

NOR-00429

May 19, 2009

Project Number 112G00903

Reference:

Contract No. N62467-04-D-0055 Contract Task Order No. 449

MEMORANDUM

FOR THE MEMBERS OF THE RESTORATION ADVISORY BOARD (RAB), INSTALLATION RESTORATION PROGRAM, NAVAL WEAPONS INDUSTRIAL RESERVE PLANT (NWIRP), CALVERTON, NEW YORK

On behalf of the U.S. Navy, Tetra Tech NUS, Inc. is pleased to provide the draft minutes from the March 12, 2009 Restoration Advisory Board meeting for your review and comment.

Comments are requested by July 15, 2009. You may provide your comments to Lora Fly at (757) 444-0781 or lora.fly@navy.mil or the RAB Community Co-Chair, Mr. Bill Gunther.

Sincerely,

David D. Brayack, P.E.

Project Manáger

DISTRIBUTION:

NAVFAC Mid-Atlantic, Lora Fly

NAVAIR, Richard Smith

NYSDEC (Albany), Larry Rosenmann

NYSDEC (Albany), Henry Wilkie

NYSDEC (Stony Brook), Walter Parrish

NYSDOH, Jacqueline Nealon

SCDHS, Andrew Rapiejko

USEPA Region II, Ellen Stein

USEPA Region II, Carla Struble

Public Repository

Town of Riverhead, Chris Kempner

Tetra Tech NUS, David Brayack

ECOR Solutions, Al Taormina

ECOR Solutions, Patrick Schauble

Community Co-Chair, Bill Gunther



Community RAB Member, Sidney Bail
Community RAB Member, Bob Conklin
Community RAB Member, Louis Cork
Community RAB Member, John Hall
Community RAB Member, Harry Histand
Community RAB Member, Jean Mannhaupt
Community RAB Member, Ann Miloski
Community RAB Member, Vincent Racaniello
Frank Anastasi (SCA Associates)

Tony Muratore

RESTORATION ADVISORY BOARD MEETING NAVAL WEAPONS INDUSTRIAL RESERVE PLANT (NWIRP), CALVERTON CALVERTON COMMUNITY CENTER, CALVERTON, NEW YORK THURSDAY, MARCH 12, 2009

The twenty-ninth meeting of the Restoration Advisory Board (RAB) was held at the Calverton Community Center. Meeting attendees included representatives from the Navy (Lora Fly), New York State Department of Environmental Conservation (NYSDEC) (Larry Rosenmann, Henry Wilkie), RAB Community Members (Sid Bail, Lou Cork, Bill Gunther, Harry Histand, Jean Mannhaupt, and Vincent Racaniello), Suffolk County Department of Health Services (SCDHS) (Andrew Rapiejko), Town of Riverhead (Joseph Maiorana), Tetra Tech NUS, Inc. (David Brayack, Debbie Cohen, and Robert Sok), ECOR Solutions, Inc. (David Streetsmith and Al Taormina), TAPP Consultant (Frank Anastasi), and PRFRC (Bob Conklin). One guest attended the meeting. 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 the meeting agenda. The agenda for the meeting is included as Attachment 2. The presentations for the meeting are included as Attachments 3 to 5.

DISTRIBUTION AND APPROVAL OF MINUTES

Ms. Fly asked whether the RAB members received the November 2008 RAB minutes, which were distributed in February 2009, and asked whether there were questions or comments on the minutes. There were no questions or comments, and the minutes for the November 2008 RAB meeting were approved.

Ms. Fly asked whether the RAB members had any comments or concerns for reducing the frequency of the RAB meeting from three times a year to twice a year. Mr. Gunther requested that the Navy continue to hold meetings three times a year at this time because there are various investigations and actions being conducted and the RAB would like to have the summer meeting so that the results can be presented before the fall RAB meeting.

COMMUNITY UPDATE

Mr. Bill Gunther, RAB Community Co-chair, discussed changes in RAB Community membership. Because Mr. Art Binder has not attended RAB meetings over the past few years, the Navy sent Mr. Binder a letter, dated December 10, 2008, requesting Mr. Binder to contact Ms. Fly or Mr. Gunther. Mr. Binder did not contact Ms. Fly; therefore, Mr. Gunther made a motion that Mr. Binder be removed as a RAB Community Member, and the other RAB Community Members indicated approval. Mr. Gunther then made a motion for Mr. Bob Conklin, who has been attending meetings for over 4 years, to become a RAB Community Member, and the other RAB Community Members indicated approval.

Mr. Gunther noted that the Southern Area groundwater results presentation was at the end of the meeting and asked if there would be sufficient time to discuss it. Ms. Fly indicated that the presentations on Sites 7 and 2 were brief updates on the status of activities at these sites and there would be sufficient time to discuss the Southern Area groundwater results; therefore, no changes were made to the agenda.

TECHNICAL PROGRESS – GENERAL PROGRAM

Ms. Fly explained that the Site 2 removal action could not be completed before the end of the 2008 construction period; however, excavation of contaminated soil was completed in 2008. Remaining work as part of the removal action includes backfilling, regrading, and reseeding the excavated area. The Navy began preparations for demolition of the Engine Test House at Site 10B as part of the removal action work for Site 10B.

TECHNICAL PROGRESS – SITE 7 REMEDIAL ACTIVITIES

Mr. David Streetsmith (ECOR Solutions, Inc.) provided a presentation on the status of remedial activities at Site 7. The presentation is included in Attachment 3.

The presentation provided updated contaminant concentration trend maps and mass removal statistics since reactivating the Air Sparge (AS)/Soil Vapor Extraction (SVE) System in April 2008. As discussed at the July and November 2008 RAB meeting, the data showed several locations with elevated concentrations of several volatile organic compounds (VOCs), and the concentrations appear to be increasing. Therefore, the Navy conducted additional sampling to determine the cause for the elevated and potentially increasing concentrations. Mr. Streetsmith

05-18-09

provided an update on the results of the sampling and plans for modifications to the treatment system to address the elevated concentrations of VOCs.

The treatment system was operated from April through December 2008. Before shut down of the system for the year, vapor samples from the SVE wells were collected and after shut down of the system groundwater samples were collected from SVE and groundwater monitoring wells. Mr. Streetsmith indicated that SV-2 was dry at the time of sampling; therefore, a groundwater sample could not be collected. Mr. Streetsmith then reviewed the December 2008 groundwater concentration results and the groundwater concentration trends since 2006. Mr. Streetsmith indicated that SV-4, SV-11, MS-17S, MW-10S, and SV-13 showed elevated levels of VOCs in December 2008. The furthest downgradient wells (MS-07S and MS-08S) showed low or non-detected VOC concentrations, which shows that contamination remains adequately bounded. Therefore, no new wells are needed east of these locations.

VOC concentration trends at most monitoring and SVE wells showed a decreasing trend. Locations with elevated VOC concentrations (MW-17S, MW-10S, SV-2, SV-13, and SV-4) are in the center of the site. Review of the data showed that adequate treatment is occurring in areas where AS wells are located. However, elevated concentrations and varied concentration trends were noted in areas that did not contain AS wells. The Navy will expand the treatment system east and south to include AS wells near areas that require additional treatment.

Mr. Streetsmith indicated that geoprobe groundwater sampling results discussed at the November 2008 RAB meeting are not included on the map with December 2008 groundwater sampling results. The geoprobe results confirmed that Freon contamination is localized around SV-11 and that VOC (BTEX and naphthalene) contamination is localized around SV-2 and does not extend south of this area.

There was some discussion of whether the groundwater contaminant migration in deeper groundwater was sufficiently investigated. Mr. Brayack explained that based on past investigations of shallow and deeper groundwater, the Navy determined that groundwater contamination was only in the shallow zone. Groundwater contamination was not found in the deeper zone.

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TECHNICAL PROGRESS – SITE 2 REMOVAL ACTION

Mr. David Brayack, Tetra Tech, provided a presentation on the status of the Site 2 soil removal action. The presentation is included in Attachment 4.

As discussed at the July and November 2008 RAB meetings, the Navy is conducting a source area (soil) removal action at Site 2 to remove accessible contaminated soil that is acting as a continuing source of groundwater contamination. The removal began in October 2008 and should be completed in April 2009. Backfilling was approximately 95 percent complete before operations were shut down for the winter. Mr. Brayack showed photographs of removal action activities, and indicated that the darker, black layer is the contaminated soil. Underneath the contaminated soil layer, light brown sand was found. The contaminated soil was visually distinguishable from the clean sand, and the Navy continued to remove visibly contaminated soil.

Mr. Brayack explained that during soil removal, some crushed drums containing approximately 5 gallons or less of petroleum-product were found, and this contamination was removed. He explained that the area was used from the 1950s to 1990s and the petroleum could have been spilled throughout this time period. These crushed drums were found in soil within the area where previous investigations showed the presence of free product and groundwater contamination. Mr. Brayack indicated that the black soil was tested for polycyclic aromatic hydrocarbons (PAHs). The results showed that the black soil had PAH concentrations similar to weathered asphalt. Other confirmatory samples were collected around the perimeter of the excavated area. The results will be included in the construction completion report; however, the preliminary results have been provided to Mr. Wilkie of NYSDEC. The excavated soil was shipped to a treatment facility for petroleum-contaminated soil. Backfill soil was obtained from a local source that was certified by NYSDEC to meet NYSDEC requirements for clean soil.

In answer to a question of whether pockets of petroleum observed at Site 2 could also be at Site 7, Mr. Rosenmann explained that the sources of contamination for the two sites are different. The petroleum at Site 2 is from fire training activities where petroleum products were released and burned over the area throughout the years of operations. Site 7 was a fuel depot where fuel was stored in tanks. When the tanks were removed, contaminated soil and free product in the soil was removed at that time.

TECHNICAL PROGRESS – SITES 2, 6A, AND 10B AND SOUTHERN AREA GROUNDWATER INVESTIGATION AND MONITORING WORK PLAN

Mr. Sok presented an update on the groundwater investigation and monitoring for Sites 2, 6A, and 10B and Southern Area. The presentation is included in Attachment 4.

Mr. Sok reviewed the planned groundwater monitoring and investigation program. The groundwater monitoring program will provide information on overall groundwater conditions. The groundwater investigation will target potential source areas and fill data gaps in the monitoring program. A temporary monitoring well groundwater investigation will be conducted in the onsite portion of the Southern Area where there are several potential source areas to be considered. The groundwater investigation will include:

- Groundwater grab sampling (geoprobe) to investigate potential source areas and address data gaps in upgradient areas of the groundwater plume. Grab sampling results will be used to determine where additional monitoring wells are needed. Geoprobes will be sampled at three depths above the upper clay unit (expected to be at 30 to 40 feet bgs). The locations were selected because data for downgradient locations suggests a potential upgradient source area may be present.
- Two new monitoring well clusters will be installed on the PRSC property to address data gaps in that area. The new wells will be included in the groundwater monitoring program.

Groundwater grab sampling is planned for the week of March 23, 2009. Once the data comes back from the laboratory, the locations for permanent monitoring well installation will be determined and the wells will be installed after getting access agreements in place. Mr. Brayack noted that the schedule for the grab sampling has slipped by approximately a month since the November 2008 RAB. Groundwater monitoring is planned for March 2009 (quarterly sampling at PRSC and semi-annual surface water and sediment sampling), June 2009 (quarterly sampling at PRSC), September 2009 (annual groundwater sampling event, quarterly sampling at PRSC, and semi-annual surface water and sediment sampling), and December 2009 (quarterly sampling at PRSC). The 2010 sampling schedule has not been determined.

During the RAB meeting, there were various questions regarding the offsite groundwater sampling and contamination. The following summarizes the discussion related to the questions:

- Analyte list for the monitoring program. The analyte list is presented in the work plan. The plan as originally presented did not include the additional parameters on the County list. Mr. Brayack indicated that there were a few small changes made from the October 2008 to the December 2008 work plan; however, the analyte list was not changed and the DPT (Direct Push Technology) work will include all of the County parameters as previously discussed.
- Provision of data to the RAB. The RAB would like to get the data as it becomes available and not wait until the next RAB meeting. The Navy indicated that a letter report with the validated data could be prepared and submitted to the RAB.
- Remedy for the offsite plume. At the November 2008 RAB meeting, the Navy indicated that a significant change to the remedy that was provided in the Corrective Measures Study (CMS) was not expected. A question was asked whether this assessment might change because concentrations in the offsite plume are greater than previously detected in this area. The Navy indicated that additional investigation is needed to evaluate whether a change in the proposed remedy in the CMS is needed. Mr. Rosenmann explained that after the investigation is complete, the Navy will need to determine the necessary revisions to the CMS, then NYSDEC will review the document before it goes out for public comment.
- Screening level for evaluation of surface water data. A RAB member expressed a concern that the surface water screening level for VOCs was 400 ug/L and not 5 ug/L as is used for groundwater or a permitted discharge to the river. Mr. Rosenmann explained that groundwater discharging to the river is not a permitted discharge; therefore, a discharge standard would not be applied. Mr. Rosenmann will talk to Suffolk County and New York Fish and Wildlife to confirm an appropriate surface water screening level. Mr. Gunther has information on regulations for scenic areas that may be appropriate for determining a screening level. Mr. Gunther will forward the information to Mr. Rosenmann.
- SCDHS groundwater and surface water sampling. Mr. Rapiejko talked about additional groundwater sampling from temporary well points that SCDHS is conducting. A figure is provided in Attachment 5. The locations on the figure are approximate. SCDHS has installed many of the temporary wells and began sampling some of the wells. The wells were drilled to 60 feet and a few were drilled deeper to determine where the clay layer pinched out. The SCDHS will be conducting gamma logging on each well to obtain data on lithology. SCDHS purged the wells before sampling. Mr. Rapiejko indicated that the

well points are being used as a quick screening tool to get groundwater data to determine where permanent monitoring wells and appropriate screen intervals in the wells are needed. The data are not available yet to determine permanent locations. As with the Navy's sampling program, the wells are along the road and not in interior areas that are difficult to access. In answer to a question regarding surface water concentrations downgradient of the VOC detection of 1,090 ug/L, Mr. Rapiejko indicated that VOCs were not detected in the surface water sample nearby. The area between the groundwater detection and surface water area cannot be accessed because it is a wetlands area. Mr. Brayack explained that the Navy tried to access the area but the vegetation was thick and the area was swampy. Mr. Rapiejko will look at the data and see whether any manual sampling points may be warranted in this area.

CLOSING REMARKS

Ms. Fly thanked everyone for coming to the meeting and asked whether there any other questions or comments. A question was asked whether there were any budget updates. The RAB community members expressed concern with the budget for the TAPP consultant and would like to have the TAPP technical support extended. Ms. Fly will provide Mr. Gunther with the TAPP contact information so that Mr. Gunther can discuss his concerns with the appropriate person. There were no other questions or comments. Ms. Fly indicated that Bethpage is no longer having a summer RAB; however, based on the Calverton RAB community member request to continue to have a summer meeting, the date for the summer meeting was flexible. The RAB indicated that the first Thursday in August was good and the next RAB meeting was set for August 6, 2009. The meeting was then adjourned.

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ATTACHMENT 1

MARCH 12, 2009 RAB MEETING SIGN-IN SHEET

29th RAB Meeting for NWIRP Calverton March 12, 2009 Sign-In List

Name	Address (if interested in being on mailing list	Organization	How Did You Hear of Meeting?
LORA FLY		MANFAC Midla	int
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Robert	Sok	TINUS)
Lou 6	Pork RA	13	•
B.M.	Suther RA	B	
Jean T	Noon Rope Pt	B	
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29th RAB Meeting for NWIRP Calverton March 12, 2009 Sign-In List

Name	Address (if inter	rested in being on mailing list)	Organization	How Did You Hear of Meeting?
Frank Ana	stusi	Rock ville, MD	5ch Assoc	
Andrew 21	APIETICO	Sc	DHS	
Henry V	VILLIE	NY 51) EC	
Michael h		Riverh News-k	leview	
AL TAOR	MWA	Ecope	7	
David 15	Tajock	TIN	ZS	
Debbie	Then	TŁNU	ζ	
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ATTACHMENT 2

MARCH 12, 2009 RAB MEETING AGENDA

Agenda

Restoration Advisory Board Naval Weapons Industrial Reserve Plant Calverton

March 12, 2009 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

General Program

Lora Fly

Site 7 Remedial Activities

David Streetsmith, ECOR

Site 2 Removal Action

David Brayack, Tetra Tech

Sites 2, 6A, and 10B and Southern Area Groundwater Work Plan

Rob Sok, Tetra Tech

Closing Remarks

Lora Fly

Presenters will be available after the program for questions.

ATTACHMENT 3

ECOR SOLUTIONS, INC. PRESENTATION



Site 7: Former Fuel Depot

Air Sparge/Soil Vapor Extraction System
Former Naval Weapons Industrial Reserve Plant
Calverton, NY

Restoration Advisory Board Meeting March 12, 2009

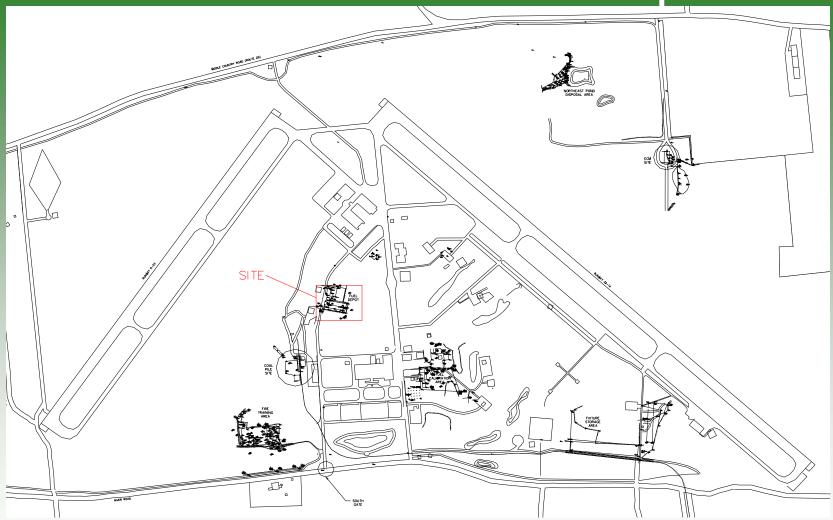


Project Overview

- Constituents of Concern:
 - BTEX, Naphthalene, and Freon in groundwater
- AS/SVE System constructed 2004
- Goal:
 - Mass removal of groundwater VOC constituents
 - Operate and maintain in-situ AS/SVE system until remediation goals are attained



Site 7: Former Fuel Depot



Source: TtEC, Inc.

Area Map

ECOR Solutions, Inc.

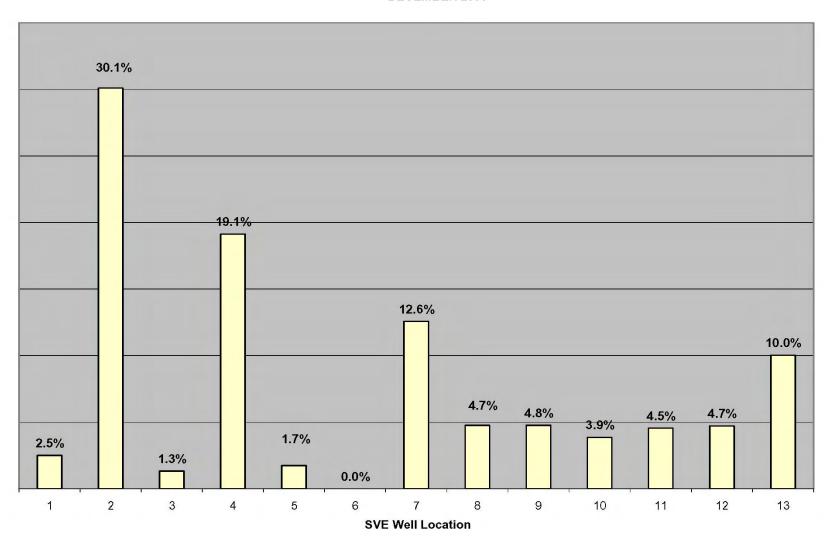
Operational Activities

- Performed weekly O&M visits until shutdown:
 - Monitored vapor-phase carbon adsorbers
 - Obtained instrument measurements
 - Insured proper system operation
 - Performed general site inspections
- December 15, 2008 (AM) Collected vapor samples, vacuum readings, and air flowrates at all 13 SVE wells
- December 15, 2008 (PM) System was shutdown for the winter
- December 15-17, 2008 Latest groundwater samples collected
- Groundwater sampling event scheduled for March 23-25 prior to system startup



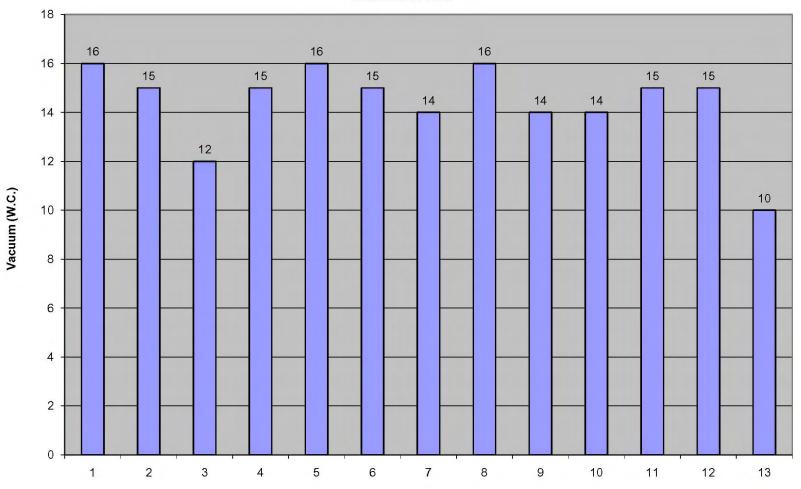
PERCENT OF TOTAL MASS REMOVED BY INDIVIDUAL SVE WELLS SITE 7 AS/SVE SYSTEM NAVAL WEAPONS INDUSTRIAL RESERVE PLANT - CALVERTON CALVERTON, NY

DECEMBER 2008

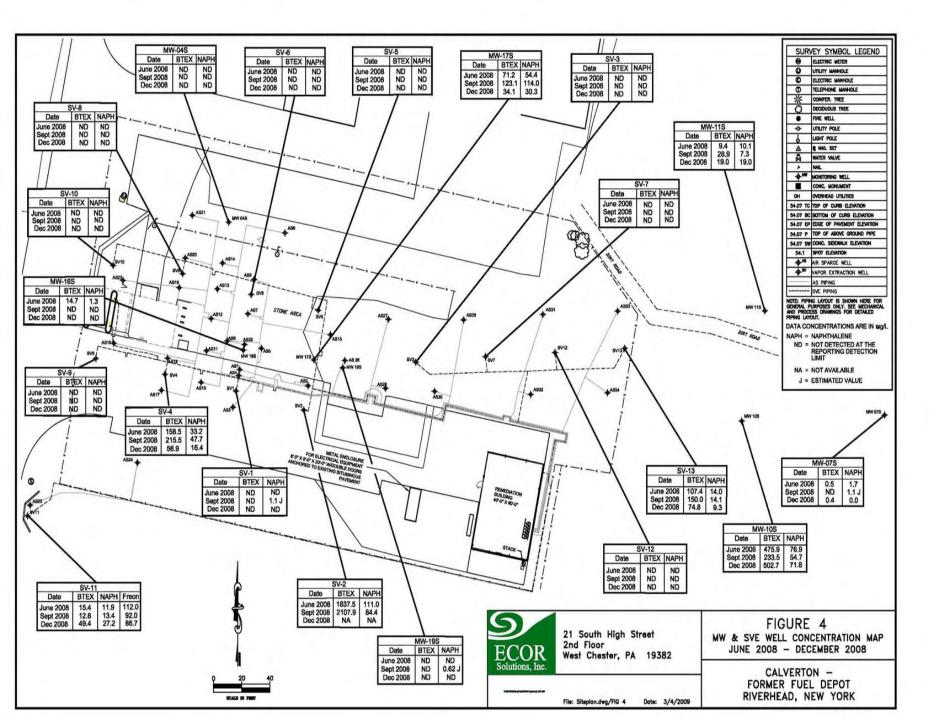


VACUUM AT INDIVIDUAL SVE WELLS SITE 7 AS/SVE SYSTE M NAVAL WEAPONS INDUSTRIAL RESERVE PLANT - CALVERT ON CALVERTON, NY

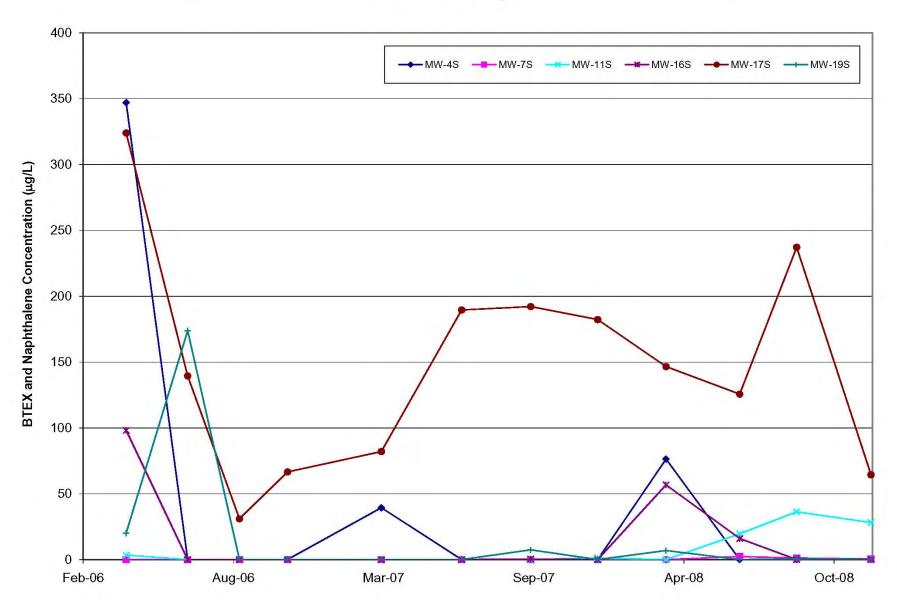
DECEMBER 2008



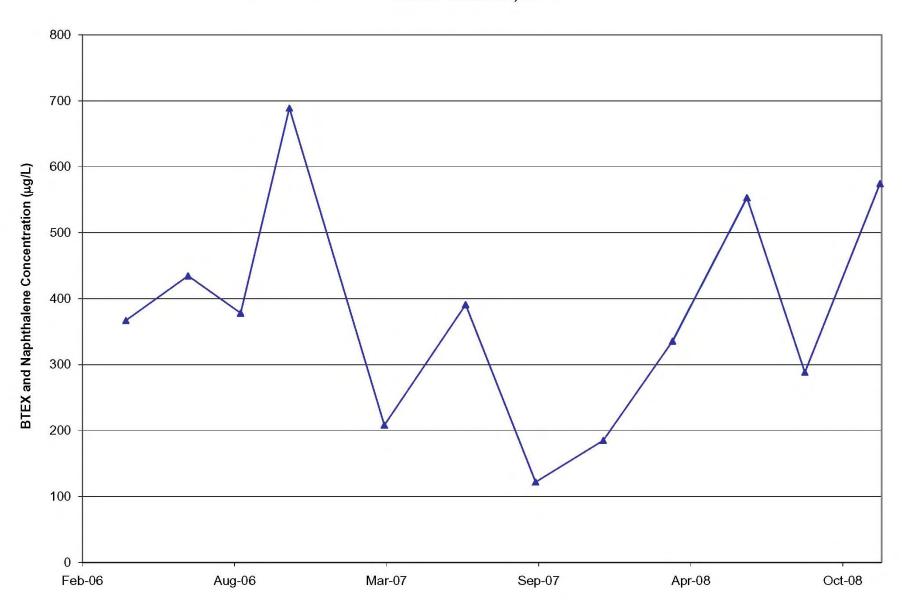
SV Well Location



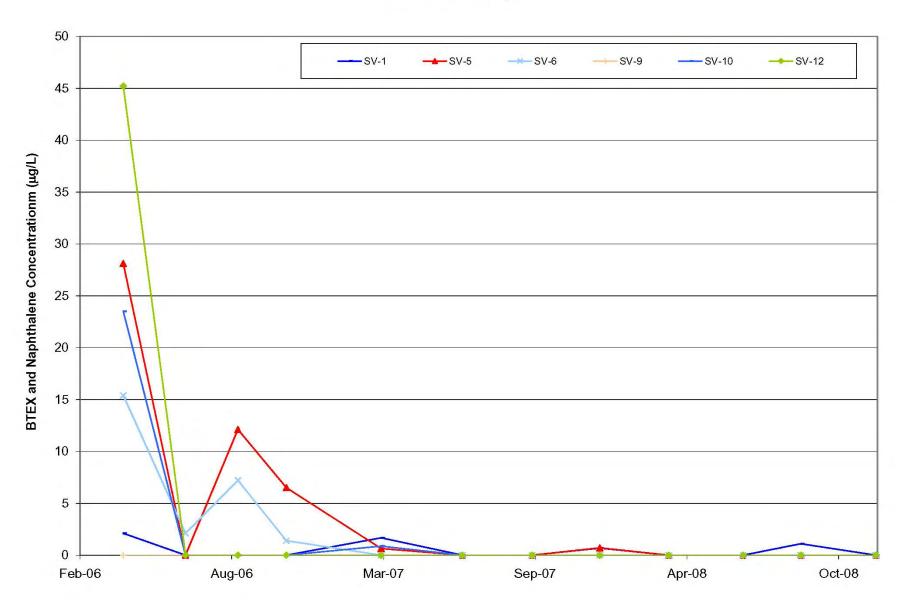
Groundwater VOC Concentrations at Select Monitoring Wells thru December 2008 NWIRP Calverton, NY



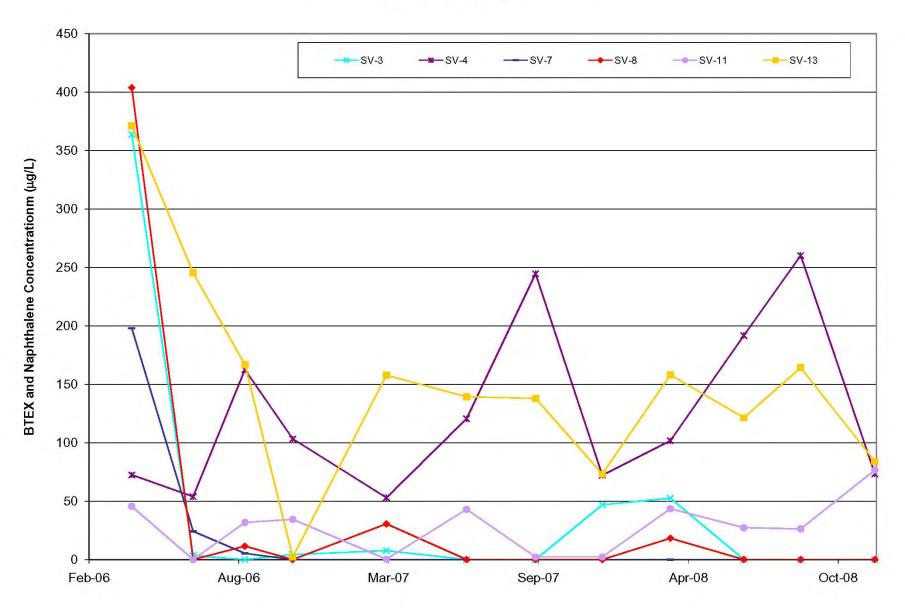
Groundwater VOC Concentration at MW-10S thru September 2008 NWIRP Calverton, NY



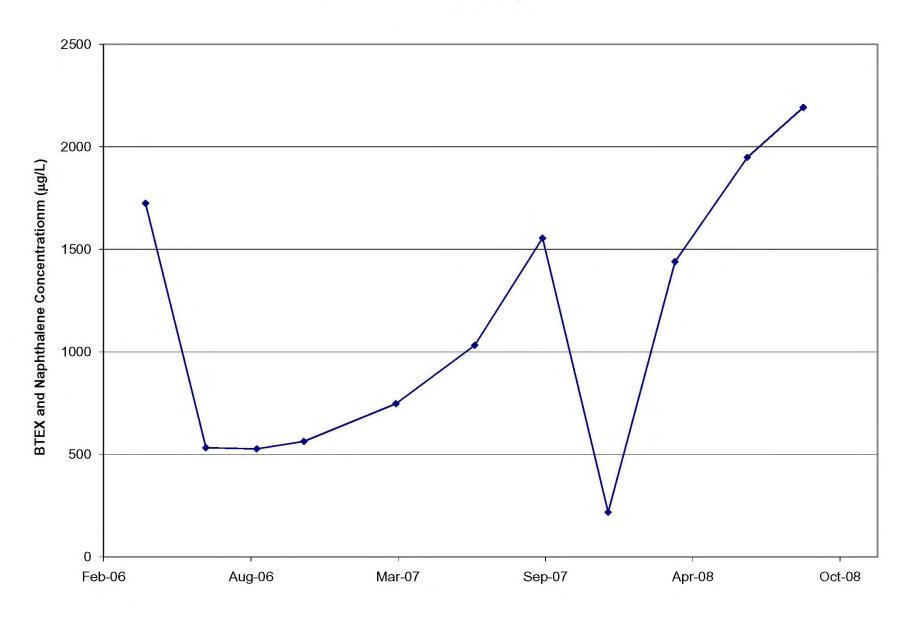
Groundwater VOC Concentrations at Select SVE Wells thru December 2008 NWIRP Calverton, NY



Groundwater VOC Concentrations at Select SVE Wells thru December 2008 NWIRP Calverton, NY



Groundwater VOC Concentrations at SV-2 thru December 2008 NWIRP Calverton, NY



System Runtime

Monthly runtimes (2008):

April – 624 hrs (86.7%)

May- 738 hrs (99.1%)

June – 628 hrs (87.2%)

July – 684 hrs (91.9%)

August – 724 hrs (97.3%)

September – 643 hrs (89.3%)

October – 711 hrs (95.6%)

November – 710 hrs (98.6%)

December – 340 hrs (97.7%)

Year to date runtime (2008):

5799 hrs (94.6%)



Mass Removal Statistics

Monthly Mass Removals (2008):

April – 2.06 lbs

May - 1.08 lbs

June – 3.14 lbs

July - 0.60 lbs

August – 1.11 lbs

September – 1.14 lbs

October – 1.02 lbs

November – 0.79 lbs

December – 0.62 lbs

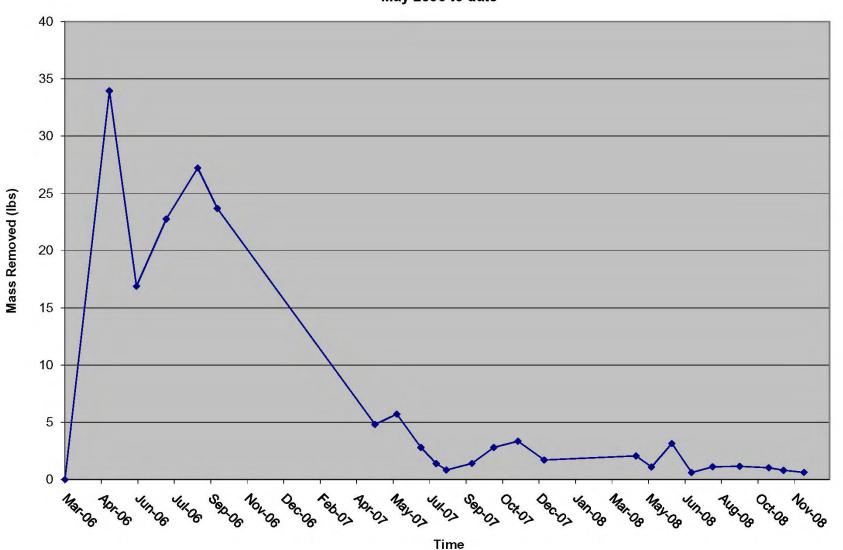
Cumulative Mass Removals:

2008 year to date – 11.54 lbs

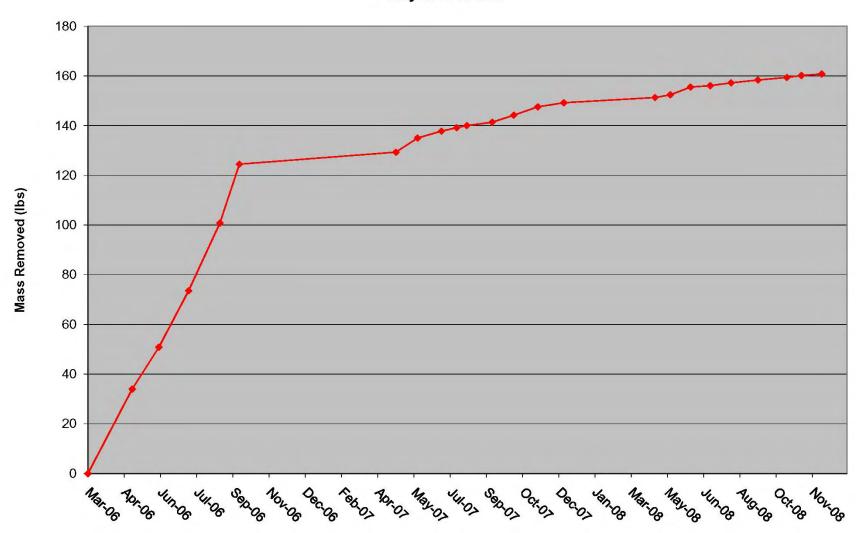
Start-up to date – 160.7 lbs



NWIRP Calverton AS/SVE system Monthly Mass Removal May 2006 to date



NWIRP Calverton AS/SVE system Cumulative Mass Removal May 2006 to date



Future Activities

- Collect quarterly groundwater samples mid to late March
- Restart the system following sampling in late March or early April
- Determine well casing elevations to assess groundwater flow rate
- Install new AS/SVE/MW wells to achieve better remediation in areas of concern as described by direct push investigation performed in October 2008



Questions?



ATTACHMENT 4

TETRA TECH PRESENTATIONS

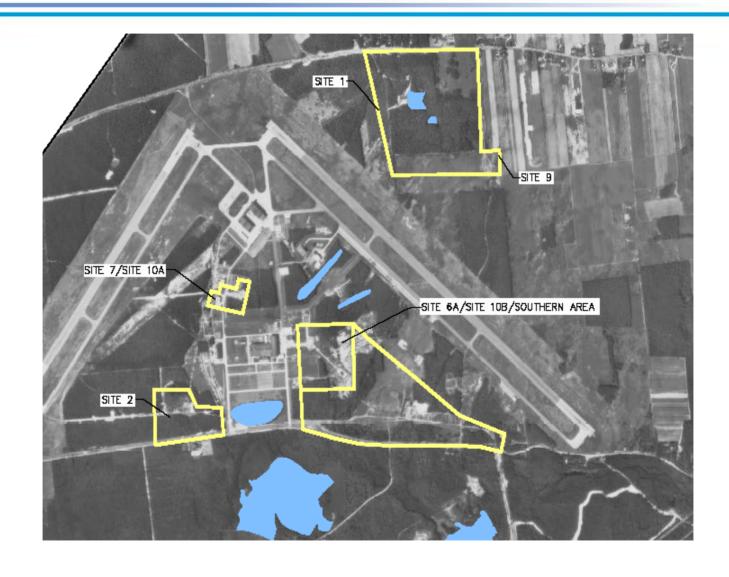


Restoration Advisory Board (RAB Meeting)

Site 2 – Removal Action
Naval Weapons Industrial Reserve Plant
(NWIRP) Calverton, New York
March 12, 2009

FACILITY LAYOUT





2 March 12, 2009

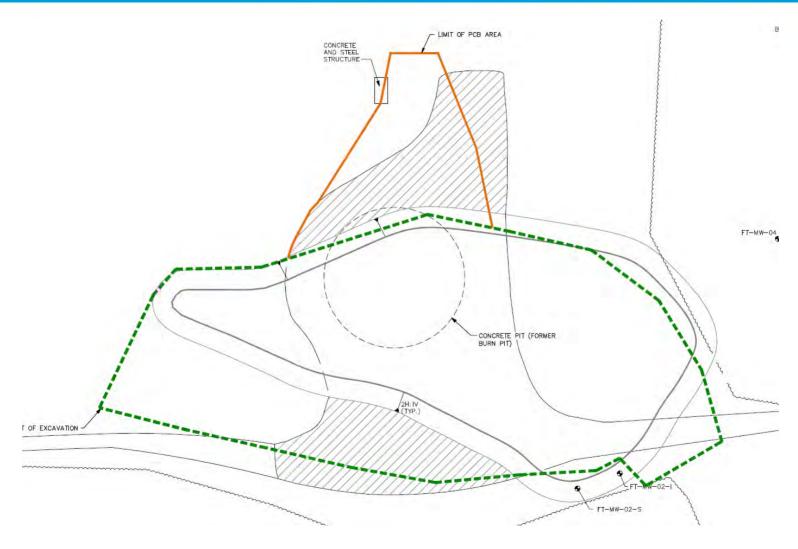
SITE 2 GROUNDWATER INVESTIGATION



- •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 is underway (October 2008 to March 2009).
- •Backfill is approximately 95 percent complete, operation shut down because of winter.

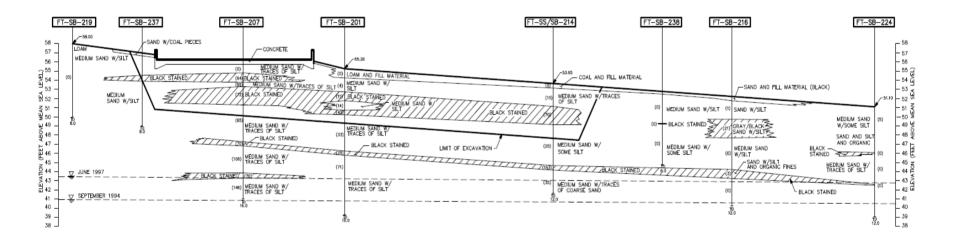
SITE 2 REMOVAL ACTION – EXCAVATION PLAN





SITE 2 REMOVAL ACTION – EXCAVATION PLAN







































Groundwater Investigation/Monitoring at Sites 2, 6A, 10B, and the Southern Area RAB Presentation

Naval Weapons Industrial Reserve Plant (NWIRP)

Calverton, New York

March 12, 2009

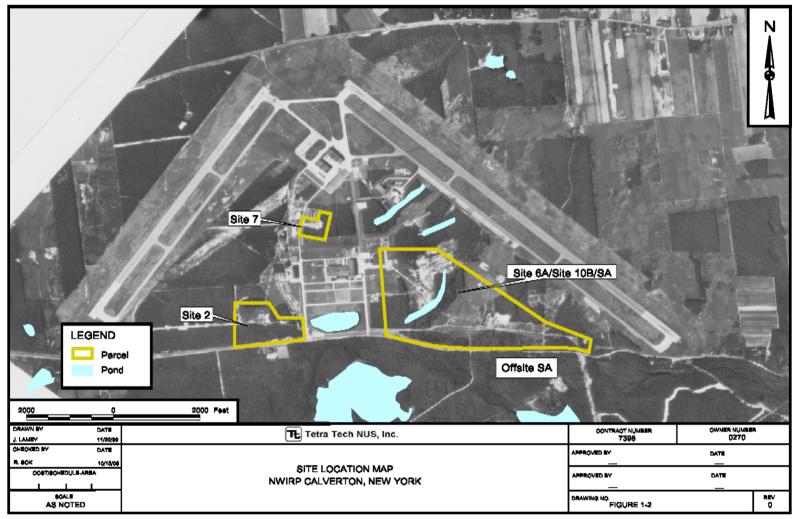
Work Plan – Scope and Objectives



- •Continuance of groundwater monitoring at:
 - -Site 2-Former Fire Training Area
 - -Site 6A-Old Fuel Calibration Area
 - -Site 10B-Engine Test House
 - -Southern Area On Site/Off Site
- •Groundwater investigation to target potential source areas and identified data gaps in current monitoring program.
 - -Temporary monitoring points to be installed to screen potential source areas and identified data gap areas.
 - -Permanent monitoring wells will be installed to address data gaps and support the ongoing groundwater monitoring program.

NWIRP Calverton –Site Location Map





PAGIGNAMIRP_CALVERTONGURFACE_WATER_HYDROLOGY.APR REVISED SITE LOCATION MAP 10/15/09 98

Southern Area

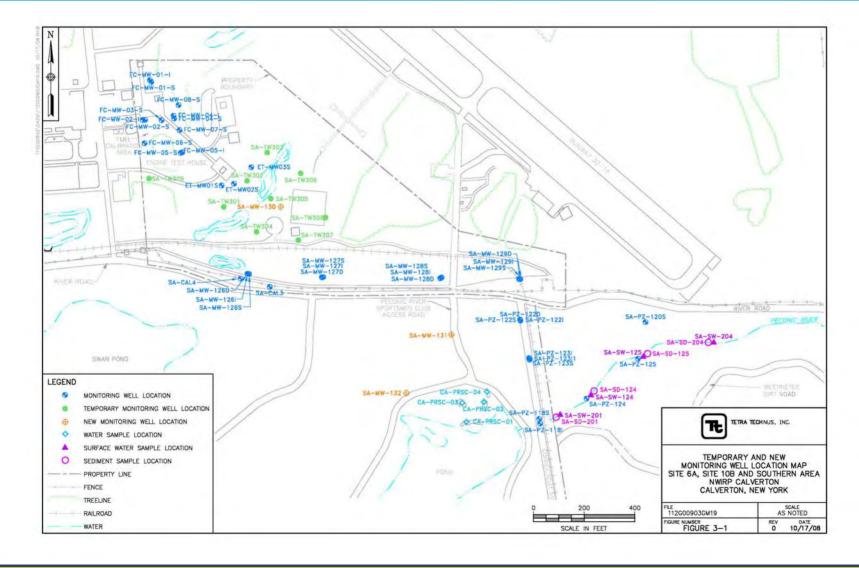


Groundwater Investigation

- •Groundwater grab sampling (approximately 9 locations) to investigate potential source areas and address identified data gaps in up-gradient area of the groundwater plume.
- •Based on results from the groundwater grab sampling, additional monitoring wells will be placed to best support the existing monitoring well network at the site.
- •Two new monitoring well clusters are proposed on PRSC property to address data gaps.
- •The new monitoring wells will be added to the groundwater monitoring program.

Southern Area – Groundwater Grab and Monitoring Well Locations





Anticipated Schedule



•Groundwater Investigation

- -Groundwater grab sampling, week of March 23, 2009
- -Permanent monitoring well installation, TBD

Groundwater Monitoring

- –March 2009, quarterly sampling event at PRSC and semi-annual surface water sediment sampling
- –June 2009, quarterly sampling at PRSC
- -September 2009, annual groundwater sampling event, quarterly PRSC sampling and semi-annual surface water sediment sampling
- -December 2009, quarterly sampling at PRSC
- -2010 sampling schedule TBD

ATTACHMENT 5

SUFFOLK COUNTY DEPARTMENT OF HEALTH SERVICES GROUNDWATER SAMPLING FIGURE

