

**RESTORATION ADVISORY BOARD MEETING
NAVAL WEAPONS INDUSTRIAL RESERVE PLANT CALVERTON
CALVERTON COMMUNITY CENTER
CALVERTON, NEW YORK
THURSDAY, AUGUST 2, 2007**

The twenty-fourth meeting of the Restoration Advisory Board (RAB) began at approximately 7:00 pm. Meeting attendees included representatives from the Navy (Susan Clarke, Nina Johnson, and Suzanne Krolikowski), New York State Department of Environmental Conservation (NYSDEC)(Henry Wilkie), RAB community members (Bill Gunther, Sid Bail, Harry Histan, Ann Miloski, and Lou Cork), Town of Riverhead (Andrea Lohneiss), Peconic River Sportsman Club (Tony Muratore), TAPP Consultant (Frank Anastasi), Suffolk County Department of Health Services (SCDHS) Representative (Andrew Rapiejko), Nature Conservancy Center for Conservation (Laura Bavaro), Group for the East End (Jennifer Skilbred), Tetra Tech NUS, Inc (Tetra Tech) Representatives (David Brayack and Timothy Smith), and ECOR-Solutions Representatives (Will Torres and Matt Lapp). The meeting sign-in sheet is provided as Attachment 1.

WELCOME AND AGENDA REVIEW

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

DISTRIBUTION AND APPROVAL OF MINUTES

Ms. Clarke asked for any comments or concerns on the meeting minutes taken during the March 29, 2007 RAB meeting. These meeting minutes were distributed on May 31, 2007. Mr. Gunther RAB Community Co-Chair indicated that Andrew Rapiejko's name was miss-spelled in the March 29, 2007 meeting minutes, and requested that the minutes be amended to reflect the correct spelling of his name. With no other comments or concerns voiced, Ms. Clarke motioned for the approval of the March 29, 2007 RAB meeting minutes. The motion was first, second, and approved as amended.

COMMUNITY UPDATE

Mr. Gunther, RAB Community Co-Chair, indicated that since the last RAB meeting Jean Mannhaupt (RAB Member) voiced a question concerning laboratory issues. Correspondence with the Navy resolved the issue. Mr. Gunther continued by indicating that the RAB community members are in general consensus that the deed transfer (Parcels C1 and D) should happen as soon as possible. Mr. Gunther's comments concluded with a question on the volatile organic compound (VOC) breakdown constituent and asked if there was a paper trail from the breakdown products to the initial VOC contamination. Mr. Brayack indicated that this process can be discussed during the presentation.

TECHNICAL PROGRESS

The technical progress presentation handout is provided with these minutes as Attachment 3.

TECHNICAL PROGRESS – GENERAL PROGRAM AND AGRICULTURAL OUTLEASE RCRA PERMIT MODIFICATION AND PROPERTY TRANSFER.

Ms. Clarke presented the facility layout and announced that the property transfers for Site 1, Site 9 and Site 10A (Parcels C1 and D) are imminent. Ms. Clarke indicated that the deeds would be transferred in the next 2 weeks. Ms. Clarke continued by indicating that the Resource Conservation and Recovery Act (RCRA) Permit for these sites was modified in February 2007 and that the Navy is working on the Statement of Basis for Site 6A, Site 10B, and the Onsite Southern Area. Ms. Clarke concluded by indicating that work is proceeding on Site 2, Site 6A, Site 10B, and the Onsite Southern Area.

TECHNICAL PROGRESS – SITE 2, SITE 6A, SITE 10B, AND ONSITE SOUTHERN AREA SAMPLING PROGRAM AND STATEMENT OF BASIS

Mr. Brayack, (Tetra Tech) recapped the March 2007 discussion concerning VOCs in the off site groundwater, including an area adjacent to the Peconic River and the sampling program related to these findings. There was a discussion regarding Mr. Gunther's

comment concerning VOC contamination (breakdown constituents and source VOC contamination) raised during the Community Update. In particular, 1,1,1 trichloroethane, which is the primary site chlorinated solvent, breaks down sequentially to 1,1-dichloroethane, chloroethane, and eventually ethane. The presence of these breakdown products is a good indication of biological degradation.

Mr. Brayack continued with the planned facility wide sampling program that is scheduled to begin in November 2007. This work was originally planned for June, but was delayed to incorporate 20 new wells to be installed this fall.

As part of the discussion on the facility wide sampling program, Mr. Andrew Rapiejko with SCDHS indicated that he had sent a letter to the New York Department of Health requesting that the Navy pick up the quarterly sampling being conducted at the Peconic River Sportsman Club. Ms. Clarke indicated that the Navy was looking into this request.

Mr. Brayack discussed previous remedial activities that were conducted at Site 2. These activities included free product removal and the operation of an air sparging/soil vapor extraction system. Based on post-treatment soil testing, contamination remains within the Site 2 soil, and in particular is concentrated with a petroleum rich soil layer at the site. This soil layer is targeted for removal under an interim removal action.

Mr. Brayack also indicated that following the facility wide groundwater sampling program, the Navy will prepare a feasibility study to evaluate remediation alternatives for the groundwater at Site 2.

Since the wells at Site 2 have not been sampled in several years, the condition of the wells was questioned. It was suggested that the groundwater sampling work plan contain language that will allow for the restoration/replacement of older wells that may be damaged. Mr. Brayack indicated that at a minimum the wells will be inspected and re-developed. Replacement will be considered for those wells that have been damaged.

Mr. Brayack discussed the findings of the Site 6A Southern Area Groundwater Plume investigation. There was a question concerning the concentrations in this plume and if concentrations have changed since the last RAB meeting. Mr. Brayack indicated that

groundwater samples have not been collected since the last RAB meeting. The question was restated to ask if the plume is moving in the same manner as it was reported last year. Mr. Brayack indicated that the Navy has not collected any data to suggest any changes in the groundwater flow direction or trends.

Mr. Brayack discussed the planned locations new monitoring wells along the southern fence line and additional wells along Connecticut Avenue that would be added off site to supplement the existing monitoring well network.

The proposed remedy for Site 6A and Site 10B contaminated soils was discussed. A question was asked during the presentation on the Statement of Basis for Sites 6A and 10B requesting information on the anticipated time frame for implementing the Site 6A and Site 10B Statement of Basis. Mr. Brayack indicated that the Statement of Basis for Site 6A and Site 10B should be implemented in fiscal year 2009. Mr. Brayack also indicated that implementation may occur earlier.

There was a question concerning the location of the polychlorinated biphenyl (PCB)-contaminated soils at Site 6A. Mr. Brayack indicated that the PCB contamination within the soils is well defined and is located near a former transfer concrete pad.

Mr. Brayack summarized the planned field activities, including the installation of approximately 19 new monitoring wells along River Road, Connecticut Avenue, and in the vicinity of the Peconic River Sportsman Club. Mr. Brayack continued by indicating that the facility wide groundwater sampling work plan also called for surface water sampling and sediment sampling. The intent of the facility wide sampling program is to verify the extent of the groundwater plume within the fence line of the facility and within the vicinity of the Peconic River Sportsman Club and the Peconic River.

Following Mr. Brayack's presentation, the following questions were raised.

Question: Does the Navy plan to collect air samples form within the Peconic River Sportsman Club if the groundwater plume is found to extend below these buildings?

Answer: Mr. Wilkie (NYSDEC) indicated that recently, the area was evaluated to determine if air sampling should be conducted in the Peconic River Sportsman Club buildings and it was determined that air sampling was not required.

Question: Are the new wells proposed in the facility wide sampling work plan the wells discussed last year?

Answer: The new monitoring wells being discussed today were not previously discussed. Wells discussed last year and have been installed and sampled.

Question: How is the plume progressing, is it moving faster?

Answer: The sampling results within the proposed wells will address the progression of the onsite and offsite groundwater plume. The results will also identify if the groundwater contamination is moving in slugs or if the contamination is continuous.

Question: How do upgradient contaminant concentration levels compare with Connecticut Avenue contaminant concentration levels?

Answer: Available data shows that solvent concentrations in the source area are much lower than in the downgradient areas and historic concentrations in the source area were high enough to account for concentrations found offsite. The new wells will provide a clearer picture concerning plume migration and degradation.

Conversation continued on the sampling program south of River Road, the purpose of these samples and the degradation products found in the groundwater south of River Road that suggest that biological activity is occurring, and the steps that lay ahead with the preparation of an Feasibility Study/Corrective Measures Study (FS/CMS). The following questions were raised.

Question: At what rate is the plume migrating?

Answer: To date the Navy has no data to suggest a change from the historically reported rate of one foot per day, but the new data would help to further define the migration rate.

Question: Has the groundwater plume reached the Peconic River?

Answer: The Navy indicated that the groundwater plume is at the Peconic River now.

Following the Presentation and the conversation that occurred afterward, Mr. Gunther confirmed with the Navy that 1) the facility wide groundwater sampling work plan would be submitted before the next RAB meeting, 2) the sampling would begin by November, and 3) Excavation of the Site 6A soils would begin as soon as possible. The Navy agreed and confirmed Mr. Gunther's list of items,

SITE 7 FUEL DEPOT AREA OPERATION

Mr. Torres, ECOR Solutions, provided a presentation on the Groundwater Remediation Project for Site 7 – Former Fuel Depot. The presentation is included with these minutes as Attachment 4. Mr. Torres's presentation focused on the process of the AS/SVE system, operation activities to date, well locations, and the results of the June groundwater sampling event. Mr. Torres presented concentration trends in the groundwater that showed a general decrease in concentrations over time. Mr. Torres concluded his presentation by indicating that they may be requesting that some of the system wells be shut down to enhance treatment in other areas.

The following questions were raised as a result of the presentation.

Question: Are the system wells used for groundwater sampling?

Answer: Yes, but the system is shut down first.

Question: Do groundwater levels fluctuate?

Answer: Available data does not suggest significant fluctuation.

Question: Do the increased concentrations in a couple of wells suggest a change in treatment duration?

Answer: It is too early to tell whether additional treatment time will be required. For now, enhancing treatment in specific areas will address the increasing concentrations. However, if treatment duration needs to be extended, it will be.

Question: Can ECOR Solutions provide mass removal information in future presentations? This information will provide a good indicator of process effectiveness.

Answer: ECOR Solutions will provide the mass removal information in the future.

Question: Can ECOR Solutions provide the mass removal information to date so that it can be included in these minutes.

Answer: ECOR Solutions will provide the mass removal information to the Navy so that the information can be incorporated into the meeting minutes.

The mass removal information is provided in these meeting minutes as Attachment 5.

SCA ASSOCIATES UPDATE

Mr. Anastasi, RAB Community Chair, reported on the correspondences since the March RAB meeting. Mr. Anastasi indicated the following;

- The CMS for the Off Site Area Plume has been reviewed and discussions have convinced the RAB members that groundwater does flow to the river and deep groundwater along with groundwater beyond the river is not contaminated.
- A memorandum was prepared April 6th that discusses the CMS and the appropriateness that the CMS did not present a remedy due to outstanding issues.
- Navy's facility wide groundwater monitoring program will answer the questions raised in the April 6th memorandum.

Mr. Anastasi concluded that he believes that the Navy is progressing and is taking the steps that they need to make at this time. Mr. Anastasi concluded by suggesting the following.

- Navy should find where groundwater discharges to the Peconic River by looking at the permeability of the soils along the river. *The Navy indicated that they are having discussions on the determination of preferential flows.*
- Quality Assurance/Quality Control (QA/QC) procedures should be adjusted to get rid of outliers or false positives to ensure that these contaminants are indeed not a concern. *The Navy indicated that the periodic/repetitive sampling will address these concerns.*
- Typical operations at burn pits can result in dioxin, furans, and PCB contamination, the Navy should consider adding these parameters to the sampling program for Site 2. *The Navy indicated that indicator parameters did not show up so dioxins and furans were not believed to be present.*

CLOSING REMARKS

Ms. Clarke thanked everyone for coming to the meeting and verified that the Next RAB meeting would be held November 8, 2007. A notice for the next RAB meeting will be provided.

No other RAB members had closing remarks, and the meeting was adjourned at approximately 8:40 pm.

ATTACHMENT 1

AUGUST 2, 2007 RAB MEETING SIGN-IN SHEET

Meeting Attendance List
with phone numbers
has been redacted.

Meeting Attendance List
with phone numbers
has been redacted.

ATTACHMENT 2

AUGUST 2, 2007 RAB MEETING AGENDA

Agenda

Restoration Advisory Board Naval Weapons Industrial Reserve Plant Calverton

**August 2, 2007
Calverton Community Center, Calverton NY
7:00 p.m.**

Welcome and Agenda Review

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

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

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

Off-Site Southern Area Update - Peconic River Sample Data
- Dave Brayack, Tetra Tech NUS

Site 7 Fuel Depot Area Operation - ECOR

SCA Associates Update - Frank Anastasi

Closing Remarks

Susan Clarke

Presenters will be available after the program for questions.

ATTACHMENT 3

NAVY PRESENTATION

**RETORATION ADVISORY BOARD (RAB MEETING)
NAVAL WEAPONS INDUSTRIAL RESERVE PLANT
(NWIRP) CALVERTON, NEW YORK
AUGUST 2, 2007**

Restoration Advisory Board (RAB Meeting)
Naval Weapons Industrial Reserve Plant
(NWIRP) Calverton, New York
August 2, 2007

Agenda

Restoration Advisory Board Naval Weapons Industrial Reserve Plant Calverton

August 2, 2007
Calverton Community Center, Calverton NY
7:00 p.m.

Welcome and Agenda Review

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

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

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

Off-Site Southern Area Update - Peconic River Sample Data
- Dave Brayack, Tetra Tech NUS

Site 7 Fuel Depot Area Operation - ECOR

SCA Associates Update - Frank Anastasi

Closing Remarks

Susan Clarke

Presenters will be available after the program for questions.



General Program Notes

- ◆ Sites 1, 9 and 10A Property Transfer is imminent
- ◆ RCRA Permit modified (Feb 07)
- ◆ Working on Statement of Basis for Sites 6A, 10B and Onsite Southern Area
- ◆ Field Work is proceedings (Sites 2, 6A, and 10B and Southern Area)

Property Transfer

- ◆ Sites 1 (NE Pond), 9 (ECM Area) and 10A (Jet Fuel Systems Lab) are ready for transfer
- ◆ Quit Claim Deeds being prepared; ready to be submitted except for obtaining proper metes and bounds description
- ◆ Transfer Process – prepared FOST, EBST, obtained NYSDEC concurrence, RCRA Permit modified, quit claim deed prepared & submitted; Town of Riverhead accepts property

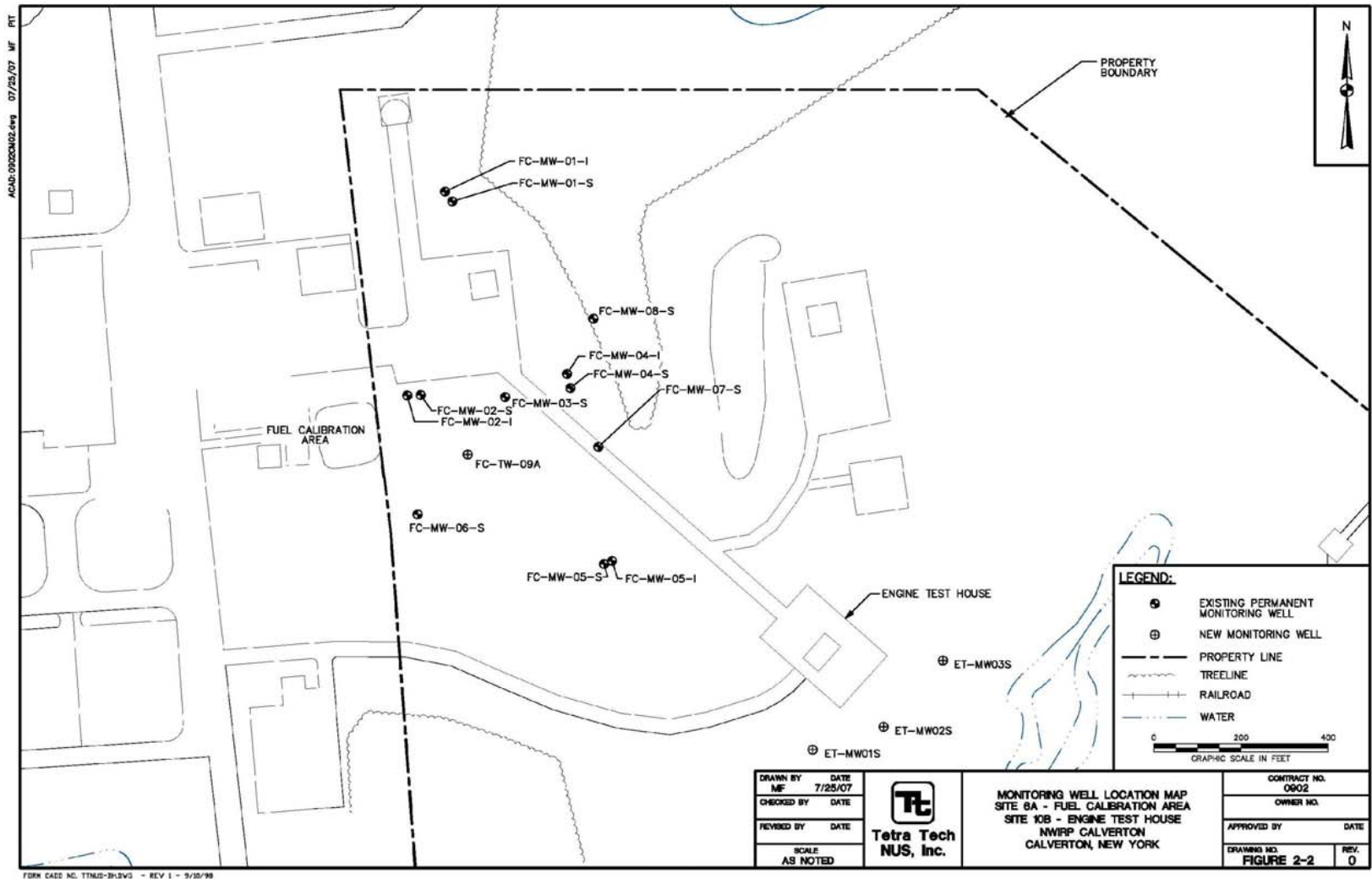
02 Aug 2007



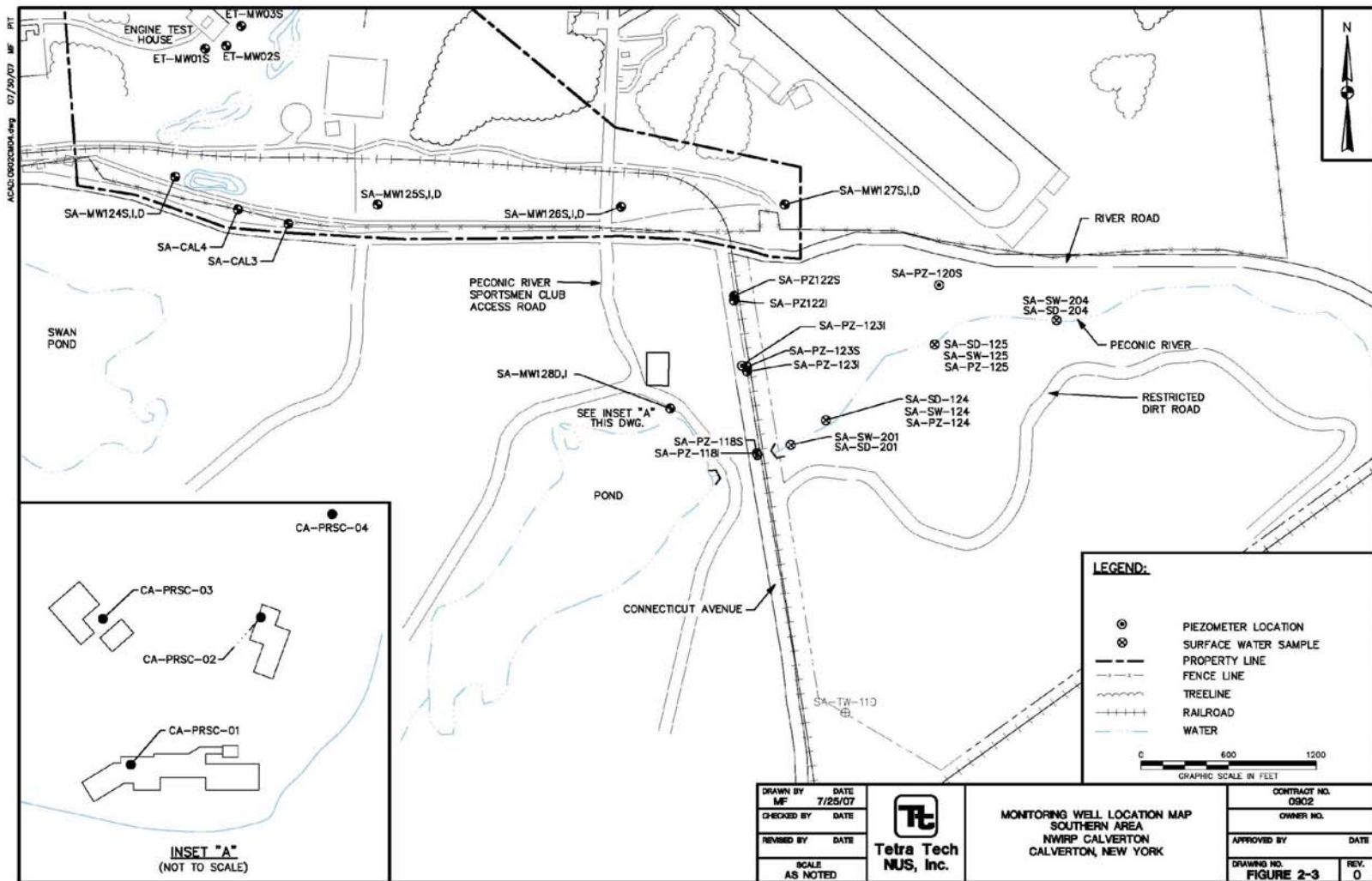
02 A



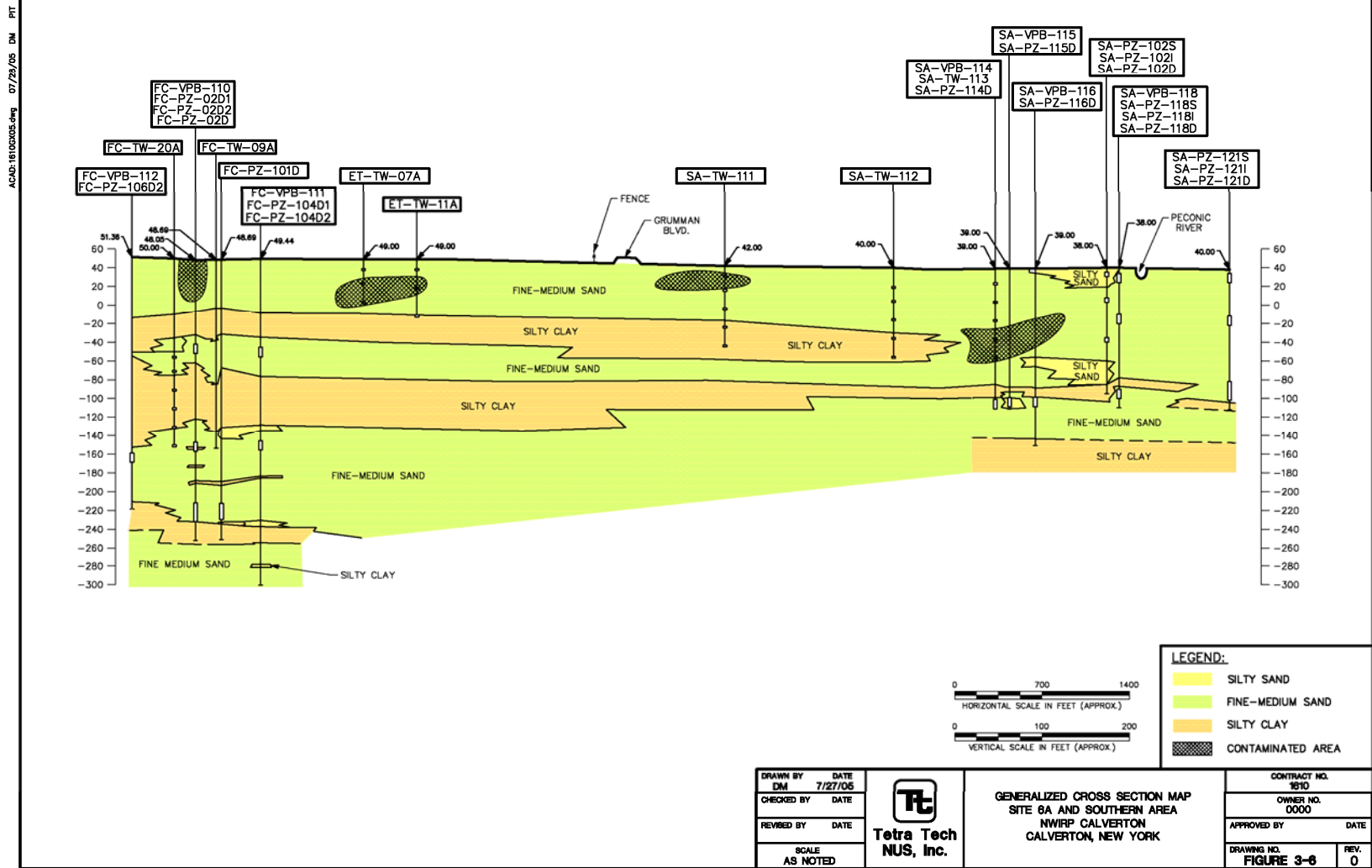
Site 6A and 10 B Sampling Program



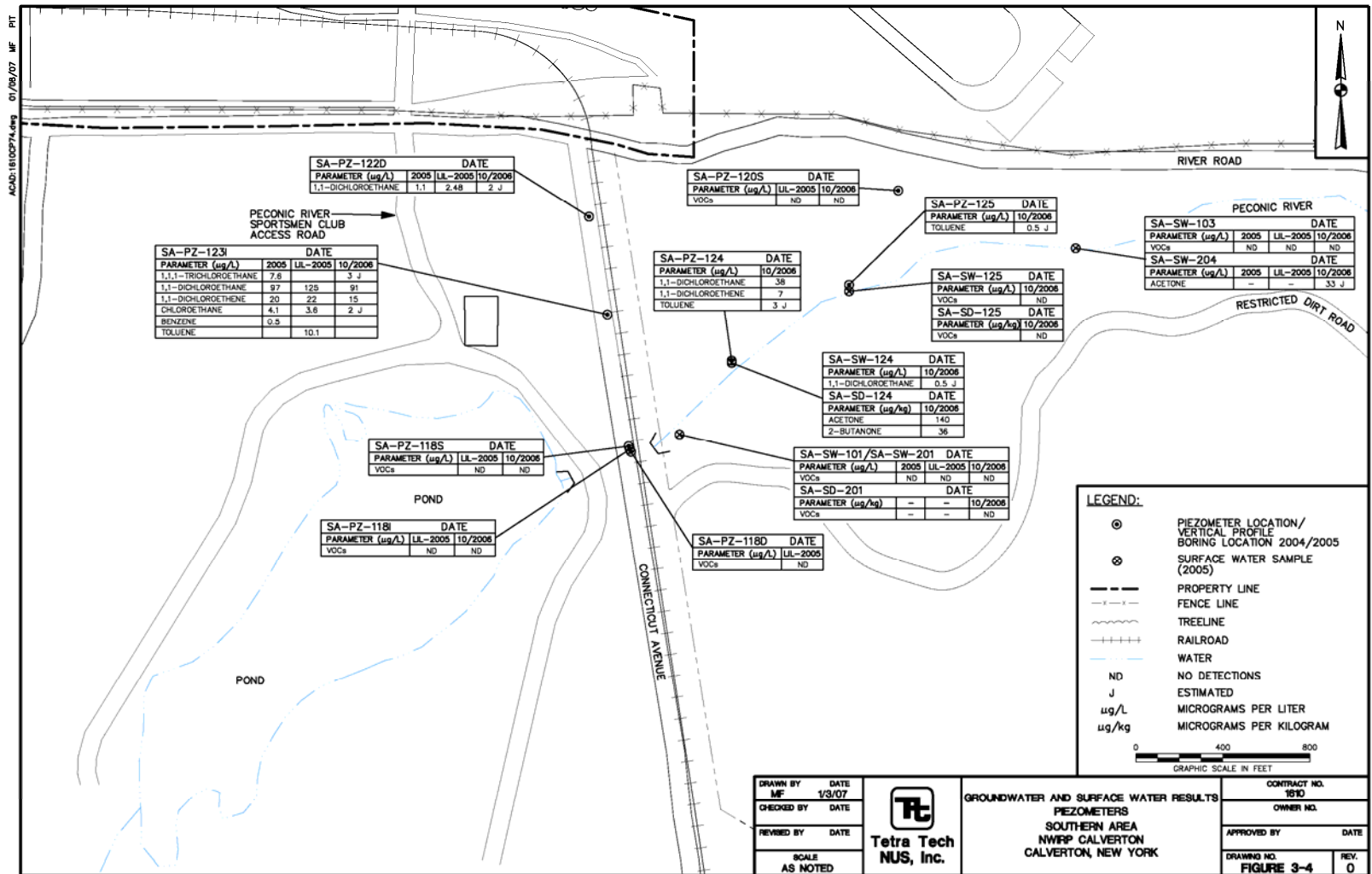
Offsite Southern Area and Peconic River Sampling Program



Site 6A and Southern Area Cross Section



Southern Area Groundwater Results (Fall 2006)



FORM CASS NO. TTNUS-B40VG - REV. 1 - 9/15/98

Next Steps

- ◆ Install Monitoring Wells at Sites 2, 6A, and 10B, and Southern Area
- ◆ Conduct a round of groundwater, surface water, and sediment sampling
- ◆ Finalize Feasibility Study/Corrective Measures Study

ATTACHMENT 4

ECOR SOLUTIONS - PRESENTATION

GROUNDWATER REMEDIATION PROJECT

SITE 7 – FORMER FUEL DEPOT



Groundwater Remediation Project

Air Sparge/Soil Vapor Extraction System

Naval Weapons Industrial Reserve Plant

Calverton, NY

Site 7: Former Fuel Depot

Restoration Advisory Board Meeting

August 2, 2007

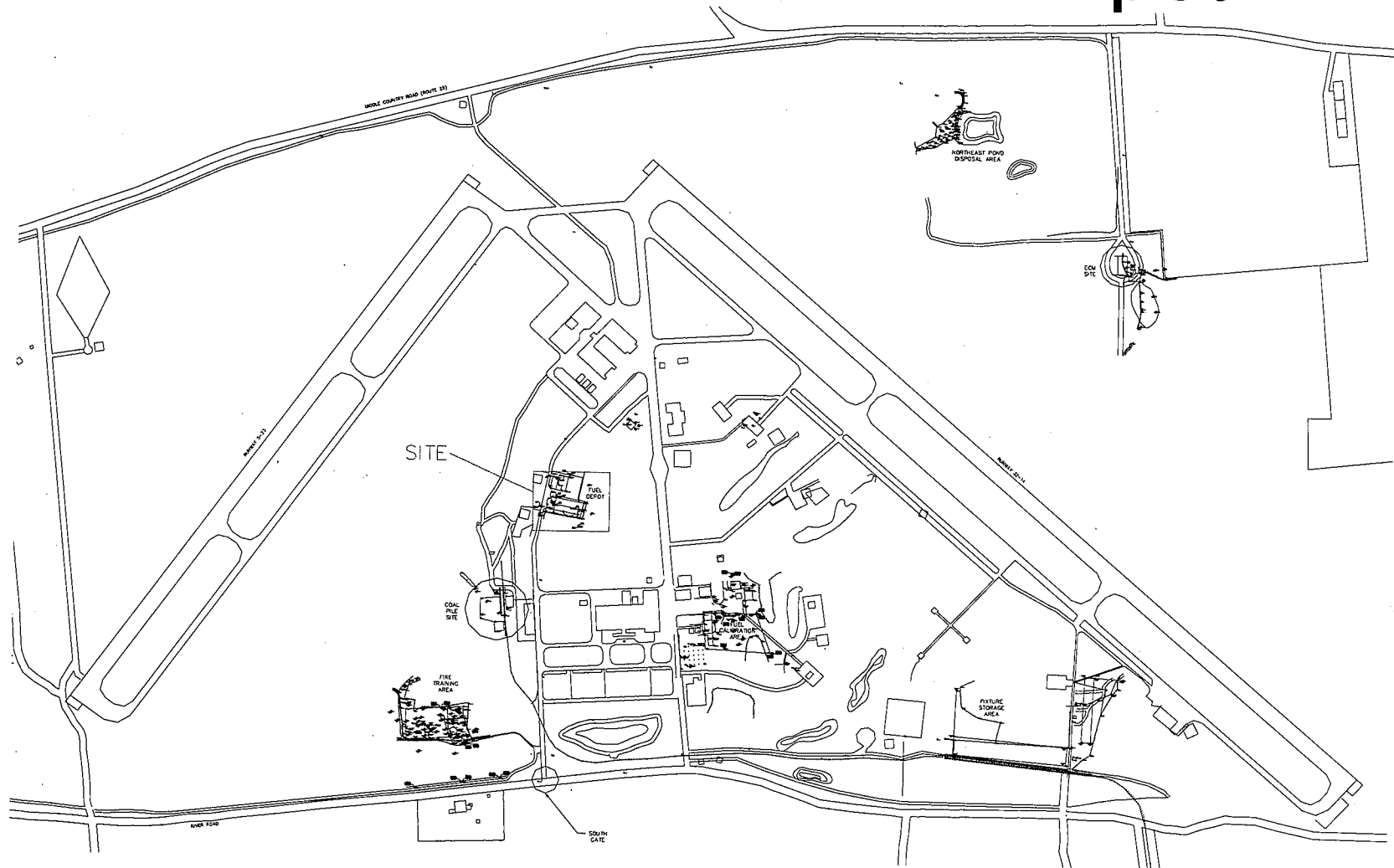
Delivering environmental construction, operations and remediation solutions to industry and government



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



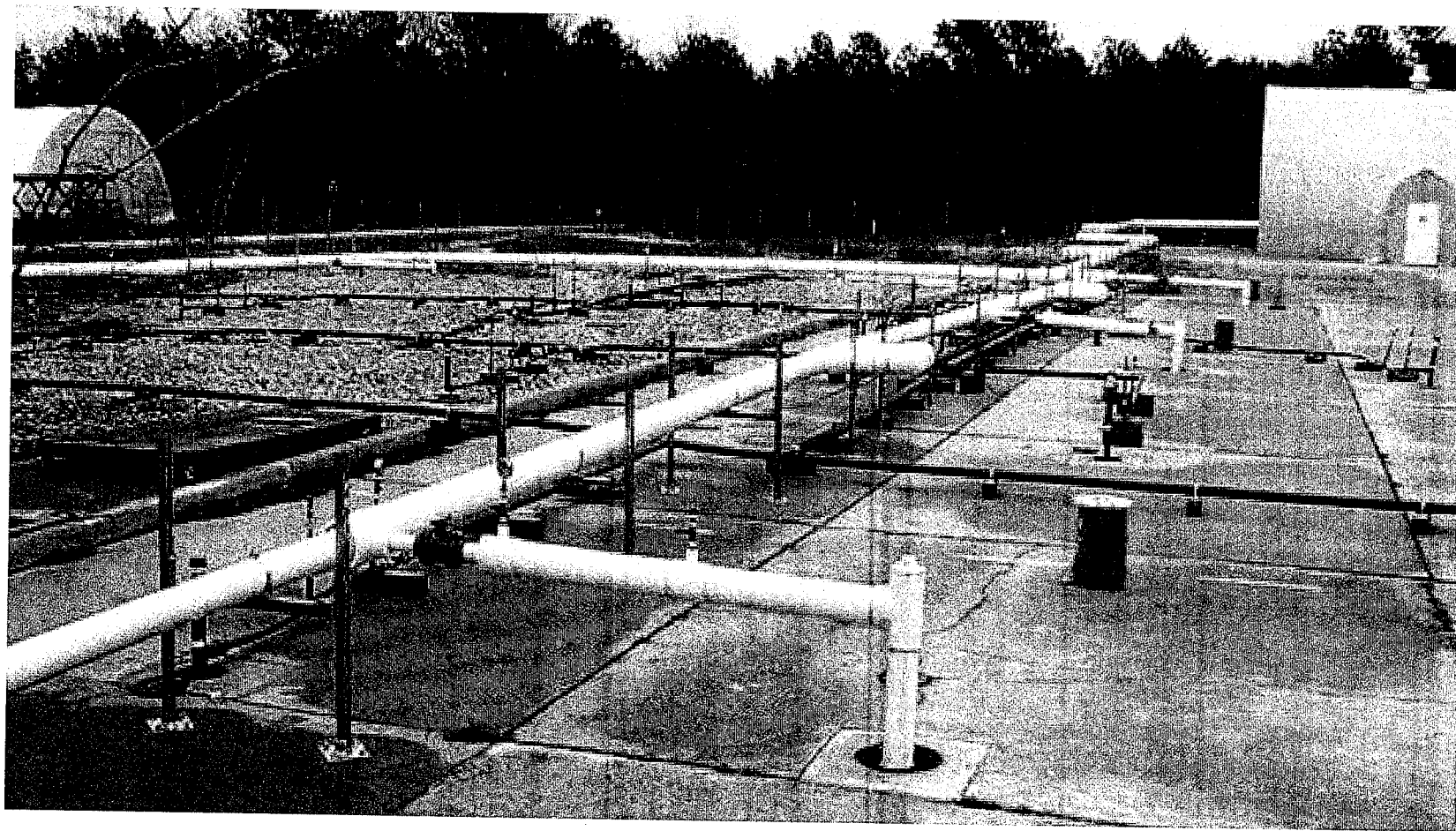
Source: TtEC, Inc.

Area Map

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



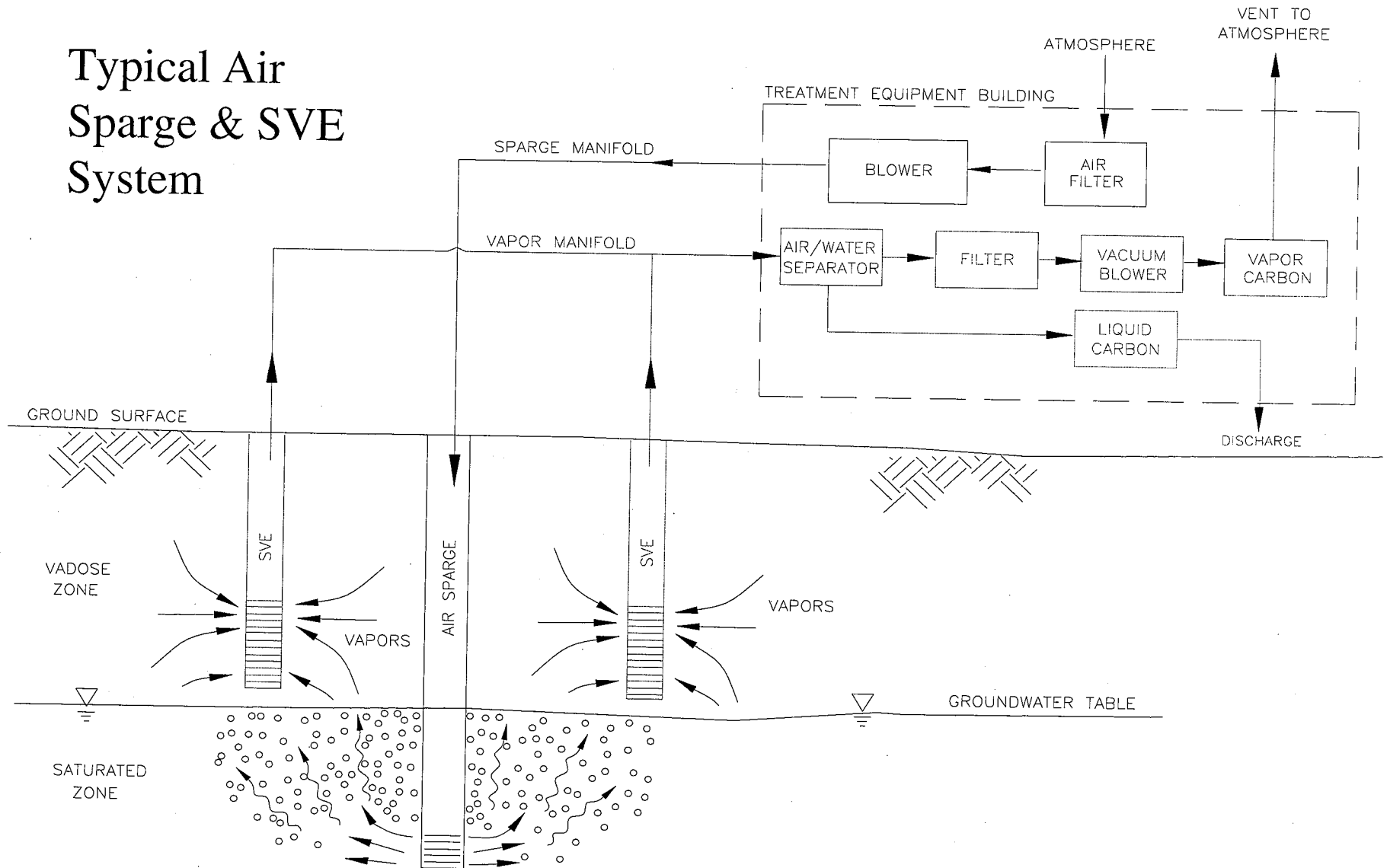
The Site



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



Typical Air Sparge & SVE System



Source: TtEC, Inc.

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

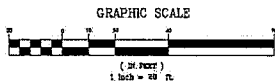


Operational Activities

- System restarted on March 23, 2007
- Latest groundwater samples collected June 19-21, 2007
- Groundwater sampling event also planned for September and December following winter shutdown

Performed weekly O&M visits to:

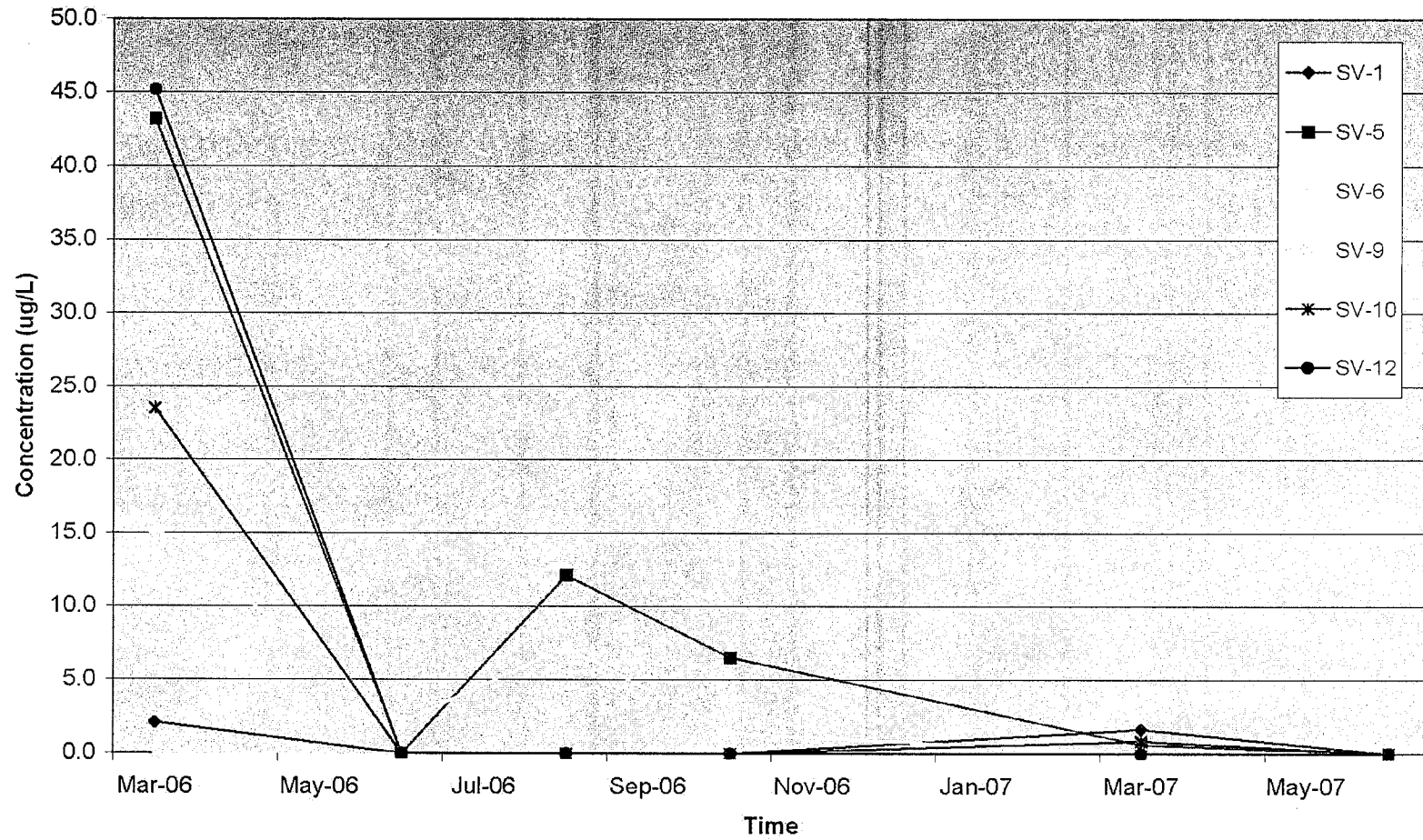
- Monitor vapor phase carbon adsorbers
- Obtain instrument measurements
- Perform general site inspections

[illegible]

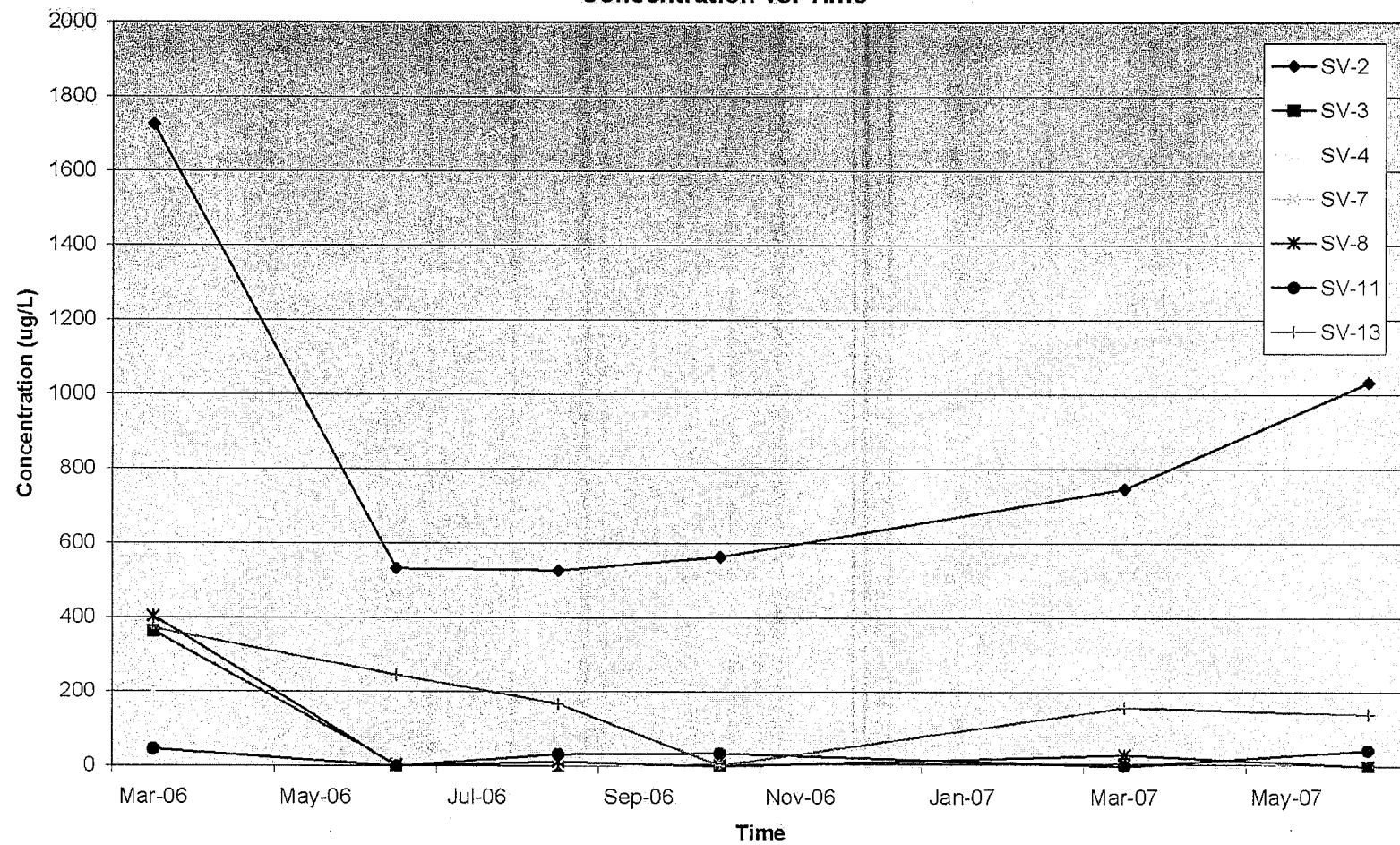
Graphs

- 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

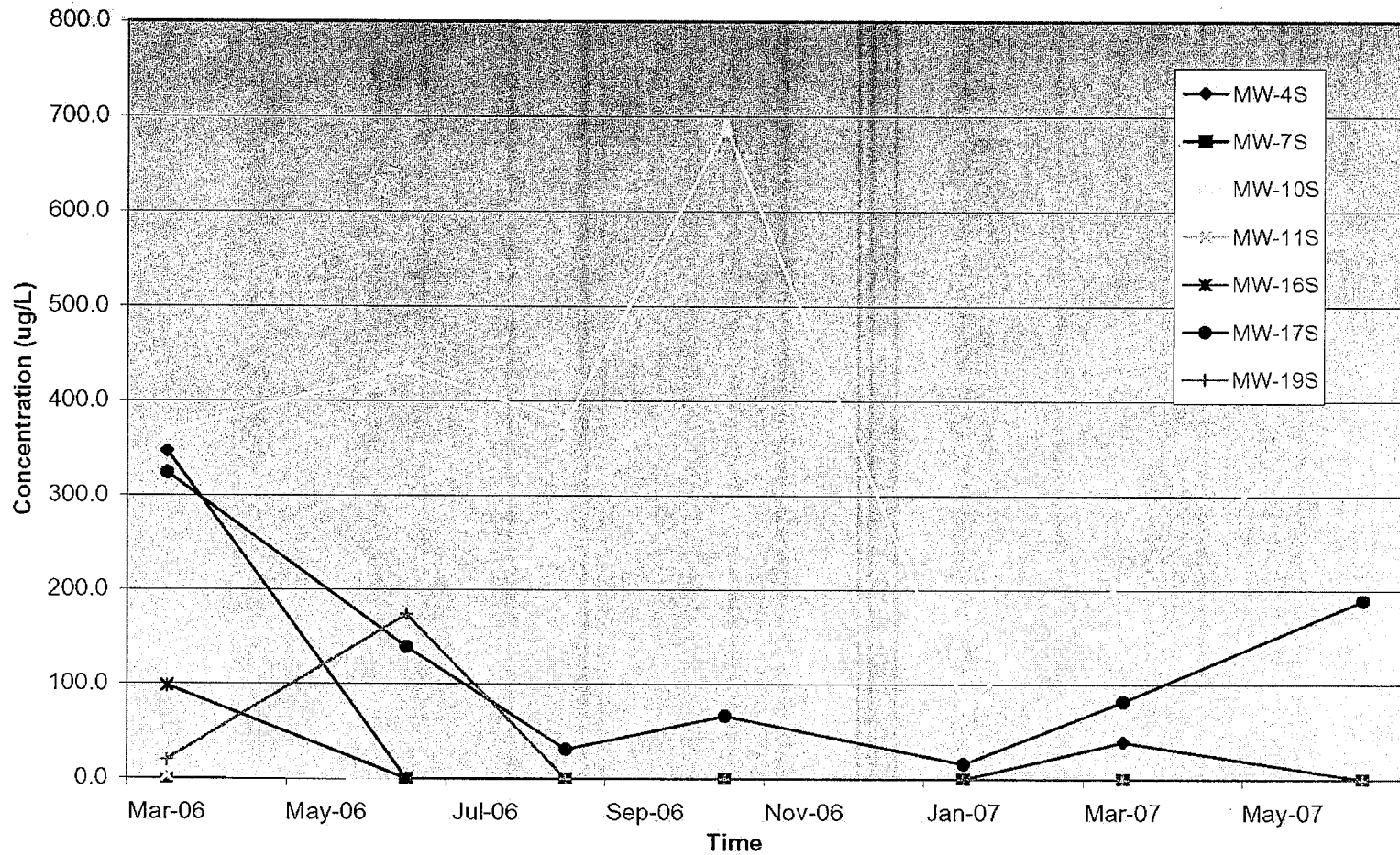
Groundwater Analytical Results at SVE Well Locations
Total BTEX and Naphthalene
Concentration vs. Time



Groundwater Analytical Results at SVE Well Locations
Total BTEX and Naphthalene
Concentration vs. Time



Groundwater Analytical Results at Monitoring Well Locations
Total BTEX and Naphthalene
Concentration vs. Time



Future Activities

- Optimize system to address rising concentrations in MW10S, MW17S, and SV2
- Temporarily shut down system in 9/07 to perform next sampling event
- Continue to collect monthly air samples to monitor extracted vapor concentrations

Questions?

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



ATTACHMENT 5

ECOR SOLUTIONS

**AIR SPARGE / SOIL VAPOR EXTRACTION MASS REMOVAL DATA
SITE 7 – FORMER FUEL DEPOT**

ATTACHMENT 5

ECOR SOLUTIONS

**AIR SPARGE / SOIL VAPOR EXTRACTION MASS REMOVAL DATA
SITE 7 – FORMER FUEL DEPOT**

TABLE 2
VOLATILE ORGANIC COMPOUND (VOC) MASS REMOVED
SITE 7 AS/SVE SYSTEM
NAVAL WEAPONS INDUSTRIAL RESERVE PLANT – CALVERTON
CALVERTON, NY

Month	Date sampled	VOC Concentration (µg/m ³)	Average Flowrate (scfm)	Operational Time (hrs)	Monthly VOCs Removed ¹ (lbs)	Cumulative VOCs Removed ² (lbs)
April	04/30/07	1229	1231	912	5.17	129.61
May	05/30/07	1879	1204	720	5.70	135.31
June	07/02/07	1172	1204	612	3.02	138.33
July	07/23/07	514	1268	636	1.55	139.88
August	08/06/07	284	1177	736	0.92	140.81

¹ **AVERAGE FLOWRATE** (scfm) * 0.02832m³/ft³ * **CONC.**(µg/m³) * 0.000001g/µg * 0.002205 lbs/g * 60 min/hr * **OPERATIONAL TIME** (hours)

² Cumulative total from May 2006