



NOR-00679

April 5, 2010

Project Number 112G00903

Reference: Contract No. N62470-08-D-1001  
Contract Task Order No. WE08

Subject: RAB Meeting Notification and Meeting Minutes  
NWIRP Calverton, New York

### **MEMORANDUM**

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

The Navy would like to announce that a *Restoration Advisory Board (RAB)* meeting has been scheduled for Thursday, April 22, 2010. This meeting is open to the general public and will begin at 7:00 PM. The location of the meeting is the *Calverton Community Center, Grumman Boulevard, Calverton, New York*.

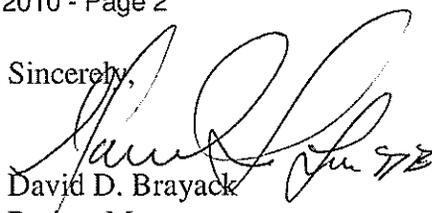
Items that will be discussed during this meeting will include:

- Site 7 Remedial Activities
- Site 6A and 10B Remedial actions
- December 2009 Interagency Meeting
- 2009 Groundwater Investigation Summary
- SCHDS Peconic River Sampling
- 2010 Groundwater Investigative Activities
- Southern Area Corrective Measures

Attached for your review are the minutes from the RAB meeting held on November 5, 2009. The Navy requests that you review the meeting minutes and provide comments that you have to the Remedial Project Manager, Ms. Lora Fly or to the RAB Community Co-Chair, Mr. Bill Gunther. These minutes will be discussed and approved at the April 22nd meeting. If you need additional information, please call Ms. Lora Fly at (757) 341-2012, or email, [lora.fly@navy.mil](mailto:lora.fly@navy.mil).

NOR-  
MS LORA FLY  
NAVFAC MID-ATLANTIC  
April 5, 2010 - Page 2

Sincerely,



David D. Brayack  
Project Manager

Distribution:

NAVFAC Mid-Atlantic, Lora Fly  
NAVAIR, Richard Smith  
NYSDEC (Albany), Larry Rosenmann  
NYSDEC (Albany), Henry Wilkie  
NYSDEC (Stony Brook), Katy Murphy  
NYSDOH, Steve Karpinski  
SCDHS, Andrew Rapiejko  
USEPA Region II, Ellen Stein  
USEPA Region II, Carla Struble  
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, Art Binder  
Community RAB Member, Louis Cork  
Community RAB Member, Harry Histan  
Community RAB Member, Jean Mannhaupt  
Community RAB Member, Ann Miloski  
Community RAB Member, Vincent Racaniello

Non-RAB Member Mailing List:

Frank Anastasi (SCA Associates)  
Tony Muratore  
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**RESTORATION ADVISORY BOARD MEETING  
NAVAL WEAPONS INDUSTRIAL RESERVE PLANT (NWIRP), CALVERTON  
CALVERTON COMMUNITY CENTER, CALVERTON, NEW YORK  
THURSDAY, NOVEMBER 5, 2009**

The thirty-first 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 and Henry Wilkie), RAB Community Members (Sid Bail, Bob Conklin, Bill Gunther, Harry Histan, and Vincent Racaniello), Suffolk County Department of Health Services (SCDHS) (Andrew Rapiejko), Town of Riverhead (Joe Maiorana), Tetra Tech NUS, Inc. (David Brayack, Debbie Cohen, and Robert Sok), ECOR Solutions, Inc. (Matt Lapp and Al Taormina), H&S Environmental (Pat Schauble), AGVIQ Environmental (Jesse Cox and Stephen Matney) and Frank Anastasi (SCA Associates). Approximately 6 guests 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.

**DISTRIBUTION AND APPROVAL OF MINUTES**

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

**COMMUNITY UPDATE**

Mr. Bill Gunther, RAB Community Co-chair, mentioned the transition has been made from Mr. John Hall to Mr. John Armentano as the Peconic River Sportsman Club (PRSC) representative as a RAB Community Member.

## **TECHNICAL PROGRESS – SITE 7 REMEDIAL ACTIVITIES**

Mr. Matt Lapp (ECOR Solutions, Inc.) provided a presentation on the status of remedial activities at Site 7, explaining that ECOR was subcontracted by the Operation and Maintenance (O&M) contractor to provide continued support for the site remediation work at Site 7. The presentation is included as Attachment 3.

The treatment system is an Air Sparge (AS)/Soil Vapor Extraction (SVE) System to remove BTEX, naphthalene, and Freon from shallow-zone groundwater at Site 7. Groundwater contamination has not been found in deeper-zone groundwater at Site 7. The treatment system was constructed in 2004. The system was designed to remove VOCs from groundwater through soil vapor extraction and enhance insitu biodegradation through air sparging. O&M for the AS/SVE system will continue until the remediation goals are attained.

As discussed during RAB meetings in 2008 and 2009, the system was effective in treating groundwater contamination at most of the site, but was not meeting treatment goals in the eastern and southern portion of the site. The Navy conducted additional sampling to determine the cause and identify modifications to the treatment system. The Navy determined that the treatment system needed to be expanded in the east and south to include AS wells near areas that require additional treatment. Additional SVE and monitoring wells would also be required.

Mr. Lapp reviewed the operational activities since the winter shutdown in December 2008. Groundwater samples were collected in March 2009, before restarting the system in April 2009. Mr. Lapp indicated that groundwater sampling will also be conducted after the system is shut down for the winter in December 2009. In addition to the weekly O&M activities, in June 2009, one SVE well (SV-14), one monitoring well (MW-20S), and seven AS wells (AS-35 to AS-41) were installed to provide additional treatment and monitoring in the eastern and southern portions of the groundwater plume. The SVE and AS wells were tied into the treatment system in July 2009 and have been operating since then.

Mr. Lapp reviewed the system runtimes and mass removals, including the updated information from August to October 2009. The system has resulted in an estimated 90 percent contaminant removal based on the reduction of VOCs in groundwater concentrations, with most areas showing greater than 99 percent removal. After the 2009/2010 winter shutdown, the Navy will evaluate the data from the new and existing SVE and monitoring wells to determine whether the

system is being effective in treating the elevated concentrations in the eastern and southern portions of the groundwater plume. Mr. Lapp indicated that the system will then be restarted in late March or early April 2010.

In answer to a question about whether there was much rebound in groundwater concentrations when the system was restarted in the spring 2009, Mr. Lapp indicated that there was some rebound. The August 2009 RAB presentation provided the graph showing the groundwater results after system startup in 2009; however, groundwater data was not collected since the August RAB; therefore, an updated graph was not provided in the November 2009 RAB presentation. Initial monitoring data indicates that the additional treatment wells are addressing the remaining contamination. Groundwater data from December 2009 and March 2010 will allow a better evaluation to be conducted.

#### **TECHNICAL PROGRESS – SITES 6A AND 10B REMEDIAL ACTIONS**

Mr. Steve Matney, AGVIQ Environmental, provided a presentation on the status of the Site 6A remedial action. The construction activities for the remedial action for Site 10B, discussed at the August 2009 RAB, were completed in May 2009. Down gradient groundwater monitoring for Sites 6A and 10B will be conducted to evaluate the effects of soil remediation activities. The presentation for Site 6A is included in Attachment 4.

Site 6A is the Fuel Calibration Area. This area was used from the 1950s to the mid 1980s to test jet aircraft systems. Previous actions at the site included removal of an underground fuel storage tank and installation and operation of a free product recovery system. The fuel was found to be mixed with chlorinated solvents. Between 1987 and 1992, a groundwater extraction system was used to enhance free product removal. Groundwater was discharged to an unlined ditch and culvert system that ultimately entered the area where groundwater contamination has been identified (Southern Area). A Corrective Measures Study (CMS) for soil contamination was prepared in May 2006, and a remedy was selected in 2008. The remedy consists of excavation and offsite disposal of contaminated soil and enhanced bioremediation of residual soil contamination below the water table.

Mr. Matney explained the various construction activities, including, demolition of the fuel pump house (Building No. 231), removal of the concrete pad, excavation of soil to, and as practical below, the water table, confirmation sampling along the side walls of the excavation, and

stockpiling of excavated soil for disposal off site. Air monitoring is being conducted during excavation activities. Approximately 660 tons of concrete from the pad removal was recycled as of the end of July 2009. Approximately 12,000 cubic yards of soil were excavated and based on test results, the soil is either being reused on site or taken off site for disposal. Free product was found during excavation in the eastern portion of Site 6A and a recovery system is being used to remove the free product from the excavation. In addition, an oxygen releasing compound (ORC) was applied to the bottom of the excavation prior to backfill to facilitate biodegradation of residual contamination below the water table. Approximately 2,300 gallons of free product and water have been removed and 2,600 pounds of ORC has been applied as of the end of October 2009.

Mr. Matney explained that most of the excavation and backfilling was completed as of October 30, 2009 and showed a figure with the remaining area for excavation. The work is expected to be completed in December 2009. A construction closeout report will be prepared to document the removal action activities. Ms. Fly explained that groundwater monitoring for the area is being conducted as part of the facility-wide monitoring program. Monitoring wells in the excavation area that were removed will be reinstalled after construction activities are completed. In addition, Ms. Fly explained that the confirmation sampling showed additional contamination in one area of Site 6A that will require the removal of approximately 2,000 cubic yards of soil. The Navy is determining the schedule for removal of this additional contamination at Site 6A.

There were several questions regarding the Site 6A removal actions. The following summarizes the questions and answers:

- What ORC compound is being used and is there any concern for oxidation of any metals from their natural state to a more mobile or toxic state? The compound is called Permeox Plus. It is a calcium-based product used to degrade petroleum products by adding oxygen to the soil at the top of the water table. One member mentioned that the addition of oxidizing compounds can result in the formation of more mobile and toxic forms of natural metals (e.g., hexavalent chromium). Mr. Brayack indicated that the ORC used is not a strong oxidizer. Mr. Rapiejko requested that groundwater monitoring after the removal action include metals analysis. The Navy indicated that it will consider metal analysis in future groundwater sampling at the site.

- Why was the excavated soil sent to a landfill instead of to a recycling facility? The Navy recycles materials to the extent possible; however, most of the excavated soil was not recyclable.

## **TECHNICAL PROGRESS – 2009 GROUNDWATER INVESTIGATIONS**

Mr. Rob Sok, Tetra Tech, provided a presentation on the status of 2009 groundwater investigations. The presentation is included in Attachment 5.

The Navy is conducting annual facility-wide groundwater monitoring that includes 13 monitoring wells at Site 2 – Fire Training Area, 12 monitoring wells at Site 6A – Old Fuel Calibration Area, 3 monitoring wells at Site 10B – Engine Test House, and 31 monitoring wells in the Southern Area. The wells at Site 6A include the wells that will be replaced after the removal action is completed. The Navy is also conducted an investigation in the Southern Area to identify potential additional source areas (hot spots) and identify data gaps to understand groundwater contaminant migration in the area. The Southern Area investigation included temporary groundwater point sampling at 17 locations and 3 depth and installation of 8 permanent monitoring wells. Other 2009 field activities included staff gauge installation on the PRSC property, slug testing of 26 monitoring wells, quarterly sampling of PRSC wells, and semi-annual surface water and sediment sampling.

Past releases of solvents to the soil and groundwater at Site 6A have resulted in a volatile organic compound (VOC)-contaminated groundwater plume that extends to the south of Site 6A. This Southern Area groundwater contamination is present both on the Calverton facility and extends south of the NWIRP Calverton facility to the Peconic River.

Mr. Sok reviewed the monitoring well and sampling locations, and the preliminary results of source area investigations. The results confirmed that the residual onsite groundwater contamination is limited to the downgradient fence line, plus a narrow band of contamination that extends west northwest (upgradient). The need for additional investigation and the search for potential sources will be discussed during the December 15, 2009 interagency technical meeting.

Future planned activities include a groundwater biodegradation study; continued semi-annual surface water and sediment sampling; annual groundwater monitoring; permanent monitoring

well installation as needed to support the monitoring well network; Waterline Engineering Evaluation/Cost Analysis (EE/CA); soil vapor structure sampling at PRSC; a technical meeting on the results of the potential source area investigation (in December 2009); and Site 2 offsite groundwater delineation.

In answer to a question on what the groundwater biodegradation study involved, Mr. Sok explained that the study involved only the collection and analysis of groundwater samples to provide a preliminary evaluation on the effectiveness of natural insitu biological activity in degrading groundwater contaminants. The Navy is planning to select six or seven wells for the evaluation. The wells will be selected based on the results of the September 2009 groundwater sampling. The Navy will provide a letter outlining the additional parameters, wells identified, and planned evaluation.

There was discussion on the concerns regarding the Southern Area contamination. The following summarizes the concerns and discussion:

- The SCDHS and the RAB Community Members expressed concern that VOC-contaminated groundwater is discharging to the Peconic River at concentrations that could cause an adverse impact on the water quality in the Peconic River, and that VOC concentrations in groundwater discharging to river may increase as upgradient VOC-contaminated groundwater in the onsite Southern Area reaches the Peconic River. The RAB Community Members requested that the Navy take more immediate action to address the elevated groundwater contamination in the offsite Southern Area.
- The Navy and NYSDEC representatives indicated that the nature and extent of groundwater contamination in the offsite Southern Area is still being investigated. The Peconic River and surrounding wetland are sensitive ecological habitats and impacts from VOC-contaminated groundwater versus proposed remedial actions need to be carefully evaluated to determine the best remedial option for the area.
- The Navy, NYSDEC, SCDHS, and other regulatory agencies overseeing the environmental cleanup activities at NWIRP Calverton are continuing to discuss the current understanding of the nature and extent of the VOC contamination in the offsite Southern Area groundwater plume and the potential impacts to the Peconic River.

Based on discussions in 2008 and 2009, the Navy conducted additional sampling of groundwater in the offsite Southern Area and surface water and sediment sampling of the Peconic River. SCDHS also conducted additional groundwater, surface water, and sediment pore water sampling and analysis. The Navy is evaluating the data and will discuss the results in the December 2009 interagency meeting to determine the next steps needed to address contamination in the offsite Southern Area.

- The community commented that the groundwater contamination has been known for several years, and does not understand why the Navy does not implement a groundwater extraction and treatment system now; even a simple single extraction and treatment well would show some progress.
- The Navy indicated that it would be premature to go out and install a groundwater pump and treat system. There are many factors that must be considered, including impacts to the environment (such as ecological receptors, wetlands, and the river) from groundwater flow changes caused by operation of the treatment system. Also, there is a process that must be followed including preparation of an engineering document, submittal of the proposal to NYSDEC and public, remedy selection, and then implementation. This is very important in an area where just accessing the area for sampling can create an adverse impact to the natural environment.
- NYSDEC explained that the process is designed to provide opportunities for public input. Also, the development and selection of remedial option to treat contaminants in the groundwater needs to consider impacts to the environment from the remedy.
- SCHDS provided the recent surface water and sediment pore water sample results from the screening evaluation SCDHS conducted along the Peconic River (Attachment 6). Sediment pore water and surface water samples were collected and analyzed for VOCs. SCDHS indicated that the data demonstrates that 1,1-DCA in the pore water is entering the river at concentrations up to 57 µg/L and is a threat to ecological receptors. SCDHS indicated that the testing was limited and that additional investigation was needed.

- The Navy stated that NYSDEC had calculated ecological screening values for 1,1-DCA, which was approximately 3,000 µg/L. SCDHS requested that the surface water and pore water results be discussed further during the December 2009 meeting.
- SCDHS also commented on the presence of 1,2,4-trichlorobenzene detected in surface water samples by the Navy at 4.9 µg/L and that it was detected in Navy groundwater data in onsite wells. The surface water quality standard for 1,2,4-trichlorobenzene is 5.0 µg/L. NYSDEC indicated that one detection below the surface water quality standard was not sufficient to trigger an action.

### **SEPTEMBER 2009 INTERAGENCY MEETING**

Ms. Fly (Navy) and Mr. David Brayack (Tetra Tech), provided an update on the September 2009 interagency meeting. Ms. Fly explained that Navy is holding a series of technical meetings to address concerns related to groundwater contamination from NWIRP Calverton. The concerns were discussed during the July 2009 interagency meeting, and the results of the July 2009 meeting were presented at the August 2009 RAB meeting. The main outcome of the July meeting was the agreement to have several technical meetings to review technical information and historical data to determine the appropriate next steps for each site.

The first in the series of technical meetings was held on September 15, 2009 (Attachment 7). The purpose of the meeting was to discuss what investigations have been conducted to identify potential source areas upgradient of the Southern Area contamination and to determine whether further source area investigation is needed. During the meeting, the Navy presented the results of the various investigations conducted from 1986 to present at Sites 6A and 10B, and nearby areas. Based on the review of all of the data, Site 6A was identified as the main source of contamination in the Southern Area. Two potential sources were also identified that require additional evaluation. McKay Lake was identified as one potential source because water from the lake flows into groundwater. If the historic discharge through Northrop Grumman's SPDES permit contained VOCs, the lake could have been a source of VOC-contaminated groundwater in the Southern Area. The Navy, NYSDEC, and SCDHS will try to locate historic documents related to Northrop Grumman's permit. The other potential source was cesspools adjacent to Site 6A. An investigation of the cesspools was conducted and evidence of significant contamination was not found. The cesspools were closed out in the mid-1990s. The Navy will locate and provide the closure report for the cesspools to the NYSDEC and SCDHS. After

these two potential sources are evaluated, then the technical team will determine whether identification of source areas has been completed.

The next interagency meeting is scheduled for December 15, 2009 to determine the additional steps needed to address contamination in the offsite Southern Area.

There was some discussion regarding contamination in the source areas. Mr. Brayack explained that there were some Site 6A wells with elevated VOC concentrations in 1994/1995 that are now at non-detected levels. Wells downgradient of the source area show contamination; however, at lower levels than in the Site 6A wells. There was also some discussion about other potential active sources, such as leaking tanks or waste water discharges. None were identified; however, it was noted that the contamination in the Southern Area hot spot area appears to be associated with a clayey soil that may act as a continuing source. As presented in this RAB meeting and the previous meetings in 2009, the Navy has been conducted source removal actions to remove or treat the majority of the residual contamination that may be acting as a continued source of contamination to groundwater. With the completion of the source area removal actions, the Navy will focus on addressing the contamination in the Southern Area.

There were several questions regarding the interagency meeting and possible options for the Southern Area contamination. The following summarizes the questions and answers:

- Is there any cost analysis that needs to be done now so that funding is available once the next step is determined? Ms. Fly explained that the Navy tries to forecast money needed for projects so that the funding will available when the projects are ready to begin.
- Are the technical meetings open to the public? No, the technical meetings are attended by the various agencies to allow for open technical discussion to determine agreements and action items. A summary of the technical meetings will be presented at the RAB meetings.
- It seems in the past, the Navy identified natural attenuation as the remedy for the Southern Area. Is this correct? The Navy previously evaluated remedial options for the

on site portion of the Southern Area plume, including an option for natural attenuation. The Sites 6A and 10B source area removals and groundwater monitoring were selected at this time. The Navy has not proposed a remedy for the off-site Southern Area plume. The Navy remains in the investigative stage to fill data gaps needed to evaluate remedial options.

- Is there any understanding of what the expected concentration will be at the river as the elevated contaminant concentrations (approximately 1,000 ug/L) migrates through the groundwater? Also, what happens to VOCs when they reach the river? The Navy is conducting tests to get information on how fast groundwater is moving and how fast contaminants are moving in the groundwater. The results will be discussed further during the December 2009 interagency meeting. Mr. Brayack indicated that based on the age of the release (1950s), it is likely that the leading edge of the original groundwater contaminant plume has already reached and entered the river. Once in the river, VOCs will typically evaporate into the atmosphere or dilute in the water. VOCs in the groundwater will pass into the sediment pore water where benthic organisms can degrade the contaminants. A RAB member indicated that the area around the river seems vibrant and wondered how much impact the groundwater contamination was actually having on the sediment and surface water environment.
- Are there technologies to treat the contamination at the river? Yes, there are various technologies available to treat the type of contamination at this site; however, it is important that the evaluation of technologies for this site consider the potential adverse impacts to the environment from implementation of the technologies.

## **CLOSING REMARKS**

Ms. Fly indicated that the Navy and regulators are working together to determine the appropriate focus for additional investigation and action to address the contamination at NWIRP Calverton, including the Southern Area groundwater contamination. The next interagency meeting is scheduled for December 15, 2009. In answer to a question about whether NYSDEC Region 1 personnel were involved in the discussions, Mr. Rosenmann indicated that NYSDEC Region 1 are briefed on the activities and that he keeps in contact with the appropriate people in Region 1 to keep them involved.

Ms. Fly proposed the date for the spring 2010 RAB meeting for Thursday April 22, 2010. The September 2009 data and the conclusions and results from the December 2009 interagency meeting would be available for the next RAB meeting.

Ms. Fly thanked everyone for coming to the meeting and asked whether the RAB members had any other questions. There were no further questions. The meeting was then adjourned.

**ATTACHMENT 1**

**NOVEMBER 5, 2009 RAB MEETING SIGN-IN SHEET**

**31st RAB Meeting for NWIRP Calverton  
November 5, 2009  
Sign-In List**

Name	Address (if interested in being on mailing list)	Organization	How Did You Hear of Meeting?
Robert Sok		TetraTech	
Patrick Schausle		H + S	
BOB CONKLIN		<del>RAB</del>	
Mike White		Riverhead News-Review	
Joe Maiorana		Town of Riverhead	
Harry Hestand		RAB	
Vincent Rosenthal		RAB	
Arl Baul		RAB	
Jen Skillbred		Group for the East End	
Michael Malayan		OSPT Trust	
Amy Teichatz		SCDFE	
Jodi Gliglio		Riverhead Councilwoman - elect	
Lora Fly		NAUPAC Midland	

# 31st RAB Meeting for NWIRP Calverton

November 5, 2009

## Sign-In List

Name	Address (if interested in being on mailing list)	Organization	How Did You Hear of Meeting?
Stephen M... Stephen M...	AGVIA Environmental 4610 Westgrove Court	AGVIA CHAMPELL	NAVFAC
Jesse Cox	AGVIA Environmental 4610 Westgrove Court	AGVIA CHAMPELL	NAVFAC
AL TAORMINA	ECOR		
Matt Lapp	ECOR		
Frank Anastasi	SCA Assoc (RAB Tech. Advisor)		
HENRY WILTIE	NYSDEC - Albany		
LARRY ROSENMAN	" "		
Bill Gunkler	RAB		
MaryCinn Johnston	Affiliated Brookhaven Center		631-281-7145
Andrew RABIGSKO	SCDHS		
David Brayock	TEMUS		
Debbie Cohen	TEMUS		

**ATTACHMENT 2**

**NOVEMBER 5, 2009 RAB MEETING AGENDA**

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# **Agenda**

## **Restoration Advisory Board Naval Weapons Industrial Reserve Plant Calverton**

**November 5, 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**

**Site 7 Remedial Activities**  
Matt Lapp, ECOR

**Sites 6A and 10B Remedial Actions**  
Steve Matney, Agviq

**2009 Groundwater Investigations**  
Rob Sok, Tetra Tech

**September 2009 Interagency Meeting**  
Lora Fly, NAVFAC/ Dave Brayack, Tetra Tech

**Closing Remarks**  
Lora Fly

*Presenters will be available after the program for questions.*

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**ATTACHMENT 3**

**ECOR SOLUTIONS, INC. PRESENTATION**



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

Restoration Advisory Board Meeting  
November 5, 2009



## Contract Transition

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- On July 1, 2009 the contract for site remediation activities at Site 7 was awarded to H&S Environmental
- Due to ECOR's experience at the site, H&S subcontracted ECOR to provide O&M support for this project.

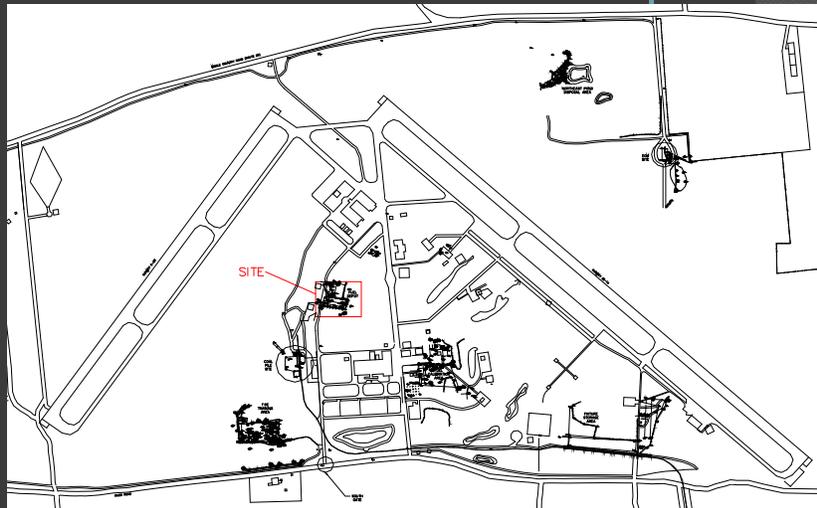


## Project Overview

- Constituents of Concern:
  - BTEX, Naphthalene, and Freon in groundwater
- AS/SVE System constructed 2004
- Goal:
  - Mass removal of groundwater VOC constituents via soil vapor extraction
  - Promote enhanced aerobic biodegradation via air sparging
  - Operate and maintain AS/SVE system until remediation goals are attained



## Site 7: Former Fuel Depot



Area Map



## Operational Activities

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- March 23-25, 2009 - Last groundwater samples collected
- April 3, 2009 – System restarted following winter shutdown
- Performed weekly O&M visits following start-up:
  - Monitored vapor-phase carbon adsorbers
  - Obtained instrument measurements
  - Ensured proper system operation
  - Performed general site inspections



## Operational Activities (con't)

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- On June 15-19, 2009 additional wells installed:
  - 1 – SVE well
  - 1 – Monitoring well
  - 7 – AS wells
- On July 28-31 wells tied in to the piping system



# System Runtime

## Yearly runtimes\*:

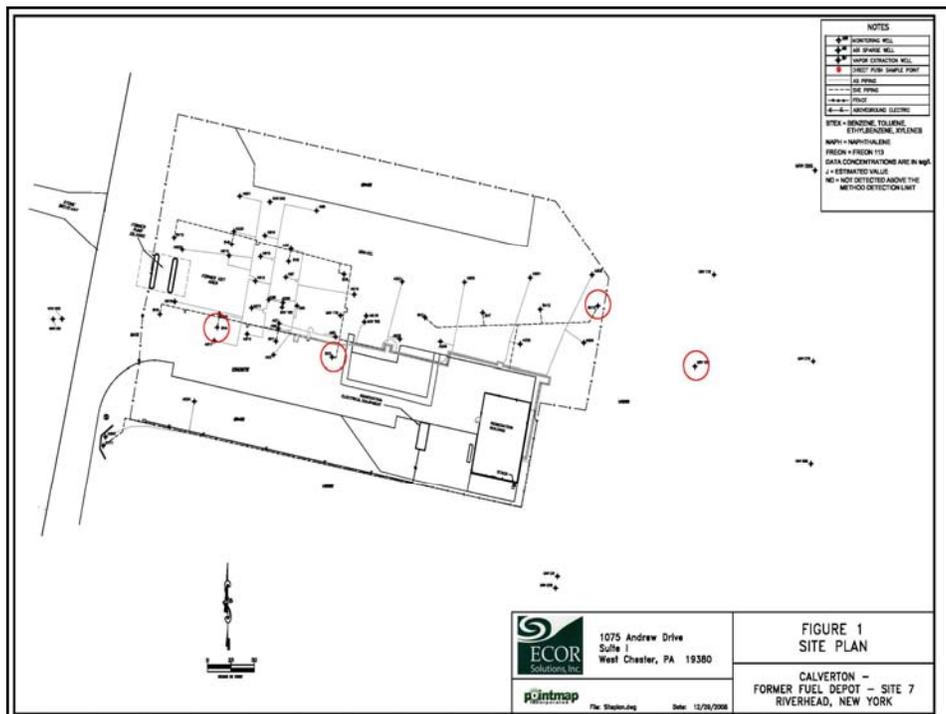
2007 – 6066 hrs (95.0%)  
 2008 – 5799 hrs (94.6%)

## Monthly runtimes (2009):

April – 648 hrs (100%)  
 May – 728 hrs (97.8%)  
 June – 712 hrs (98.9%)  
 July – 672 hrs (90.3%)  
 August – 720 hrs (96.7%)  
 September – 714 hrs (99.2%)  
 October – 718 hrs (96.5%)

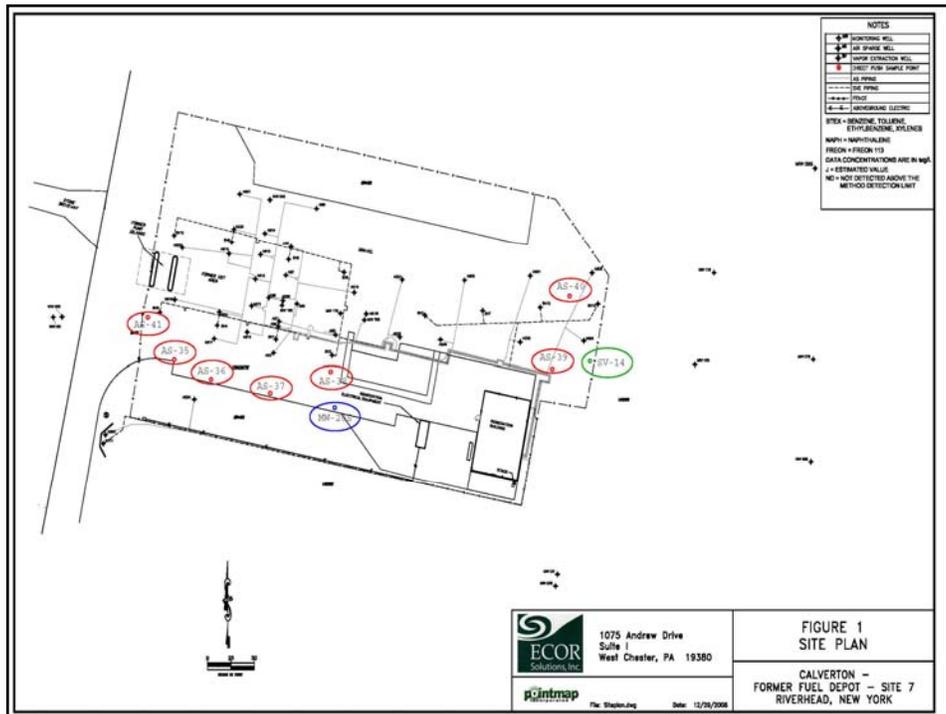


\*Downtime includes shutdowns for sampling



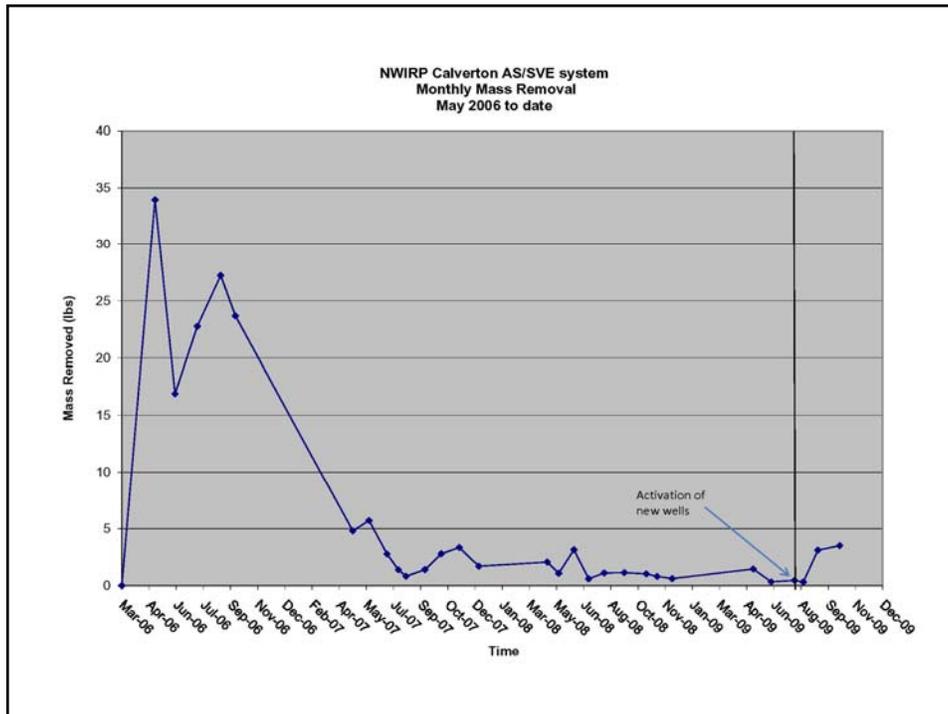
# Drilling/Installation of New Wells

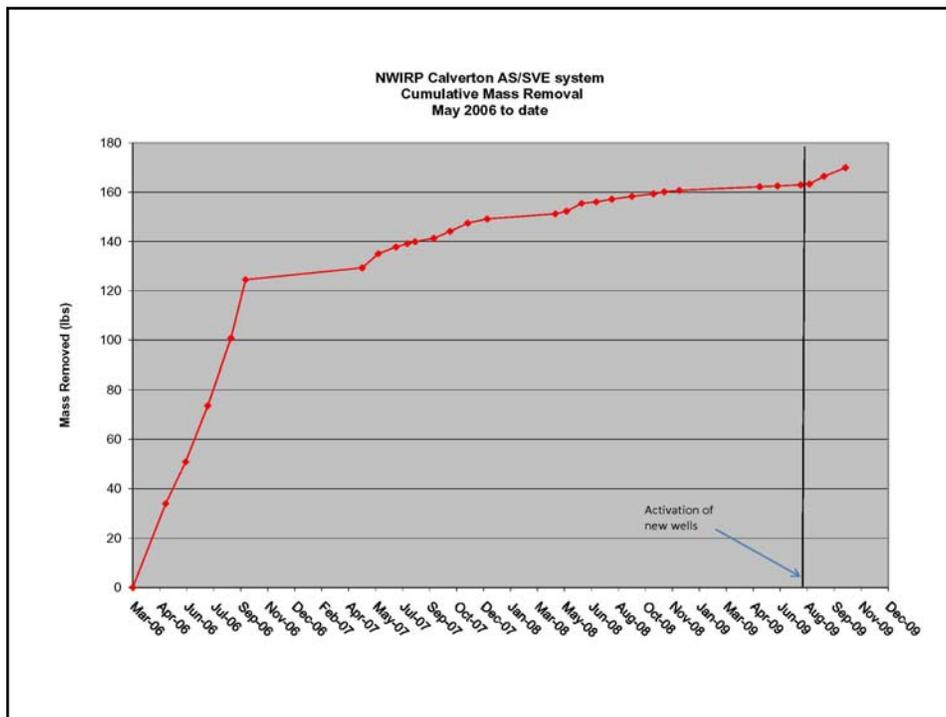
- Installed the following wells:
  - MW-20S (Monitoring well) to provide better monitoring of the southern part of the contaminant plume
  - SV-14 (SVE well) to provide increased vapor recovery at the eastern part of the site
  - AS-35 thru AS-41 (Air Sparge wells) to promote volatilization/attenuation in the southern boundary of plume
- SVE and AS wells tied into the current system during the last week of July 2009



# Mass Removal Statistics

- Cumulative Mass Removals:
  - 2007 – 24.72 lbs
  - 2008 – 11.54 lbs
- Monthly Mass Removals (2009):
  - April/May – 1.4 lbs
  - June – 0.32 lbs
  - July – 0.39 lbs
  - August – 0.32 lbs
  - September – 3.10 lbs
  - October – 3.50 lbs
- Mass removed since system inception– 169.9 lbs





## Future Activities

- Collect groundwater samples following winter shutdown in December 2009.
- Restart the system following sampling in late March or early April 2010
- Collect/evaluate data from the new SVE and Monitoring wells to determine if elevated concentrations in SV-2, SV-4, SV-13, MW-10S and MW-17S are being effected.



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Questions?



**ATTACHMENT 4**

**AGVIQ ENVIRONMENTAL PRESENTATION**



## Site 6A Fuel Calibration Area, Removal Action

Naval Weapons Industrial Reserve Plant (NWIRP)  
Calverton, New York  
November 5, 2009

### Site 6A Fuel Calibration Area - Removal Action Demolition

Demolition of the fuel  
pump house (Building  
No. 231)

- Concrete Recycled  
(concrete pad removal):  
663 Tons removed to  
date (7/28/09)



Photo Date: March 18, 2009



### Site 6A Fuel Calibration Area - Removal Action Concrete Removal

- A portion of the concrete pad was first removed prior to excavation activities.



Photo Date: June 4, 2009



### Site 6A Fuel Calibration Area - Removal Action Excavation to 4 ft below ground surface (bgs)

Excavation began on July 6, 2009. Crews began digging from 0 feet to 4 ft bgs at the western portion of Site 6A.



Photo Date: 7/14/09



## Site 6A Fuel Calibration Area - Removal Action Excavation to Water Table – Western Area

- Excavation to the water table (approximately 8 ft below ground surface).
- Confirmation samples were collected along the side wall of the excavation. Orange flags mark the location. Flags are along the black silt fence.



Photo Date: July 14, 2009



## Site 6A Fuel Calibration Area - Removal Action Air Monitoring

- Excavation continues to 4 ft below ground surface. Air monitoring is conducted in the breathing zone with a Flame Ionizing Detector (FID). Soils are also screened using the FID. The operator pauses excavation activities so soils can be screened.



Photo Date: July 21, 2009



### Site 6A Fuel Calibration Area - Removal Action Excavation

- Soils are loaded into an articulating dump truck and transported to the material staging area.



Photo Date: July 14, 2009



### Site 6A Fuel Calibration Area - Removal Action Stockpiling

- Soils are stockpiled on 10 mil polyethylene sheeting. Piles are covered and secured every evening.
- Approximately 12,000 cubic yards excavated to date (10/28/09)



Photo Date: July 23, 2009



## Site 6A Fuel Calibration Area - Removal Action Stockpiling

- Soils are stockpiled on 10 mil polyethylene sheeting. Piles are covered and secured every evening.
- There has currently been twenty five reuse samples taken, 1 per 500cu yd stockpile.
- There has been 7 Waste Characterization samples collected. One per 1,000 cubic yards of materials failing reuse criteria.

Photo Date: August 8, 2009



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## Site 6A Fuel Calibration Area - Removal Action Excavation to Water Table – Eastern Area

- Excavation to the water table (approximately 8 ft below ground surface).
- Confirmation samples were collected along the side wall of the excavation.

Photo Date: October 19th, 2009



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## Site 6A Fuel Calibration Area - Removal Action Free Product recovery

- Excavation to the water table and below to 8 ft below ground surface). Free product formed in this area.
- To date approximately 2,340 gallons of free product and water have been recovered.



Photo Date: September 24th, 2009



## Site 6A Fuel Calibration Area - Removal Action ORC application

- After completion of excavation to the water table and/or 1 below to 8 ft below ground surface) ORC (Permeox) is applied .
- To date 2,600 lbs. of ORC have been applied to the excavation.

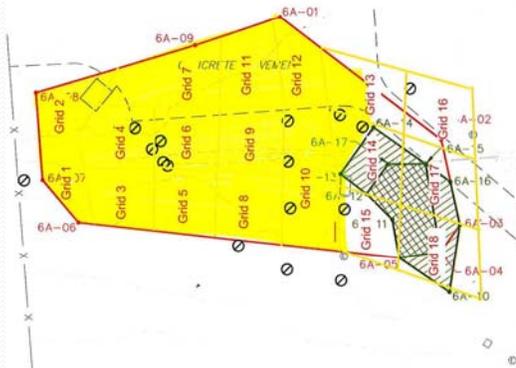


Photo Date: August 12th, 2009



### Site 6A Fuel Calibration Area - Removal Action

Overall Progress View of the As-Built/Grid Map for areas completed and backfilled as of 10/30/09 at Site 6A.



**ATTACHMENT 5**

**TETRA TECH PRESENTATION**



## Summary of 2009 Field Activities



### Annual Facility-Wide Groundwater Monitoring:

- Site 2-Former Fire Training Area (13 monitoring wells)
- Site 6A-Old Fuel Calibration Area (12 monitoring wells)
- Site 10B-Engine Test House (3 monitoring wells)
- Southern Area (31 monitoring wells)

### Southern Area groundwater investigation targeting potential source areas and identified data gaps:

- Groundwater grab and temporary well sampling at three discrete depths (17 locations)
- Permanent monitoring well installation (3 shallow, 4 intermediate, and 1 deep well) - to address data gaps and support the ongoing groundwater monitoring program

3

## Summary of 2009 Field Activities

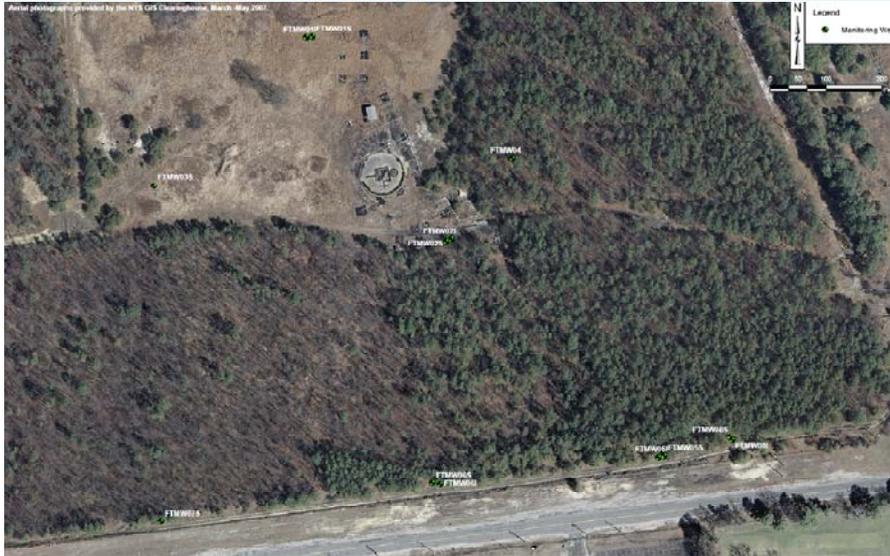


### Other Facility Activities:

- Staff gauge installation (2 located on PRSC property)
- Slug Testing at 26 monitoring wells
- Quarterly PRSC sampling
- Semi-annual surface water and sediment sampling

4

## Site 2 Monitoring Well Locations



5

## Site 6A and 10B Monitoring Well Locations



6



## Southern Area – 2009 Potential Source Area Investigation



- In March 2009, groundwater grab sampling was conducted at nine locations via Direct-Push Technology between Site 10B and the railroad
- In September 2009, temporary well program was conducted at eight locations via hollow stem auger, placed between the railroad and River Road.
- In both events, three groundwater samples were collected at approximate depths of 15, 30, and 50 feet below ground surface. Deepest sample collected above the clayey silt unit (aquicard)

## Southern Area – Groundwater Grab/Temporary Well Preliminary Results



## Future Activities

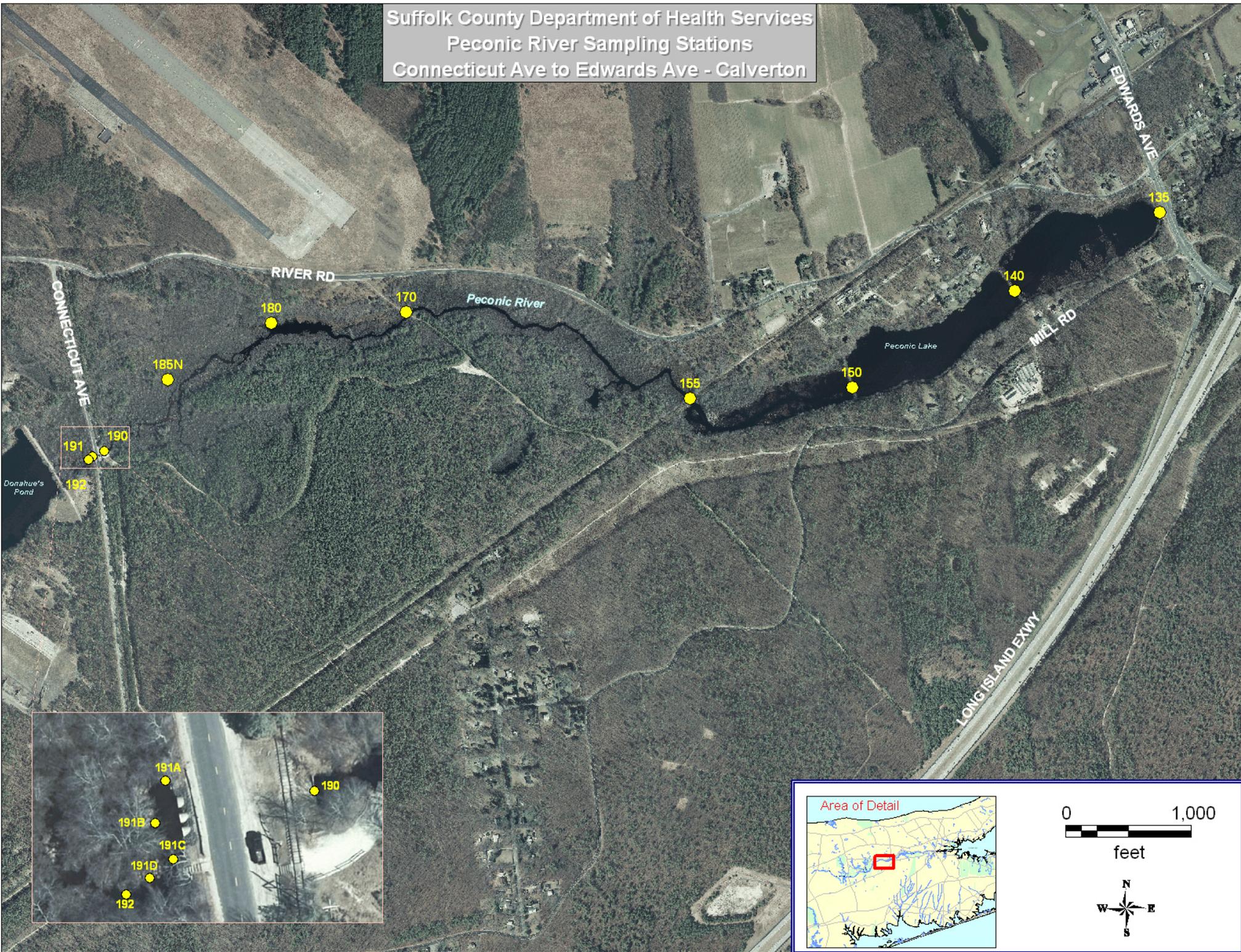


- Groundwater Biodegradation Study (November 2009 to January 2010)
- Quarterly PRSC sampling (4<sup>th</sup> quarter 2009, 2010 quarterly sampling)
- Semi-annual surface water and sediment sampling (spring and fall 2010)
- 2010 Annual groundwater sampling event (fall 2010)
- Permanent monitoring well installation (as needed for monitoring network)
- Waterline Engineering Evaluation Cost Analysis, public comment period, and Action Memorandum (November 2009 to January 2010)
- Soil vapor intrusion sampling (PRSC)
- Additional groundwater grab/temporary well sampling – Technical Meeting discussion
- Site 2 – Off-site groundwater delineation

**ATTACHMENT 6**

**SCDHS FIGURE/RESULTS**

Suffolk County Department of Health Services  
Peconic River Sampling Stations  
Connecticut Ave to Edwards Ave - Calverton



Suffolk County Department of Health Services  
 Peconic River Surface Water 2009 VOC Data  
 Between Connecticut Ave Edwards Ave

Surface Water Station ID	Location	Sample Date	1,1-Dichloroethane ppb	All other VOCs
192	W/O Connecticut Ave. N bank at bottom just inside PRSC fence	4/8/2009	<0.5	No Detect
191A	W/S Connecticut Ave. N/W bank at bottom at broken fence	4/8/2009	<b>1.9</b>	No Detect
191B	W/S Connecticut Ave. N central bank at bottom opp. central culvert	4/8/2009	<0.5	No Detect
191C	W/S Connecticut Ave. S central bank at bottom opp. Stairs	4/8/2009	<0.5	No Detect
191D	W/S Connecticut Ave. SW bank at bottom at fence	4/8/2009	<0.5	No Detect
190	E/S Connecticut Ave at boat launch	6/1/2009	<0.5	No Detect
185N	Peconic Rive North Trib - S/O Bell Atl #117 S/S River Rd	6/1/2009	<0.5	No Detect
180	S/o River Rd - E/O pole#122 - Trails end for angler parking area #7 - at shore	6/2/2009	<0.5	No Detect
170	At culvert on DEC trail s/o River Rd & Calverton Runway	6/1/2009	<0.5	No Detect
155	At LIRR track - s/o River Rd	6/1/2009	<0.5	No Detect
150	West end Peconic River Herb Farm - at old spliway	6/1/2009	<0.5	No Detect
140	At spillway behind #26 Mill Rd	6/2/2009	<0.5	No Detect
135	At spillway - w/s Edwards Ave	6/1/2009	<0.5	No Detect
135	Peconic River Synoptic, W/S Edwards Ave Spillway	11/14/2001	<b>0.6</b>	No Detect

indicates historic detect of 1,1-dichloroethane at Edwards Ave

**ATTACHMENT 7**

**SEPTEMBER 15, 2009 INTERAGENCY TECHNICAL MEETING SUMMARY**

Interagency Technical Meeting  
September 15, 2009

Potential other source areas investigated near Site 6A – Former Fuel Calibration Area and 10B – Engine Test House.

The purpose of this technical meeting was to determine:

1. What investigations were conducted by the Navy and Northrop Grumman in potential source area upgradient of the Southern Area; and
2. Determine if any further investigation is needed in these areas to identify potential additional sources.

The Navy and Northrop Grumman investigated the following sites:

Site 6A – Former Fuel Calibration Area  
Site 10B – Engine Test House  
New Fuel Calibration Area  
Old Paint Shop  
Former Stripping Building  
New Paint Hanger  
Aircraft Shelters  
Waste Treatment Facility  
Leachfields/Cesspools  
Plant 6

Conclusion:

- Site 6A was the major source of Southern Area contamination.
- Contamination was found at some of the other areas investigated; concentrations were low when compared to Site 6A.
- Groundwater flow was toward Site 6A and Site 10B areas and contamination from these areas would be identified in the Sites 6A and 10B investigations.
- Remedial actions are currently being conducted at Sites 6A and 10B to address the primary source areas of the groundwater contamination.

McKay Lake was identified as a potential source of groundwater contamination. In particular, there is a SPDES permit that regulated the discharge of treatment water (industrial and sanitary) from the facility.

Action Items:

1. NYSDEC to review the McKay Lake discharge reports and priority pollutant scans that may have been conducted as part of the permitting process.
2. In addition, the Navy will locate the closure report for the cesspools at Calverton and distribute copies to the state and county.