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RESTORATION ADVISORY BOARD MEETING NAVAL WEAPONS INDUSTRIAL RESERVE PLANT (NWIRP), CALVERTON CALVERTON COMMUNITY CENTER CALVERTON, NEW YORK THURSDAY, NOVEMBER 8, 2007

The twenty-fifth meeting of the Restoration Advisory Board (RAB) began at approximately 7:00 pm. Meeting attendees included representatives from the Navy (Susan Clarke), New York State Department of Environmental Conservation (Henry Wilkie, Larry Rosenmann), RAB community members (Bill Gunther, Harry Histand, and Lou Cork), Peconic River Sportsman's Club (Tony Muratore), Suffolk County Department of Health Services (Andrew Rapiejko), Tetra Tech NUS, Inc. (David Brayack and Debbie Cohen), and ECOR Solutions, Inc. (Bob Ingram, Al Taormina, Patrick Schauble, Will Torres, and Matt Lapp). The meeting sign-in sheet is provided as Attachment 1.

WELCOME AND AGENDA REVIEW

The Navy representative, Ms. Susan Clarke, Naval Facilities Engineering Command, Mid-Atlantic, welcomed everyone to the RAB meeting and reviewed the meeting agenda. The agenda for the meeting is included as Attachment 2.

Ms. Clarke indicated that a public availability session for the Sites 6A and 10B and Onsite Southern Area Statement of Basis was held before the RAB meeting. Ms. Clarke, David Brayack, Lou Cork, Henry Wilkie, Larry Rosenmann, and Andrew Rapiejko attended the availability session.

DISTRIBUTION AND APPROVAL OF MINUTES

Ms. Clarke asked whether the RAB members received the August 2007 minutes, which were distributed in October 2007, and asked whether there were questions or comments on the minutes. There were no questions or comments, but the approval of the minutes was tabled because only a few RAB community members were present. Minutes from the August 2007 RAB meeting will be approved at the April 2008 RAB meeting.

COMMUNITY UPDATE

Mr. Gunther, RAB Community Co-Chair, mentioned that the Town of Riverhead held a press conference for the Sites 1, 9, and 10A property transfer. The Town thanked the RAB and community members for their participation in the transfer process. The Town is planning to develop the property for recreational use.

TECHNICAL PROGRESS

The technical progress presentation handout is provided as Attachment 3.

TECHNICAL PROGRESS – GENERAL PROGRAM

Ms. Clarke presented a slide summarizing the NWIRP Calverton projects that the Navy is planning to fund in FY08. Ms. Clarke is anticipating that funds will be available for all of the listed projects. One of the funding items is the TAPP grant for SCA Associatates (Frank Anastasi). Ms. Clarke will review the scope of work for the grant with Mr. Gunther after the meeting before submitting the proposal.

TECHNICAL PROGRESS – SITES 1, 9, 10A AND AGRICULTURAL OUTLEASE RCRA PERMIT MODIFICATION AND PROPERTY TRANSFER

Ms. Clarke indicated that the property transfer for Site 1, Site 9 and Site 10A (Parcels C1 and D) is almost complete. A quit claim was signed, and provided to the Town of Riverhead on November 8, 2007. Once the property tax forms are finalized, the property transfer will be complete. It was noted that the Pine Barrens Commission is not involved in the property transfer; the Commission gets involved during property redevelopment planning. It is likely that the Commission would not be involved in redevelopment of industrial portions of the property

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

Mr. Brayack, Tetra Tech NUS, Inc., indicated that NYSDEC is holding a public comment period for the Statement of Basis that will end on November 13, 2007. The Statement of Basis provides for removal of soil in the source areas at Sites 6 and 10B and groundwater monitoring for the sites and onsite southern area. Mr. Brayack indicated that the Navy will modify the permit after the public comment period ends and begin the remedy design this winter so that construction can begin in September 2008.

The Navy and Suffolk County DHS discussed their concerns with the statement of basis. Mr. Rapiejko indicated that Suffolk County DHS supports the source area removal component of the remedy; however, the County has concerns with the natural attenuation portion of the remedy. He needs to review the available information to confirm that there has been sufficient evaluation to support selection of natural attenuation. The Navy will set up a meeting with Mr. Rapiejko to review previous documents to show the evaluation that has been conducted to support the Navy's proposed remedy for natural attenuation.

As indicated earlier, a public availability session was held before the RAB meeting. Mr. Brayack indicated that he was available after the RAB meeting if anyone had questions on the poster boards for the availability session.

TECHNICAL PROGRESS – SITES 6A AND 10B AND SOUTHERN AREA GROUNDWATER WORK PLAN

Mr. Brayack reviewed three figures (in Attachment 3) showing the area of the contaminated groundwater plume and the planned locations of new monitoring wells at Site 10B, along the southern fence line (River Road), along Connecticut Avenue, and at the Peconic River Sportsman's Club (SA wells) that would be added off site to supplement the existing monitoring well network. Three new monitoring wells at Site 10B are planned downgradient of the soil contaminant source area. New monitoring wells are planned along River Road to provide data to evaluate groundwater contaminant concentrations over time along the facility boundary. Groundwater data were collected for this area when vertical profile borings were installed; however, there are few monitoring wells for collecting data over time for concentration trend evaluation. Four monitoring well clusters that include three wells each (one shallow, one intermediate, and one deep) are planned for River Road. Four wells are planned along Connecticut Avenue to provide groundwater data for shallower intervals at locations where contamination was found in groundwater in wells screened at deeper intervals. A monitoring well cluster, consisting of a shallow well, an intermediate well, and a deep well, is planned near the pistol range at the Sportsman's Club. The Navy is also planning to conduct quarterly monitoring at four locations at the Sportsman's Club (CA-PRSC wells).

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The Navy and Suffolk County DHS met to review comments from the County. Mr. Brayack mentioned that they were able to resolve most of the concerns, and the Navy will provide formal responses to the comments. The final issues that need to be resolved are related to the analyte list and requests for additional evaluation and information from previous investigations. These issues do not affect the locations of the new monitoring wells and the Navy can proceed with monitoring well installation. Mr. Brayack explained that the analyte list Suffolk County DHS uses includes more analytes than the standard lists required by NYSDEC or EPA. The Navy is reviewing Suffolk County's list to see whether the standard analytical method SW 846 8260 includes any of the additional analytes. Mr. Rapiejko indicated that Suffolk County DHS is also concerned that there may be preferential groundwater flow pathways (seeps) in the river. The Navy will include some additional surface water and sediment sampling locations in the river to address this concern.

The Navy is planning to begin well installation the week of November 26, 2007. Except for the wells at the Sportsman's Club, well installation should be completed in December, and sampling of the wells in the monitoring program should be conducted in January 2008. Mr. Brayack indicated that the groundwater data should be available by the April 2008 RAB meeting. The wells on the Sportsman Club property will be installed after property access agreements are in place.

TECHNICAL PROGRESS – SITE 2 GROUNDWATER WORK PLAN

Mr. Brayack reviewed two figures (included in Attachment 3) showing contaminant concentrations in groundwater at Site 2. Mr. Brayack explained that NYSDEC requested facility-wide groundwater sampling for the sites at NWIRP Calverton. Site 2 was the only site not covered in a groundwater sampling plan; therefore, the Navy prepared a work plan for sampling groundwater at Site 2. The Navy will conduct groundwater sampling at Site 2 to determine whether some groundwater contamination may have migrated off site. Mr. Brayack indicated that the Navy and NYSDEC discussed comments on the draft work plan. The main comments were related to several wells that were inadvertently not included in the draft work plan that will be added. Based on discussion with Suffolk County DHS, the Navy will also add a well in the golf course area.

Mr. Brayack also explained that the previous groundwater data for Site 2 shows a decrease in concentrations after free product removal and operation of an air sparging/soil vapor extraction

system were conducted; however, there is residual petroleum contamination in soil at Site 2 that continues to act as a source of contamination to groundwater. The contaminated soil is targeted for removal under an interim removal action in the near future.

TECHNICAL PROGRESS - SITE 7 FUEL DEPOT AREA OPERATIONS

Mr. Torres, ECOR Solutions, Inc., provided a presentation on the operation activities and results to date for the Groundwater Remediation Project for Site 7 – Former Fuel Depot. The presentation is included as Attachment 4 and includes project overview and operational information.

Based on the results of the operations, the Navy is evaluating groundwater flow, contaminant trends, and ways to optimize the treatment system to address changes in flow and contaminant concentrations.

The groundwater flow evaluation involves evaluating groundwater elevation data to develop isoconcentration maps. The treatment system changed the reference elevation for groundwater level measurements for some of the wells; therefore, water level elevations need to be recalculated using the new reference elevation. ECOR is evaluating the survey data and associated reference elevations so that groundwater elevations can be mapped to better evaluate the groundwater flow direction. Site 7 is at a groundwater divide and groundwater flow is slow and generally to the east; however, the evaluation will provide information on whether groundwater flows in a north eastern or south eastern direction. Mr. Torres explained that operation of the treatment system can result in localized groundwater mounding, but based on the geology at Site 7, it is not expected to be significant. There are water level data over time for Site 7 that would show whether water levels have been affected by operation of the system. The evaluation of water levels will be provided in the annual report, expected by March 2008.

Mr. Torres reviewed the total VOC vapor concentrations for October 2007 and the groundwater contamination concentration and mass removal trends since March 2006 (see Attachment 4). The highest total VOC vapor concentration was at SV-2, which was also the well with the highest VOC groundwater concentration. SV-2 is located near some piping that may have had residual petroleum in the pipeline that leaked to soil in the area. SV-2 is at the southern edge of the treatment system, which is potentially at the downgradient edge of the site. The Navy needs to evaluate the data and determine how to optimize the treatment system to treat the

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contamination near SV-2. Depending on the results of the groundwater flow evaluation, the Navy may need to add wells to monitor groundwater downgradient of the contaminant plume. There is a line of monitoring wells at the downgradient edge of the site and the groundwater flow evaluation will indicate whether this line of wells is still adequate. Optimization may include shutting down portions of the treatment system where contaminant concentrations are not detected so that the system can provide additional treatment to the SV-2 area. It was indicated that the Navy is at the mid-point of operation of the treatment system so that it is the appropriate point to determine the necessary activities to optimization of the system. Mr. Brayack noted that the petroleum contamination by SV-2 tends to be shallower and the treatment system addresses petroleum contamination at and above the water table as well as dissolved BTEX. Although there were deeper borings installed during investigation of the site, Mr. Brayack does not recall whether there is a clay layer would not affect contaminant migration or system optimization.

Mr. Torres noted that cumulative mass removal in 2007 was about 20 pounds of VOCs and since system start up was about 140 pounds of VOCs. The calculation of mass removal is based on a specific list of VOCs and does not provide an estimate of pounds of all VOCs or contaminants removed.

Mr. Torres indicated that by shutting down sparge wells in areas with non-detect contaminant concentrations or that have low mass removal, and directing the air to wells with high concentrations, the system can move more air through the wells and better treat areas with high concentrations. After the system is shut down for the winter, the data will be reviewed to determine the system optimization needs.

It was noted that Freon is no long a concern for Site 7, so the evaluation of the system operation focuses on VOCs. Freon was used to test fuel systems and was previously a concern in one area of Site 7. This area was treated with air and ozone and subsequently Freon has not been detected in groundwater at Site 7.

Ms. Clarke noted that the Navy, NYSDEC, Suffolk County DHS will need to determine a time to meet to go over facility-wide groundwater concerns, including Site 7, to make sure there is a comprehensive groundwater monitoring program. Although monitoring of wells at the different

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sites is addressed in different work plans, the Navy would like to coordinate sampling so that the data collection will occur in the same general time frame.

CLOSING REMARKS

Ms. Clarke thanked everyone for coming to the meeting and verified that the next RAB meeting would be held April 3, 2008. A notice for the next RAB meeting will be provided as usual.

No other RAB members had closing remarks, and the meeting was adjourned at approximately 8:10 pm.

ATTACHMENT 1

NOVEMBER 8, 2007 RAB MEETING SIGN-IN SHEET

25th RAB Meeting for NWIRP Calverton November 8, 2007 Sign-In List

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Name Address (if interested in being on mailing list) Organization How Did You Hear of **Meeting?** R.A.B. Lou Cork) APIEJKO iew SCDHS. NYSDEC-A/BANY HERRY LARRY ROSENMANN NYSDEC ALBANY Bob Ingram ECOR Ecor ADRONA ALAL ECCR Patrick Schaubic ECOR Matt Will Torres ECOR SUSAN CLARICE NAVY Debbie Cohen FENUS David Brogan 'ZNUS

25th RAB Meeting for NWIRP Calverton November 8, 2007 Sign-In List

Name Address (if interested in being on mailing list) Organization How Did You Hear of Meeting? Bill Gunther RAB Tony Murritore Pecunic River Scontours CIUT Hump Histord RAB - ...

ATTACHMENT 2

NOVEMBER 8, 2007 RAB MEETING AGENDA

Agenda

Restoration Advisory Board Naval Weapons Industrial Reserve Plant Calverton

November 8, 2007 Calverton Community Center, Calverton NY 7:00 p.m.

> <u>Welcome and Agenda Review</u> Susan Clarke, NAVFAC Mid-Atlantic

> > Distribution of Minutes All Members

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

Technical Progress

General Program - Susan Clarke, NAVFAC Mid-Atlantic

<u>Status of Sites 1, 9, 10A & Agricultural Outlease RCRA Permit</u> <u>Modification and Property Transfer</u> – Susan Clarke

Sites 6A and 10B and Onsite Southern Area - Statement of Basis Dave Brayack, Tetra Tech NUS

Sites 6A and 10B and Southern Area Groundwater Work Plan Dave Brayack

Site 2 Groundwater Work Plan - Dave Brayack

Site 7 Fuel Depot Area Operation - ECOR

Closing Remarks Susan Clarke

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 November 8, 2007

November 2007

AGENDA



Agenda

Restoration Advisory Board Naval Weapons Industrial Reserve Plant Calverton

November 8, 2007 Calverton Community Center, Calverton NY 7:00 p.m.

> <u>Welcome and Agenda Review</u> Susan Clarke, NAVFAC Mid-Atlantic

> > Distribution of Minutes All Members

Community Update Bill Gunther, RAB Co-chair

Technical Progress

General Program - Susan Clarke, NAVFAC Mid-Atlantic

<u>Status of Sites 1, 9, 10A & Agricultural Outlease RCRA Permit</u> <u>Modification and Property Transfer</u> – Susan Clarke

Sites 6A and 10B and Onsite Southern Area - Statement of Basis Dave Brayack, Tetra Tech NUS

Sites 6A and 10B and Southern Area Groundwater Work Plan Dave Brayack

Site 2 Groundwater Work Plan - Dave Brayack

Site 7 Fuel Depot Area Operation - ECOR

Closing Remarks Susan Clarke

Presenters will be available after the program for questions.



GENERAL PROGRAM



- Fiscal Year 08 Funding Program:
 - Site 7 Continuation of AS/SVE O&M, ECOR (\$300,000).
 - Site 2 Interim Soil Removal Action, EMAC (\$1,200,000).
 - Sites 6A and 10B, Remedial Design, TtNUS, (\$30,000).
 - TAPP No. 4, SCA Assoc (\$25,000).
 - Southern Area, Groundwater Investigation TtNUS (\$150,000).
 - Facility-wide groundwater sampling, TtNUS (\$80,000).
 - Site 6A and 10B, Soil Removal Action, EMAC (\$1,500,000).

STATUS OF SITES 1, 9, AND 10 PROPERTY TRANSFER



- Quit claim deed signed and submitted to town.
- Finalizing property tax forms.







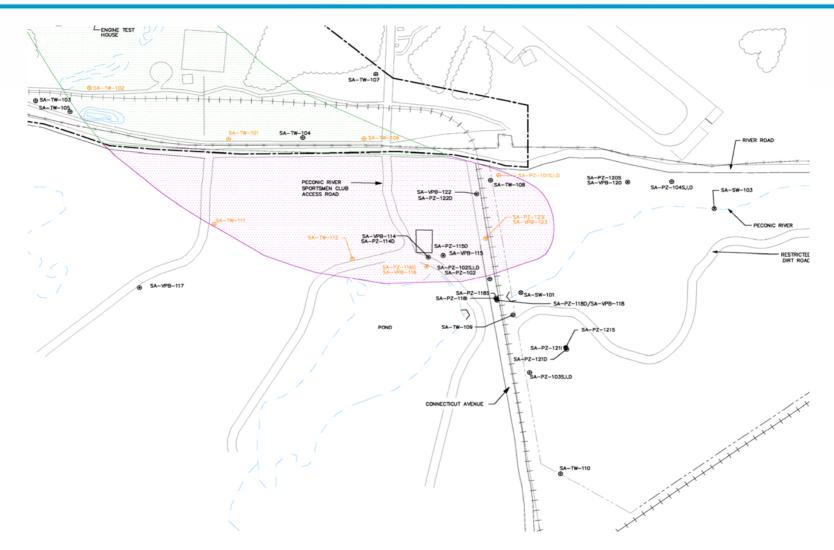
SITES 6A AND 10B AND ONSITE SOUTHERN AREA - STATEMENT OF BASIS



- •Currently in Public Comment Period, ends November 13, 2007
- •Public Availability Session held earlier today
- Permit Modification
- •Design this winter
- Construction later next year

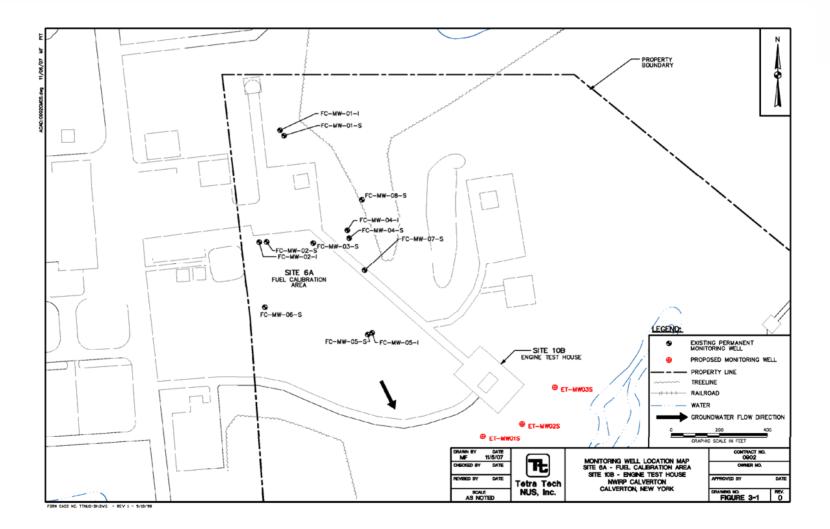
SITES 6A AND 10B AND SOUTHERN AREA GROUNDWATER WORK PLAN





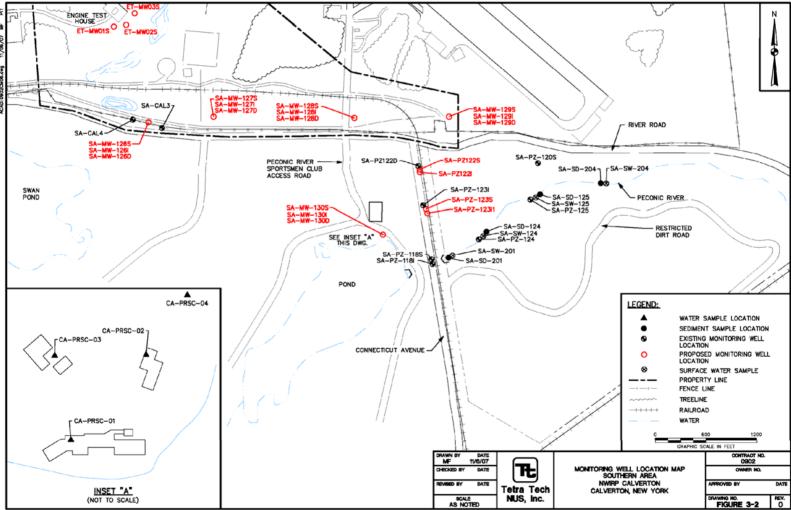
SITES 6A AND 10B AND SOUTHERN AREA GROUNDWATER WORK PLAN





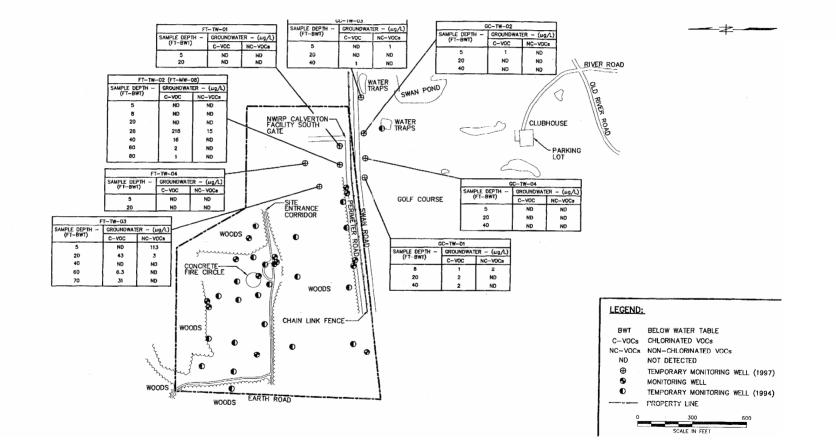
SITES 6A AND 10B AND SOUTHERN AREA GROUNDWATER WORK PLAN (Cont.)



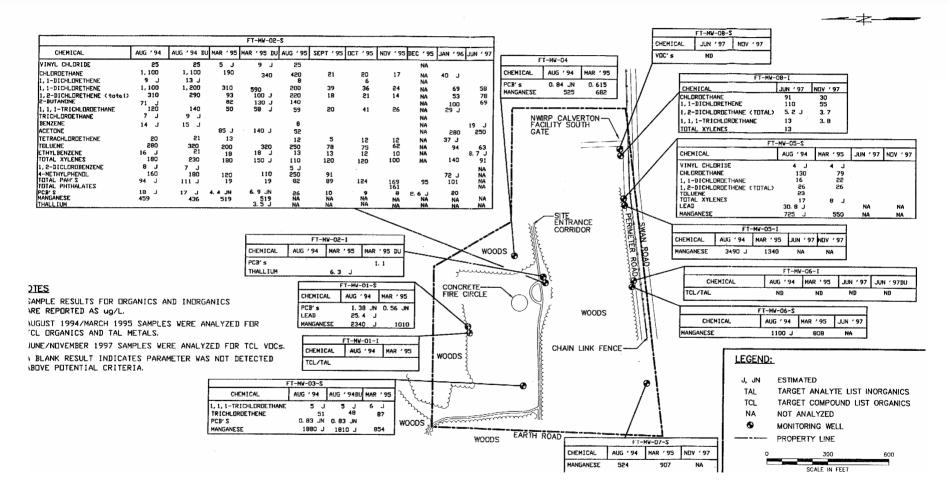


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ATTACHMENT 4

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 November 8, 2007



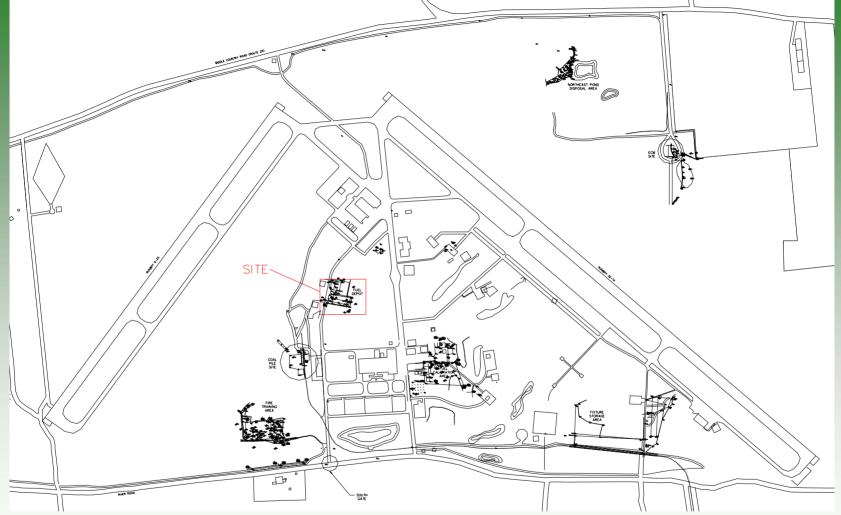
Delivering environmental construction, operations and remediation solutions to industry and government

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

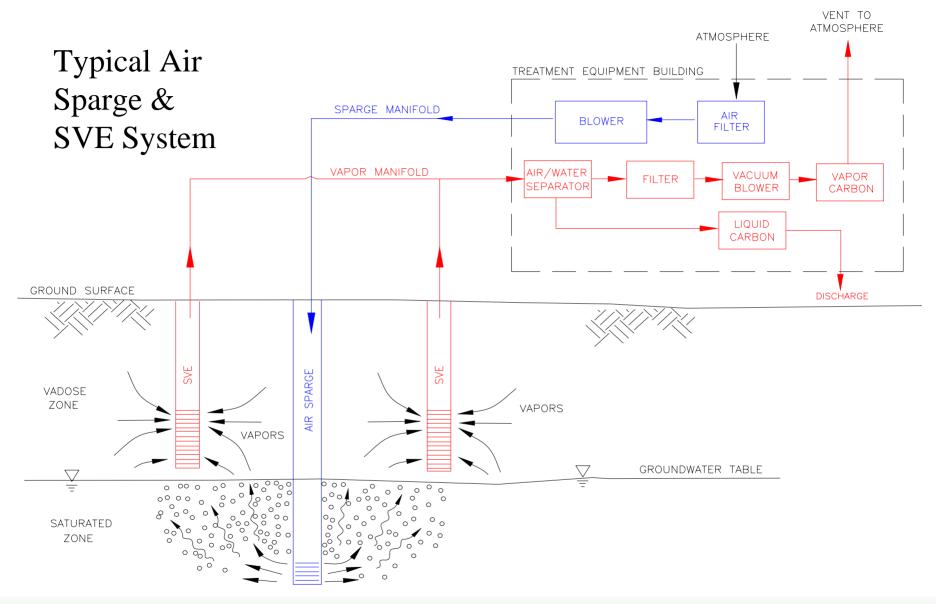


The Site









Source: TtEC, Inc.

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

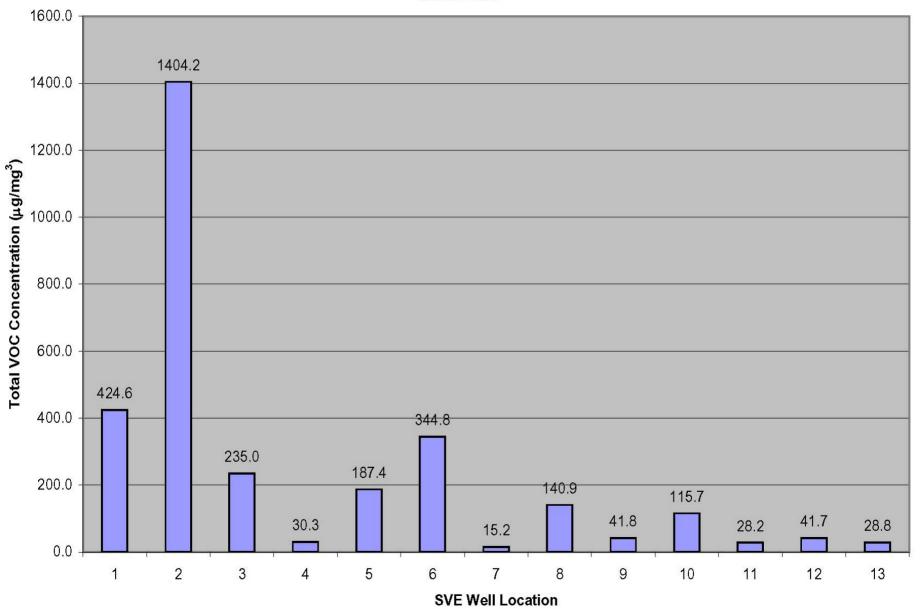
ECOR Solutions, Inc.

Operational Activities

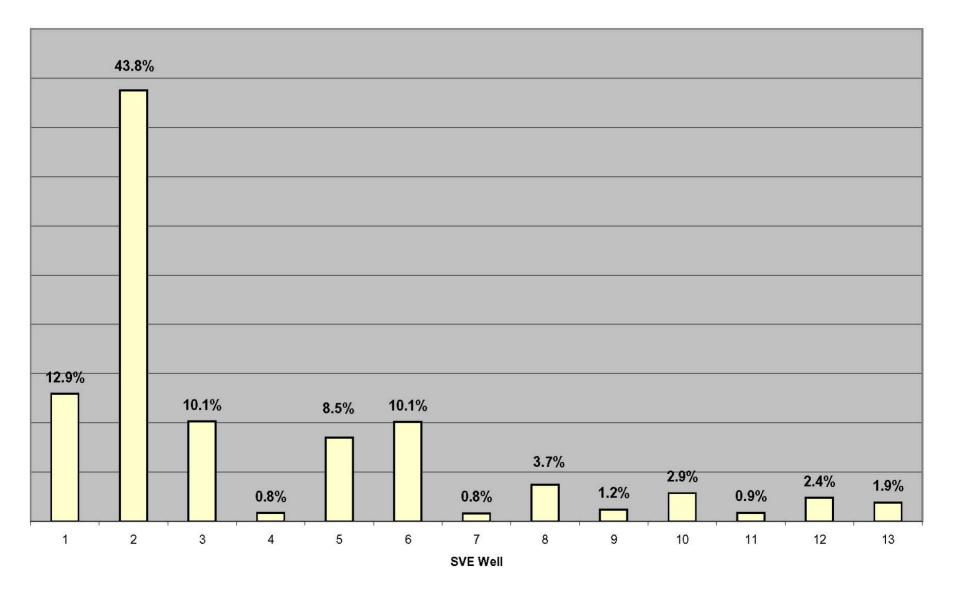
- Latest groundwater samples collected Sept 18-20, 2007
- Performed weekly O&M visits to:
 - Monitor vapor phase carbon adsorbers
 - Obtain instrument measurements
 - Perform general site inspections
- Optimized system by shutting down two SVE wells and 1 air sparge well to address rising concentrations in MW-10S, MW-17S and SV2.
- Collected vapor samples, vacuums and flowrates at all 13 SVE wells to verify decreasing mass removals.

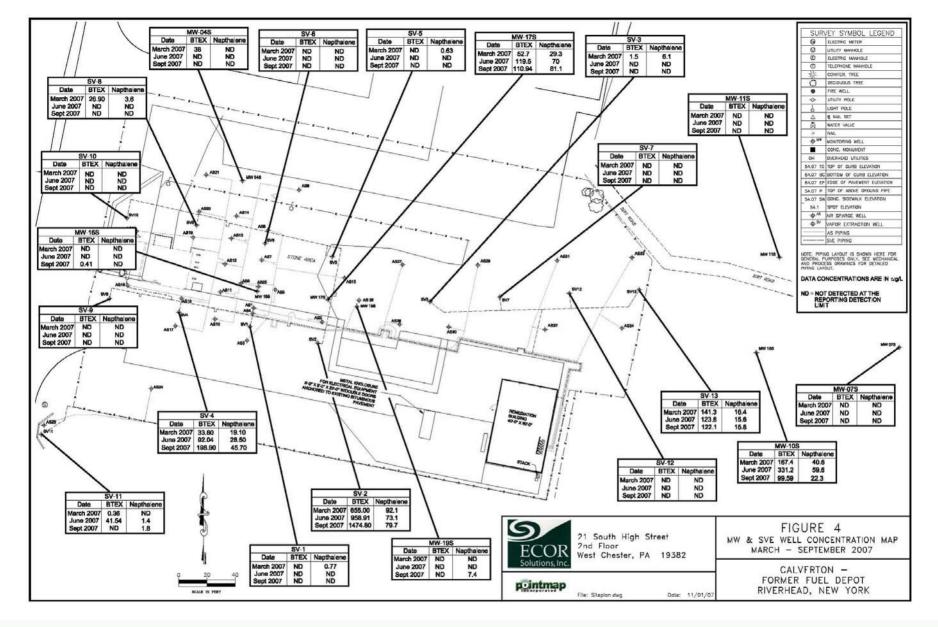


Total VOC Vapor Concentration of Individual SVE Wells AS/SVE System Evaluation NWIRP Calverton, NY October 2007



Percent of Total Mass Removed by Individual SVE Wells AS/SVE System Evaluation NWIRP Calverton, NY October 2007





Well Location/Contaminant Concentration Map

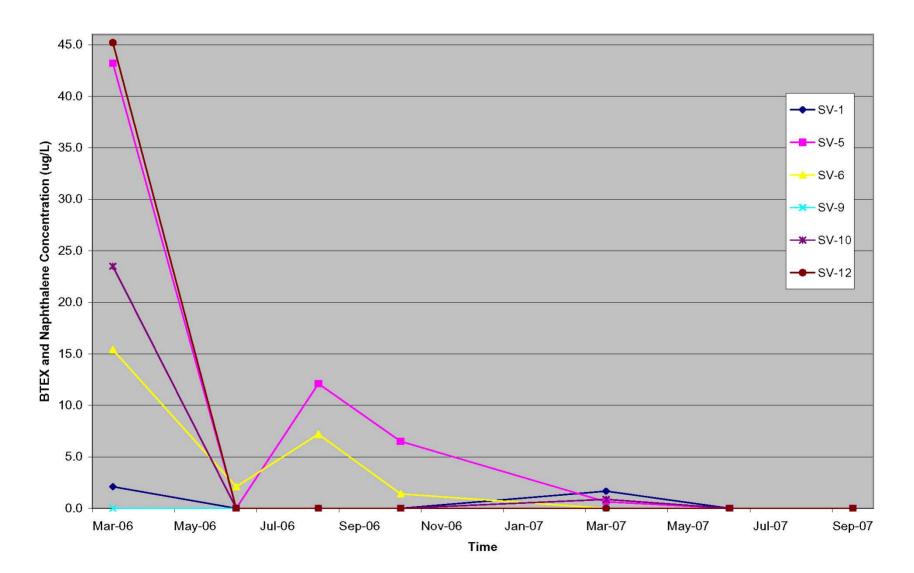


Graphs

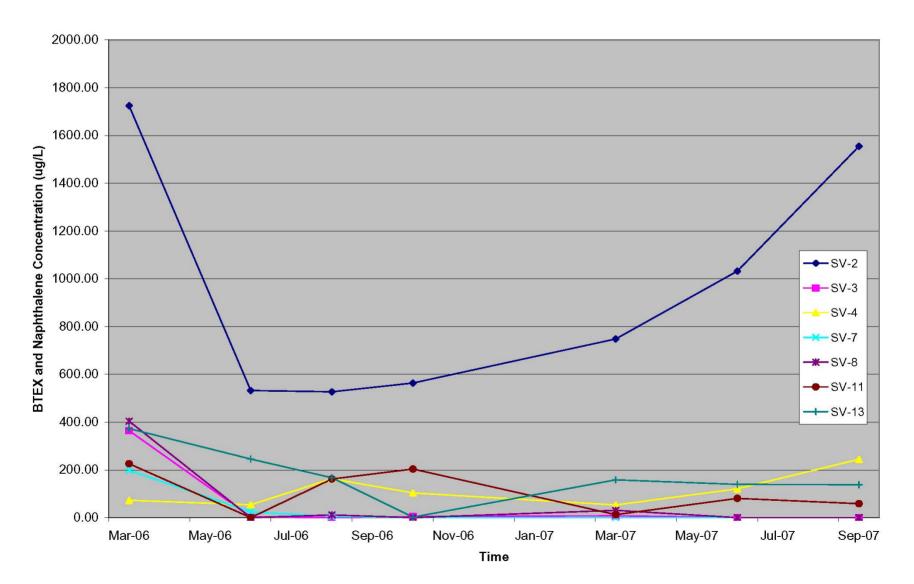
- Groundwater analytical results at SVE wells 1, 5, 6, 9, 10, 12
- Groundwater analytical results at SVE wells 2, 3, 4, 7, 8, 11, 13
- Groundwater analytical results at monitoring wells 04, 07, 10, 11, 16, 17, 19



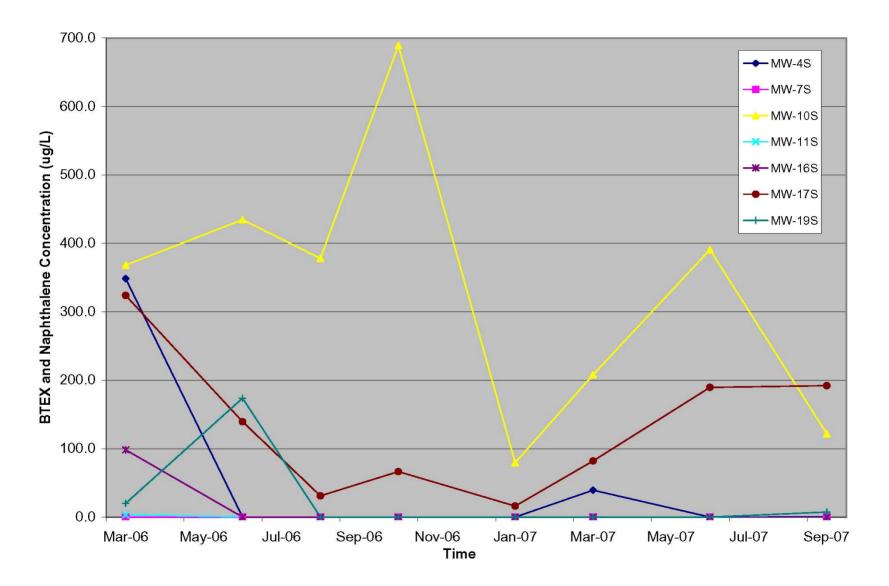
Groundwater Contaminant Concentrations at Select SVE Wells NWIRP Calverton, NY September 2007



Groundwater Analytical Results at Select SVE Well Locations NWIRP Calverton, NY September 2007



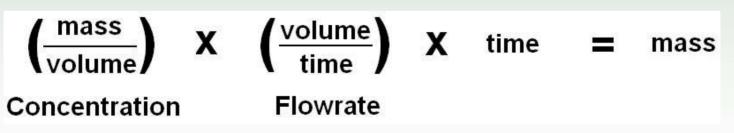
Groundwater Contaminant Concentrations at Monitoring Well Locations NWIRP Calverton, NY September 2007



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.





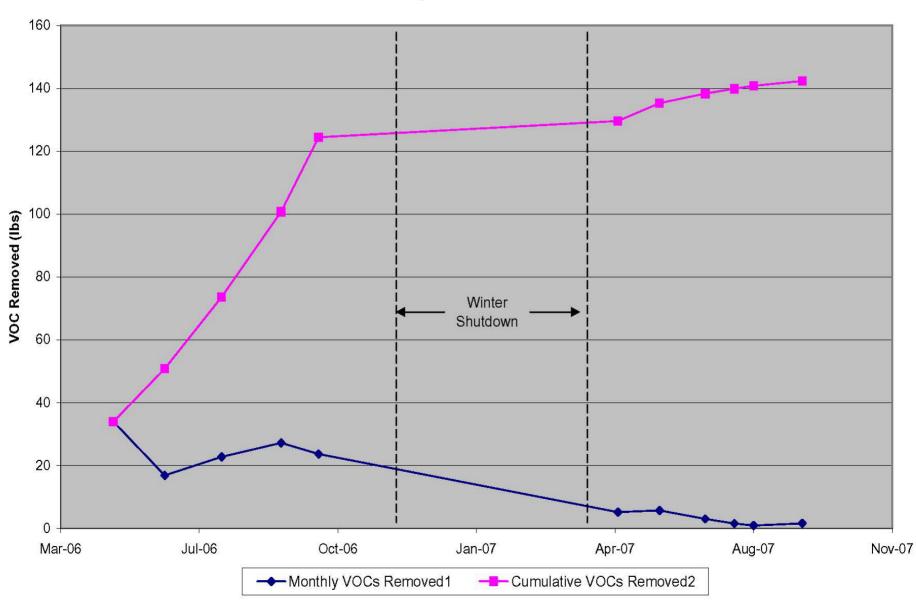
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Mass Removal Statistics

- The mass removal for September was 2.79 lbs.
- The cumulative mass removal since April 2007 is 20.7 lbs
- The cumulative mass removal from system start-up is 145.2 lbs



NWIRP Calverton AS/SVE system Mass Removal by Soil Vapor Extraction May 2006 to date



Future Activities

- Optimize system to address rising groundwater concentrations in SV2 and SV4
- Continue to collect monthly air samples to monitor extracted vapor concentrations
- Shut down system in December for the winter
- Perform post-shut down groundwater sampling







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