, and that samples would be collected to verify that the targeted contamination was removed prior to backfilling, and that these results would be made available to the public.

Mr. Rosenmann asked whether an oxygen releasing compound (ORC)-type chemical will be added to the excavation at Site 2 to address residual petroleum contamination. Mr. Brayack indicated that it should be added, but would need to check to confirm if it was included Engineering Evaluation/Cost Analysis (EE/CA) and design. [Note, a post-meeting check found that the addition of an ORC-type chemical was not addressed in the EE/CA. The EE/CA was not modified, but the design and public notice were modified to indicate the use of this chemical.]

Regarding the EE/CA public comment period, Ms. Fly asked if the state or community would like additional public notifications of the removal action other than newspapers, library, or radio. Mr. Henry Willkie indicated that this approach was adequate. No questions were raised by RAB members or other meeting participants.

TECHNICAL PROGRESS – SITES 6A AND 10B AND ONSITE SOUTHERN AREA GROUNDWATER INVESTIGATION AND STATEMENT OF BASIS

Mr. Brayack, presented the January 2008 groundwater results for Site 6A/10B and the Onsite Southern Area. Mr. Brayack indicated that current groundwater contaminant concentration at Site 6A do not indicate the presence of significant groundwater contamination. The rate at which contaminants are leaching from the soil and free product to groundwater appears to be balanced by natural attenuation processes. However, since there is still a layer of free product associated with sites 6A and 10B, an interim measures removal action is still going to be conducted to remove residual contamination.

The schedule for the interim removal action was questioned. The Navy indicated that the removal actions (one for Site 6A and one for Site 10B) are scheduled for Fiscal Years 2009 and 2010 and that the planning documents for the removal action are underway.

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TECHNICAL PROGRESS – OFFSITE SOUTHERN AREA FEASIBILITY STUDY

Mr. Brayack presented and discussed the January 2008 groundwater monitoring well installation program, sampling program, and sampling results for the Offsite Southern Area (illustrated on Slides 12 through 17) and indicated that the results presented in the handout are draft and final data will be published in an upcoming data report. Contamination was observed along the fence line. The contamination is where it was expected, and the concentrations are consistent with the results in down gradient wells. Another round of sampling is planned for this summer. Evaluation of this data will require several rounds of data over several years.

Following the presentation of the groundwater data a question and answer period was held on the offsite groundwater contamination plume. Results of the question and answer period identified the following:

- A community member expressed relief that the permanent monitoring wells have finally been installed in this area. The community has been asking for this information for years.
- Ms Jacquelyn Nealon (NYSDOH) questioned the status of a soil vapor intrusion investigations for the PRSC. NYSDEC indicated that they had coordinated with the Environmental Protection Agency (EPA) and evaluated potential soil vapor intrusion several years ago. It was concluded that because the contaminated groundwater was at depth and clean groundwater was present above the contaminated groundwater that soil vapor intrusion was not identified as a concern.
- The NYSDOH indicated that there was a site where a buffer of clean groundwater was present and sub slab soil vapor were detected. NYSDOH indicated that they would review the site data.
- The location and frequency of sampling in the Peconic River were questioned. Based on the discussion, it appears that there was confusion on the approach for evaluating potential impacts to the river. Some RAB members were under the impression that more samples would be collected along the entire stretch of the river. Mr. Brayack indicated that monitoring wells located adjacent to the river where the primary basis for evaluating the potential impact to the river and that only a limited number of surface water sample would be collected. Because of significant variation in data and inability to reproduce results, surface water samples are generally considered to be of limited value.

- If VOC concentrations within the wells located adjacent to the river show a trend of increasing concentrations, then the Navy would increase sample collection.
- When questioned on the progress for installing wells on the PRSC property, the Navy indicated that groundwater monitoring wells would likely be required. Originally it was planned to install these wells near the Pistol Range in a location where VOCs were previously detected. However, based on the concentration and location of VOCs detected at the fence line, another location may be considered. Mr. John Hall (PRSC) expressed a willingness to support the Navy in providing access.
- PRSC questioned the status of an invoice that was previously submitted for installation of carbon treatment on one of there wells. The Navy agreed to look into this.
- The quality of the water from the fire suppression well on the PRSC was questioned. The Navy indicated that this well had been sampled, but that the data was not yet available.

TECHNICAL PROGRESS – SITE 7 FUEL DEPOT AREA OPERATIONS

Mr. Will Torres with ECOR presented the progress of the Site 7 remediation system (Attachment 4). Mr. Torres indicated that the Air Sparge/Soil Vapor Extraction System has been reactivated following the winter shut down and presented the data collected to date. The following questions were raised on the Site 7 remediation system.

- Has the area been tested for chlorinated compounds? Mr. Torres indicated that based on historic data and site usage, petroleum-based VOCs and Freon are the only site concerns.
- What causes some compounds to achieve a non-detect and then re-appear at higher detections? Mr. Torres indicated that this observation can occur after a system has been shut down for a while and that this trend is an indication that treatment needs to continue.
- Is the mass removal to date hitting projected mass removal goals? Mr. Torres indicated that specific mass removal goals have not been established, but that a reduction in groundwater concentrations is being used to evaluate cleanup goals.
- Where is the groundwater divide in relation to Site 7? The groundwater divide is located approximately 100 feet north of the site.

Do we have recent data to show contamination is not moving vertically downward? Mr.
Brayack indicated that historic data did not show a vertical gradient and that there is no reason to suspect a vertical gradient at this time.

CLOSING REMARKS

Ms. Fly thanked Tetra Tech and ECOR for their presentations and asked if there were any questions or comments.

The SCDHS indicated that the Parachute School had contacted them concerning the collection of samples from their wells and asked the Navy if there was any concern with groundwater in this area. The Navy responded that there is no evidence of contamination in that area, but that this area was not specifically investigated.

With no other questions or comments Ms. Fly proposed that the next RAB meeting be held on July 31st 2008. This meeting date was agreed upon and the meeting was adjourned at approximately 9:10 pm.

ATTACHMENT 1

APRIL 17, 2008 RAB MEETING SIGN-IN SHEET

26th RAB Meeting for NWIRP Calverton April 17, 2008 Sign-In List

Name	Address (if interested in b	Address (if interested in being on mailing list)		How Did You Hear of Meeting?
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26th RAB Meeting for NWIRP Calverton April 17, 2008 Sign-In List

Name	Address (if interested in bei	ing on mailing list)	Organization	How Did You Hear of Meeting?
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ATTACHMENT 2

APRIL 17, 2008 RAB MEETING AGENDA

Agenda

Restoration Advisory Board Naval Weapons Industrial Reserve Plant Calverton

April 17, 2008 Calverton Community Center, Calverton NY 7:00 p.m.

> <u>Welcome and Agenda Review</u> Lora Fly, NAVFAC Mid-Atlantic

> > Distribution of Minutes All Members

<u>Community Update</u> Bill Gunther, RAB Co-chair

Technical Progress

General Program Lora Fly

Site 2 Groundwater Investigation David Brayack, Tetra Tech

Sites 6A and 10B and Southern Area Groundwater Investigation and Onsite Statement of Basis Dave Brayack

> Offsite Southern Area Feasibility Study Dave Brayack

Site 7 Fuel Depot Area Operation ECOR

> Closing Remarks Lora Fly

Presenters will be available after the program for questions.

ATTACHMENT 3

NAVY AND TETRA TECH NUS, INC. PRESENTATION



Restoration Advisory Board (RAB Meeting)

Naval Weapons Industrial Reserve Plant (NWIRP) Calverton, New York April 17, 2008

AGENDA



Agenda

Restoration Advisory Board Naval Weapons Industrial Reserve Plant Calverton

April 17, 2008 Calverton Community Center, Calverton NY 7:00 p.m.

> Welcome and Agenda Review Lora Fly, NAVFAC Mid-Atlantic

> > Distribution of Minutes All Members

Community Update Bill Gunther, RAB Co-chair

Technical Progress

<u>General Program</u> Lora Fly

Site 2 Groundwater Investigation David Brayack, Tetra Tech

Sites 6A and 10B and Southern Area Groundwater Investigation and Onsite Statement of Basis Dave Brayack

> Offsite Southern Area Feasibility Study Dave Brayack

Site 7 Fuel Depot Area Operation ECOR

> <u>Closing Remarks</u> Lora Fly

Presenters will be available after the program for questions.



• Meeting Minutes Approval – November 2007



- •PRSC Quarterly Sampling May 08, August 08, November 2009
- •Sites 6A/10B and Southern Area Groundwater Sampling, including Peconic River – July 2008 and July 2009
- •Sites 6A/10B Remedial Design June 2008
- •Sites 6A/10B Remedial Action 2009/2010
- •Southern Area Offsite Feasibility Study
- •Site 2 EE/CA Public Comment May 2008
- •Site 2 Removal Action 2009
- •Site 2 Groundwater Monitoring 2010
- •Site 2 Feasibility Study 2010/2011

FACILITY LAYOUT







- •Fire Training Activities 1950s to mid-1990s.
- •Free product recovery from late 1980s to mid-1990s.
- •Free product and limited solvents present in soil and groundwater at site.
- •Air sparging/soil vapor extraction was used to treat solvents (volatile organic compounds) in soils 1995 to 2001.
- •Good success on groundwater, but did not address a continuing source of groundwater contamination above the groundwater.



- •Removal action planned. Design is complete April 2008.
- •Bid process this summer, construction in Fiscal 2009.
- •Start a public comment period in May 2008 on Engineering Evaluation/Cost Analysis (administrative requirement). Run for 30 days.

SITE 2 REMOVAL ACTION – EXCAVATION PLAN





SITE 2 REMOVAL ACTION – EXCAVATION PLAN

NATAC



SITE 2 JANUARY 2008 GROUNDWATER RESULTS



SITE 6A/10B JANUARY 2008 GROUNDWATER RESULTS













NAFAC



FORM CADD NOL SDOV-BILDWG - REV 2 - 6/29/06

NATAC



FORM CALO NO. SOLV-BROWG - REV 2 - 6/19/06









ATTACHMENT 4

ECOR SOLUTIONS - PRESENTATION

GROUNDWATER REMEDIATION PROJECT SITE 7 – FORMER FUEL DEPOT



Site 7: Former Fuel Depot Air Sparge/Soil Vapor Extraction System Naval Weapons Industrial Reserve Plant Calverton, NY

Restoration Advisory Board Meeting April 17, 2008



Delivering environmental construction, operations and remediation solutions to industry and government

Project Overview

- Contaminants of Concern: BTEX, Napthalene, and Freon in groundwater
- Air Sparge/Soil Vapor Extraction System constructed 2004
- Goal:
 - Mass removal of groundwater contaminants
 - Operate & Maintain in-situ treatment system until remediation goals are attained



Site 7: Former Fuel Depot



Source: TtEC, Inc.

Area Map

Delivering environmental construction, operations and remediation solutions to industry and government



The Site









Source: TtEC, Inc.

Delivering environmental construction, operations and remediation solutions to industry and government



Operational Activities

- December 14, 2007 System was shut down for the winter
- December 17-19, 2007 Post-shutdown groundwater samples collected
- March 17-19, 2008 Pre-start up groundwater samples collected and vapor carbon adsorbers changed-out
- April 3, 2008 System restarted following winter shutdown





Well Location/Contaminant Concentration Map



Groundwater Contaminant Concentrations at Monitoring Well Locations NWIRP Calverton, NY March 2008



Groundwater Contaminant Concentrations at Select SVE Wells NWIRP Calverton, NY March 2008



Groundwater Analytical Results at Select SVE Well Locations NWIRP Calverton, NY March 2008



Mass Removal

Mass Removal is calculated from:

- the concentration of contaminants in vapor samples collected monthly at a location immediately prior to carbon adsorption.
- The flowrate of the vapor through the adsorbers
- And the operational time of the system for the month.





Delivering environmental construction, operations and remediation solutions to industry and government

Mass Removal Statistics

- The mass removal for October through December 2007 was 7.83 lbs.
- The cumulative mass removal since April 2007 is 25 lbs
- The cumulative mass removal from system start-up is 149.4 lbs



NWIRP Calverton AS/SVE system Mass Removal by Soil Vapor Extraction 2007



Future Activities

• Begin collecting monthly effluent air samples to monitor vapor concentrations







Delivering environmental construction, operations and remediation solutions to industry and government