Agenda

Restoration Advisory Board
Naval Weapons Industrial Reserve Plant Bethpage

November 2, 2011
Town of Oyster Bay Ice Skating Center Community Room
1001 Stewart Avenue, Bethpage, New York
7:00 p.m.

Welcome and Agenda Review
Lora Fly, NAVFAC Mid-Atlantic

Meeting Minutes
All Members

Technical Progress

Site 1 Activities – Onsite Drilling Activities
Rob Sok, Tetra Tech

GM-38 Operation
Jen Good, H&S

Soil Vapor Extraction Containment System Performance and Modifications
Jen Good, H&S

OU 2 - Offsite Groundwater Investigation & Public Water Supply Design
David Brayack, Tetra Tech

Closing Remarks
Lora Fly

Presenters will be available after the program for questions.

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Naval Facilities Engineering Command
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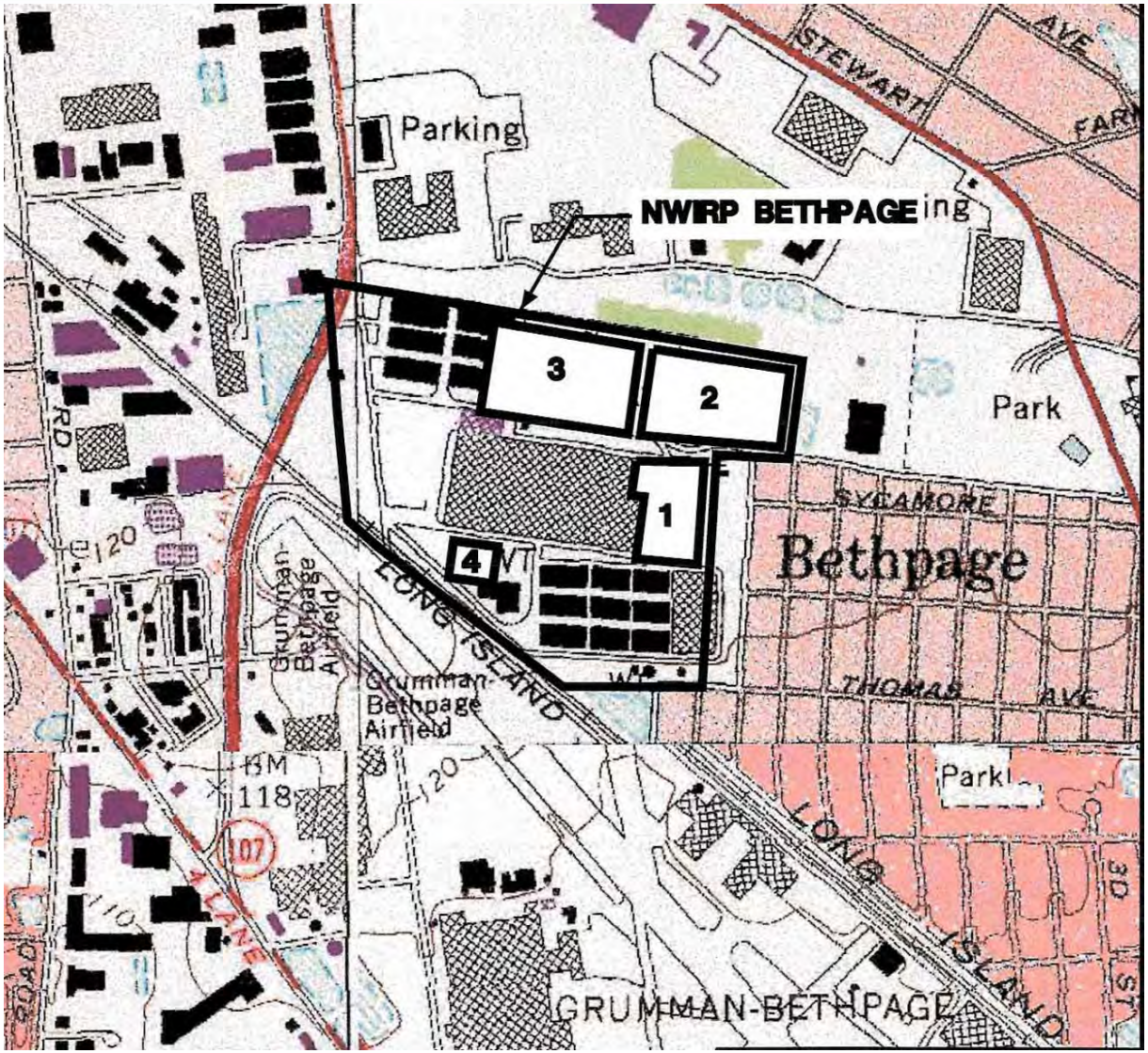
Restoration Advisory Board (RAB) Meeting

Site 1 PCB Investigation - Update

Naval Weapons Industrial Reserve Plant (NWIRP) Bethpage

November 2, 2011

FACILITY MAP



PCB INVESTIGATION UPDATE

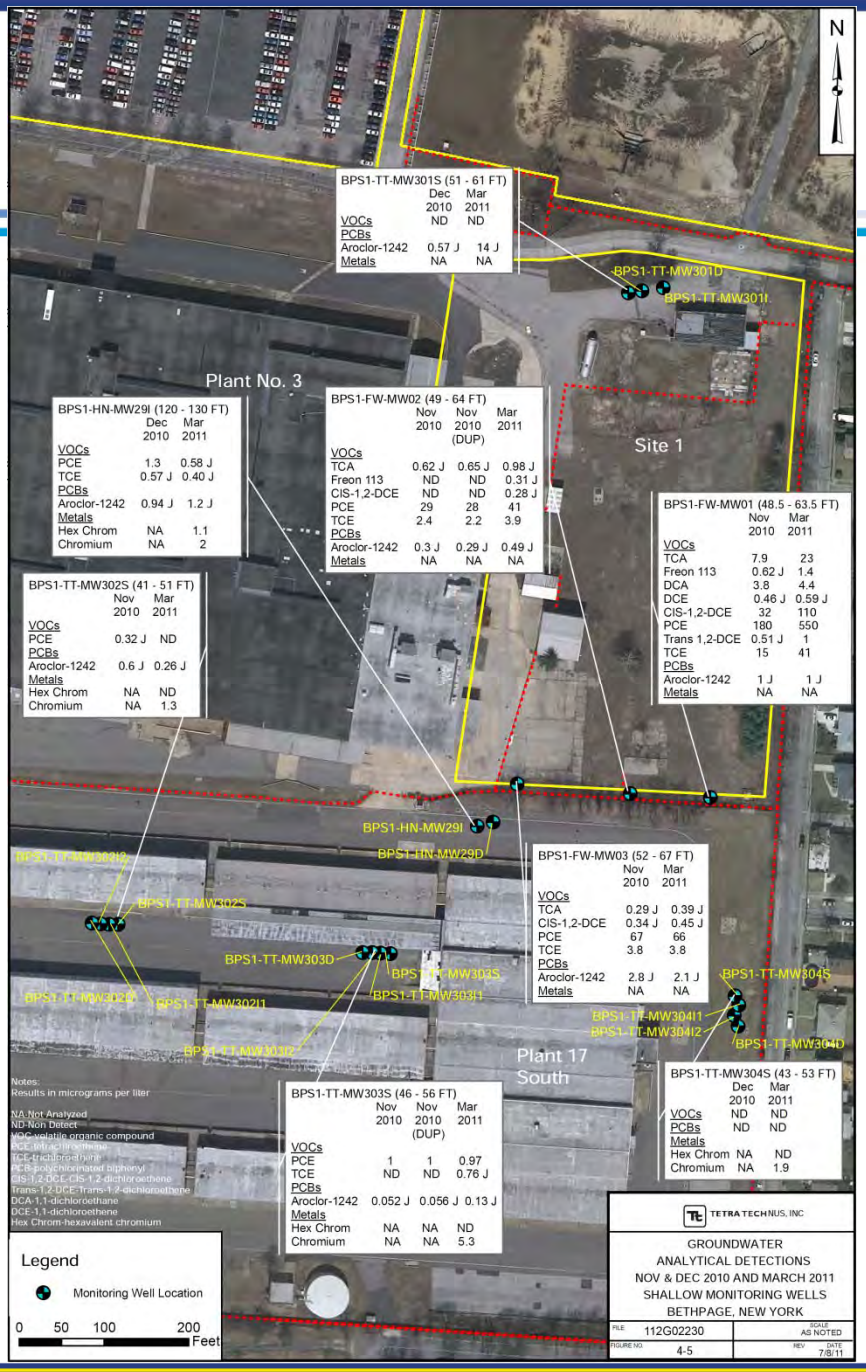
- SAP/Work Plan for PCB Investigation finalized May 2010
- Primary Objectives:
  - Delineate vertical extent of PCBs in soil
  - Determine whether PCB-contaminated groundwater has migrated beyond the site boundary
  - Determine whether organics could have acted as a carrier fluid promoting PCB migration
- 6 soil borings and 15 monitoring wells installed in 2010 via rotosonic drilling methods
- Groundwater sampling events conducted in early December 2010 and March 2011

PCB INVESTIGATION UPDATE

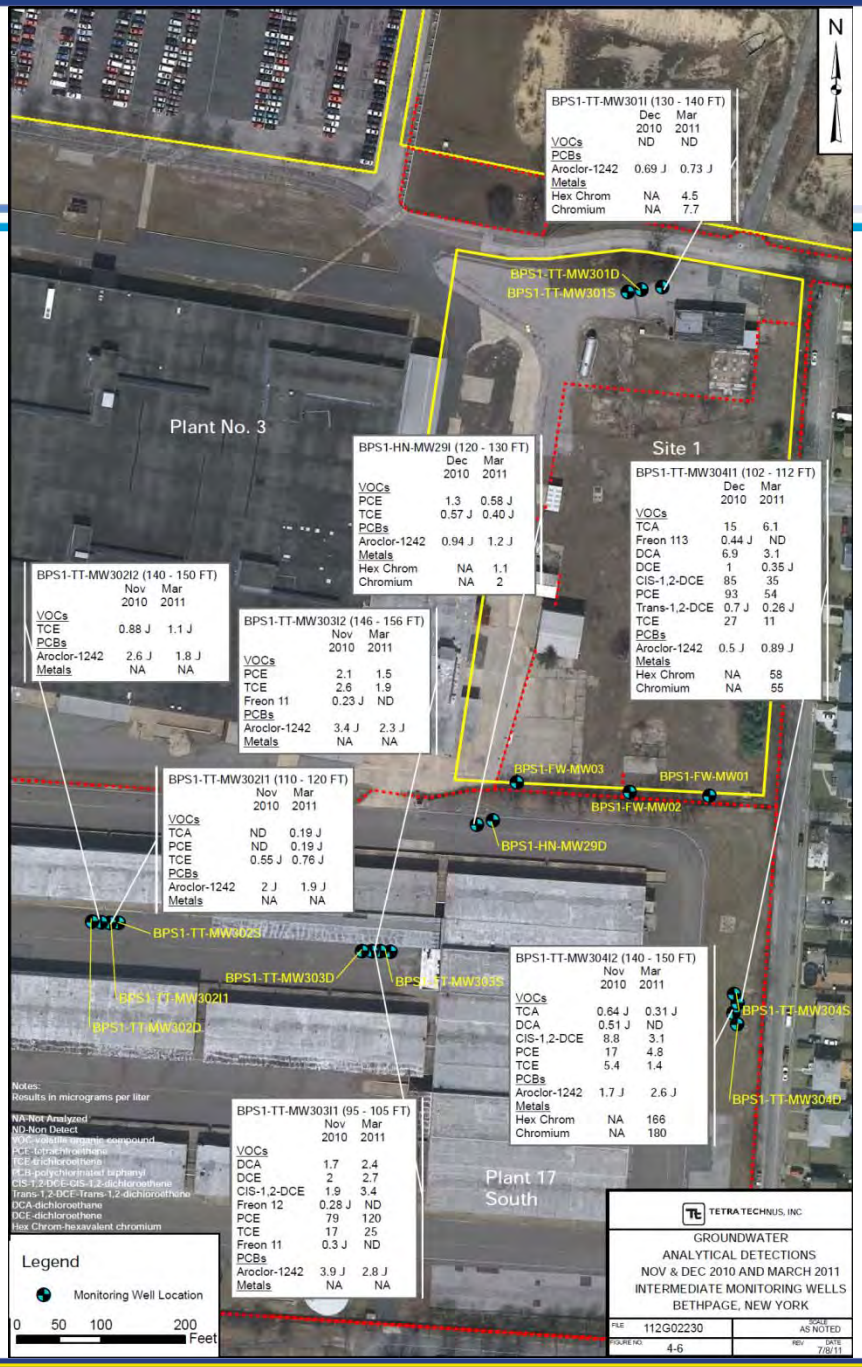
- Vertical extent of PCB contaminated soils determined at approximately 70 feet bgs in source area soil borings
- Organics (fuel and solvent-related) detected at low concentrations, not likely to affect PCB migration
- Groundwater sampling events conducted in early December 2010 and March 2011
- Results indicated PCBs in groundwater (ND to 14 µg/L)
- Results also indicated some detections of chromium (CR^{+6}) ranging from ND to 166 µg/L

PCB INVESTIGATION UPDATE

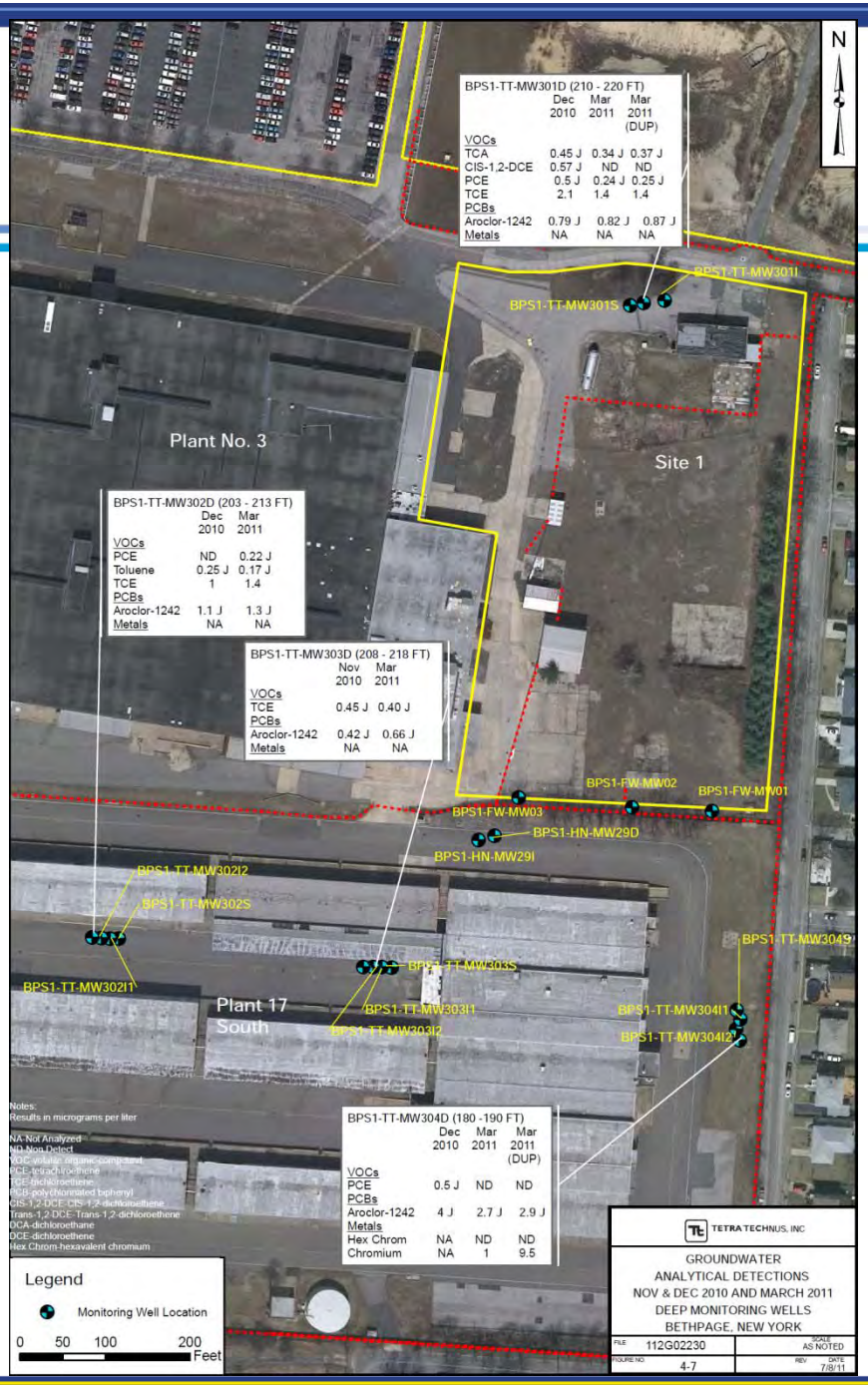
Groundwater Detections in Shallow Wells



Groundwater Detections in Intermediate Wells



Groundwater Detections in Deeper Wells



PCB INVESTIGATION UPDATE

- Based on the two rounds of groundwater sampling, additional delineation of PCBs and chromium in groundwater was needed
- Submitted Interim Report and SAP Addendum for additional groundwater investigation (June 2011)
- Objectives: Investigate potential upgradient sources and delineate extent of PCB-contaminated groundwater downgradient of Site 1
- Currently installing 15 additional monitoring wells – 6 upgradient and 9 downgradient

PCB INVESTIGATION UPDATE

PCB INVESTIGATION – FUTURE WORK

- Additional rounds of groundwater sampling planned for 2012
- Data gaps in soil delineation at Site 1 have been identified
- Further evaluating PCBs in soil (new and historical data) at Site 1
- Submittal of Interim Report and SAP Addendum addressing PCB-contaminated soils at Site 1
- Follow up soil investigation planned for Spring 2012 to address data gaps and complete soil delineation

QUESTIONS ?

Restoration Advisory Board Meeting

Former Naval Weapons Industrial Reserve Plant
Bethpage, NY
GM-38 Area GWTP
and Site 1 SVECS
2 November 2011

NAVFAC
Naval Facilities Engineering Command

Presented by

H&S

Presentation Agenda

- GM-38 GWTP
  - Overview
  - Operational Activities – issues / resolutions
  - GWTP performance and future activities
- Site 1 SVECS
  - Overview
  - Operational Activities – issues / resolutions
  - System performance and future activities

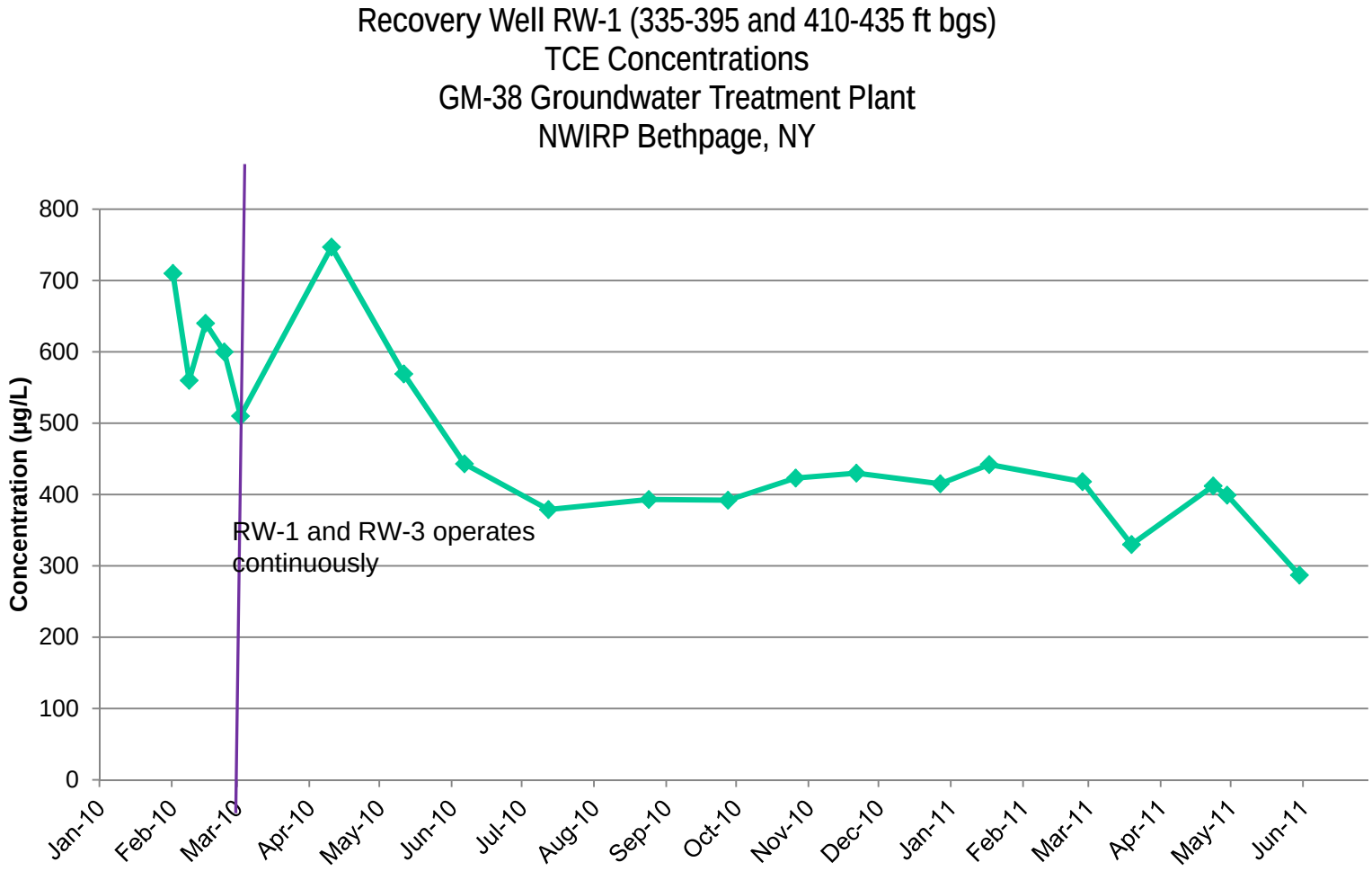
GM-38 Project Overview

- Purpose: Treat an area of higher concentration volatile organic compound (VOC)- impacted groundwater.

- System started operation in October 2009 and will continue to operate for approximately 5 years.

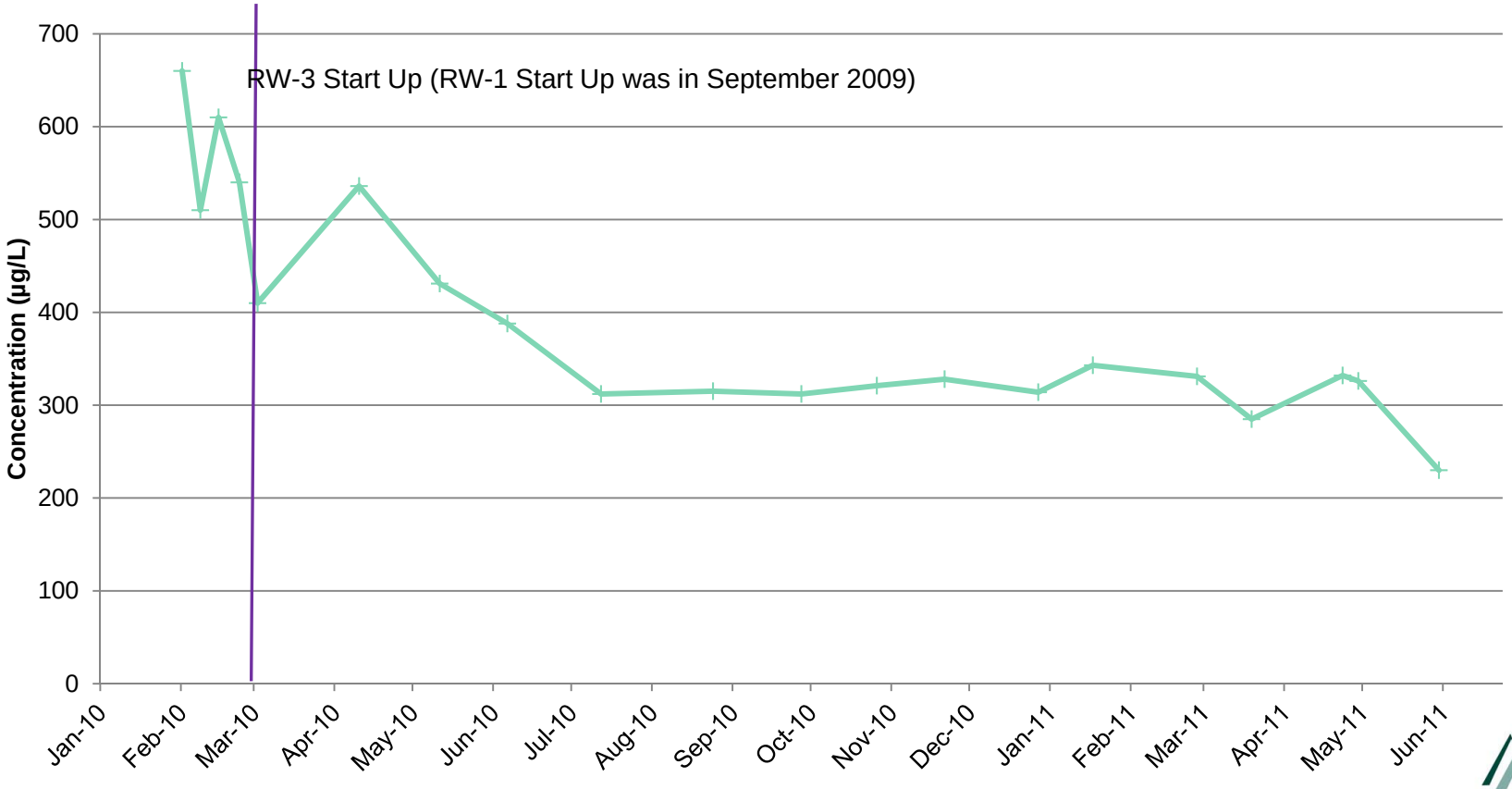
- Extracts 46 million gallons of water and 200 pounds of VOCs per month.

GM-38 Remedial Action



GM-38 Remedial Action

Recovery Well RW-3 (392-412 and 442-504 ft bgs)
TCE Concentrations
GM-38 Groundwater Treatment Plant
NWIRP Bethpage, NY



GM-38 GWTP Operational Activities

- H&S assumed operational responsibility (O&M / LTM) from EFS 1 June 2011.
- 14-15 June 2011 – quarterly LTM event, groundwater samples collected from eight monitoring wells.
- 16 August 2011 – pump / motor in extraction well RW-1 malfunctioned - electricians determine pump / motor needs pulled
  - Pump and motor pulled in September 2011 and inspected to assess cause of malfunction, determine that both pump and motor need replaced.
  - Procured new pump and motor.
  - Installed replacement pump and motor 14 October 2011, extraction well brought back on-line 17 October 2011.

GM-38 GWTP Operational Activities (cont'd)

- 28 August 2011 – System down due to power outages from Hurricane Irene. Back on-line 29 August 2011 – no damage from hurricane.
- 27-28 September 2011 – quarterly LTM event, groundwater samples collected from eight monitoring wells.
- September 2011 – 1,000-lb intermediary carbon unit installed to treat vapor from EQ tank prior to entering Air Stripper blower.

GM-38 GWTP Performance and Future Activities

- Plant has continually operated in compliance with air and SPDES permit guidelines.
- Runtime has been above 95% with minimal downtime due to power outages and scheduled installation of carbon vessel.
- Approximately 985 million gallons of water treated through September 2011.
- Continue to collect monthly air and water compliance samples.
  - Submit monthly O&M compliance reports.
- Continue to collect quarterly groundwater samples as LTM.
  - Submit quarterly LTM reports.

Site 1 Project Overview

- Purpose: Prevent offsite migration of Site 1 VOC-impacted soil gas and cleanup offsite soil gas.

- System started operation in January 2010 and continues to operate.

- Extracts approximately 500 cubic feet per minute of soil gas from 12 wells located along Site 1 fence line.

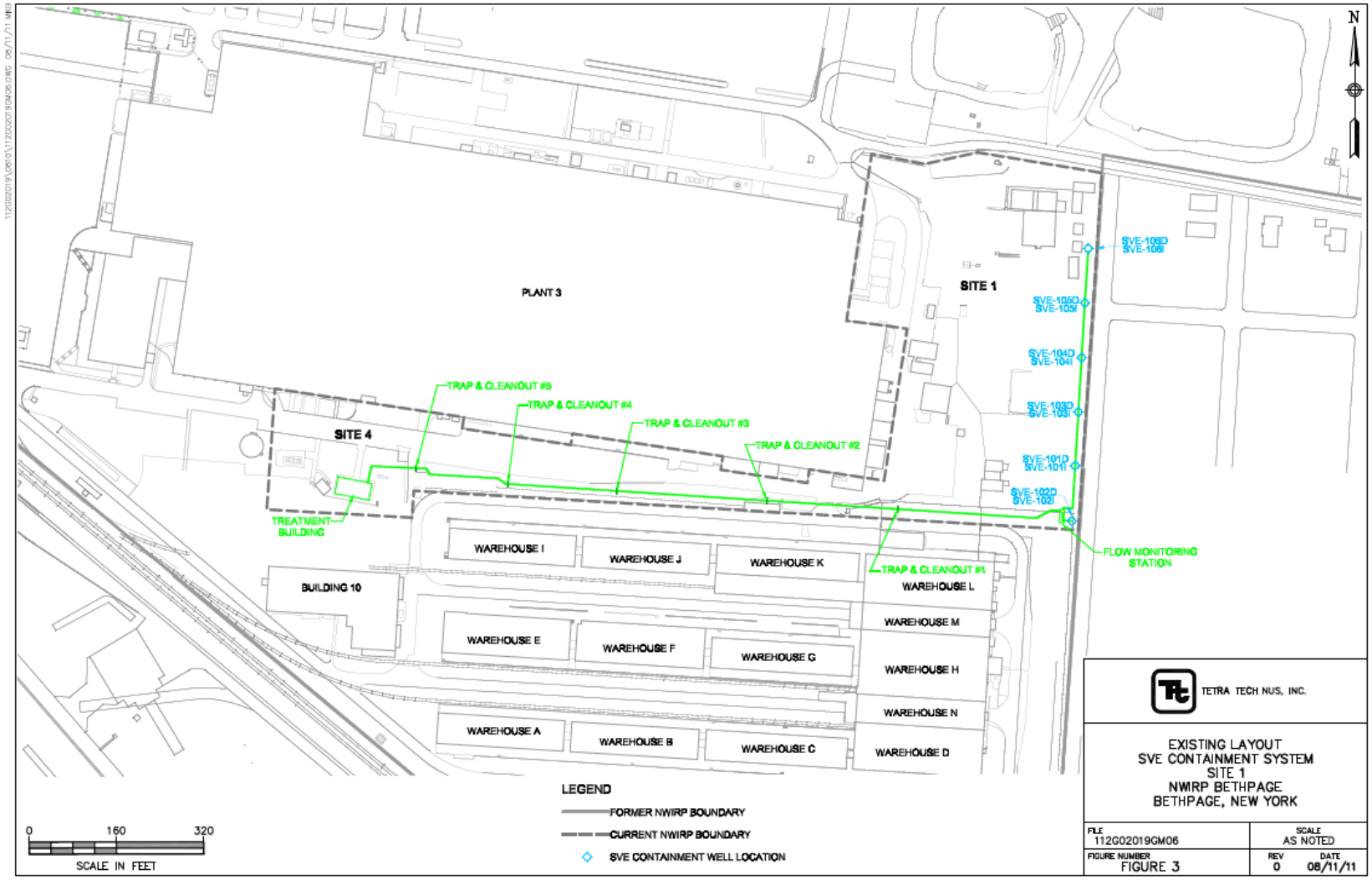
Site 1 Operational Activities

- H&S assumed operational responsibility from EFS 1 July 2011.
- 5 September 2011 – quarterly vapor samples collected from 12 SVE wells.
- 14 October 2011 – quarterly vapor samples collected from 12 SVE wells.
- 16-22 October 2011 – five additional SVE wells installed.

Site 1 Soil Vapor Extraction Containment System

- System is expected to operate until approximately 2015.
- Optimization activities are ongoing
  - Improve performance
  - Evaluate capture zone
  - Reduce operating cost
- Additional extraction wells added along 10-inch header to address potential VOCs under Plant No. 3 and South Warehouse.

Site 1 Soil Vapor Extraction Containment System



Site 1 SVECS Performance and Future Activities

- Plant has continually operated in compliance with air permit guidelines.
- Runtime has been above 95% with minimal downtime due to power outages and scheduled shut-down during well installation activities.
- Continue to collect monthly air compliance samples.
- Continue to collect quarterly air samples of SVE wells.
  - Submit quarterly operations reports.

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Restoration Advisory Board (RAB) Meeting

OU2 - Offsite Groundwater Investigation and Public Water Supply Design

Naval Weapons Industrial Reserve Plant (NWIRP) Bethpage

November 2, 2011

OU2 GROUNDWATER INVESTIGATION - PURPOSE

- Delineate area of groundwater contamination in areas south of NWIRP Bethpage
- Program consists of:
  - Vertical profile borings - used to quickly screen areas for the presence, depth, and concentration of contamination
  - Permanent monitoring wells - to confirm presence/absence of contamination and develop trends

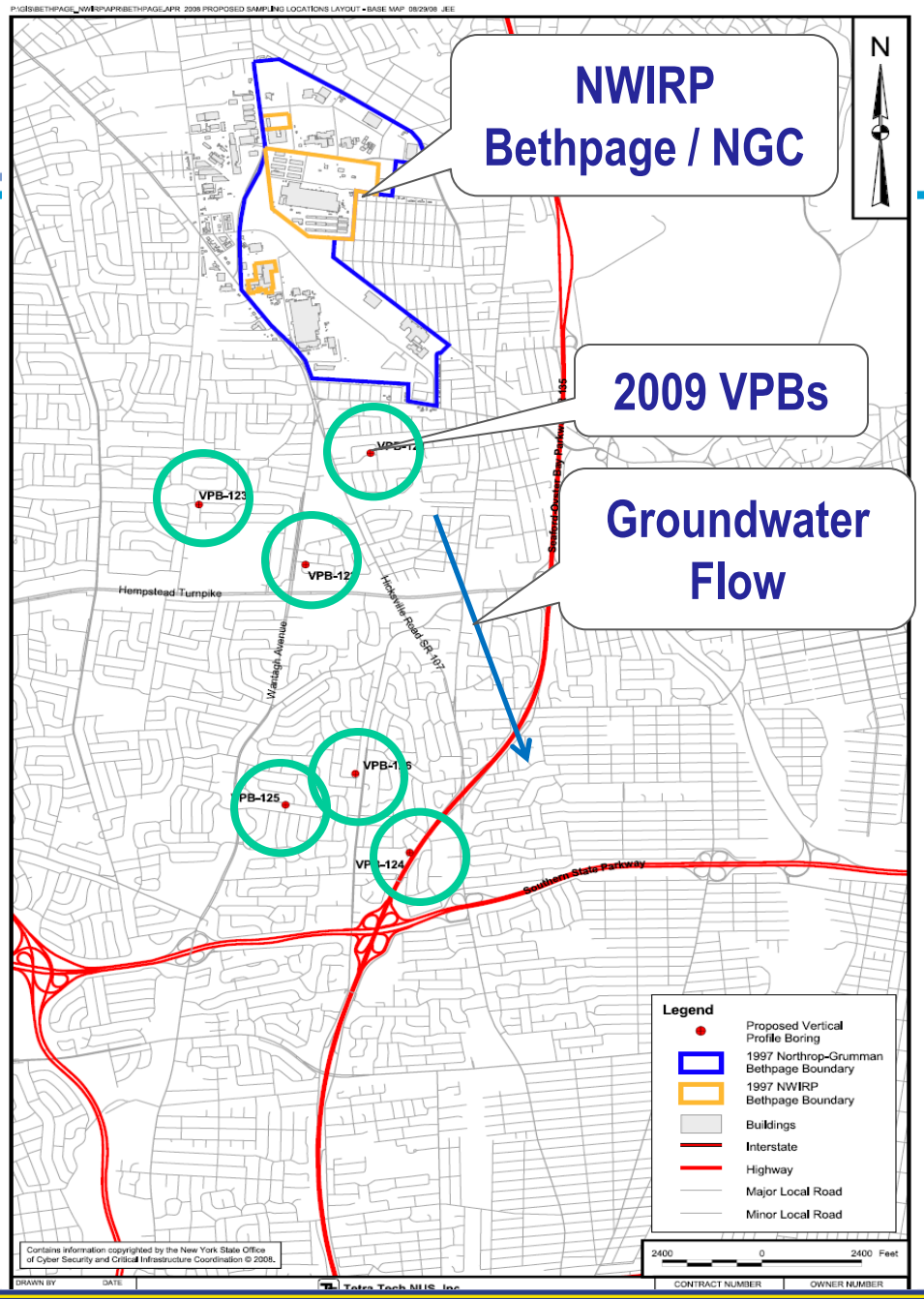
OU2 INVESTIGATION - VERTICAL PROFILE BORING PROGRAM

- A vertical profile boring is a 12-inch diameter hole drilled into the ground. At select depths, the drilling is stopped, a device is lowered to depth, and a sample of the water is collected
- The borings will extend to the Raritan Clay Layer at a depth up to 860 feet below ground surface
- 36 groundwater samples will be collected per boring and analyzed for VOCs

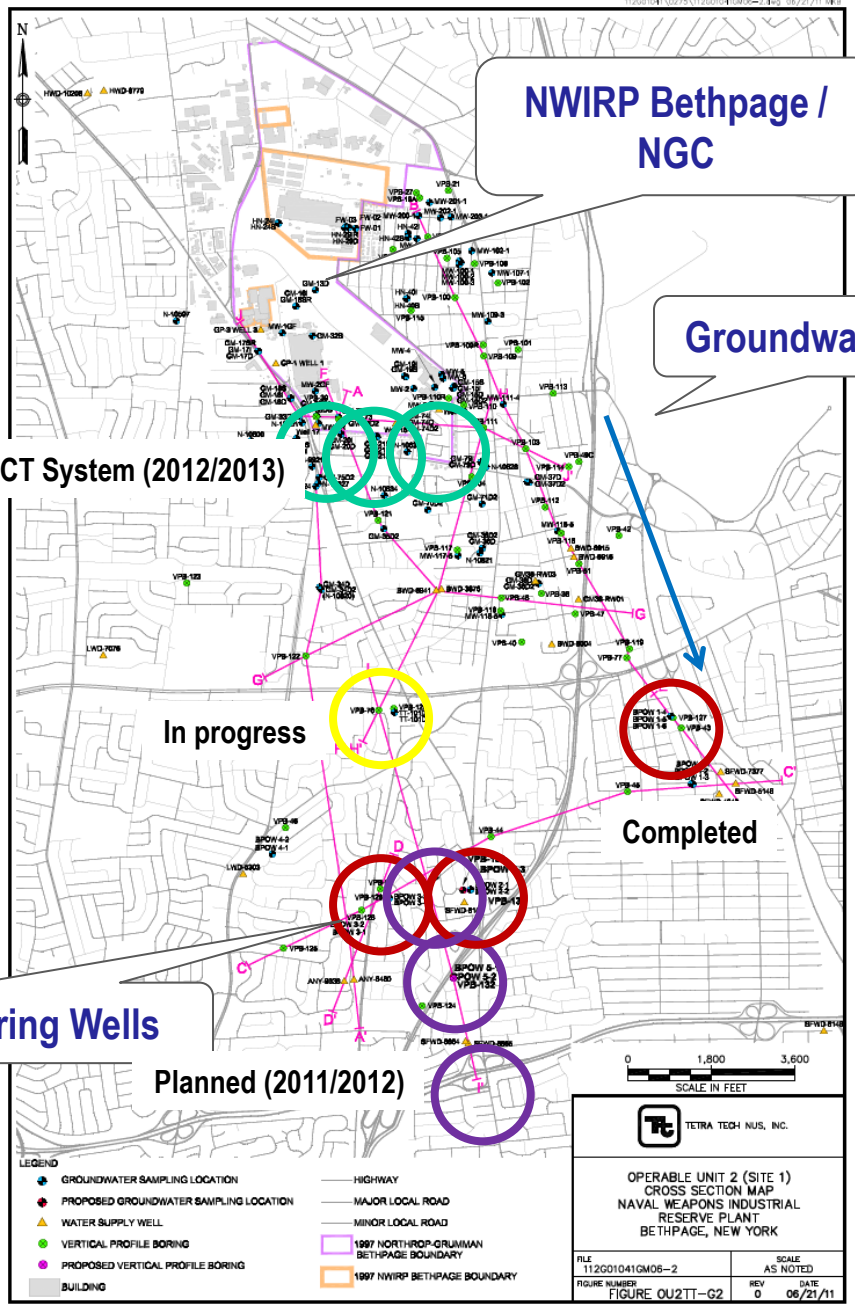
OU2 INVESTIGATION - VERTICAL PROFILE BORING PROGRAM (Cont.)

- Each boring requires 4 to 6 weeks to complete
- Six locations were completed in 2009
- Addition borings and monitoring wells are currently being installed through 2011
  - Since Oct 2010, four borings and seven wells (completed) and two wells (in progress)
  - Three borings and four wells are planed for 2011/2012
- Navy currently designing a treatment system, installation planned for 2012

2009 Vertical Profile Borings



2010 to 2013 Vertical Profile Borings and Monitoring Wells



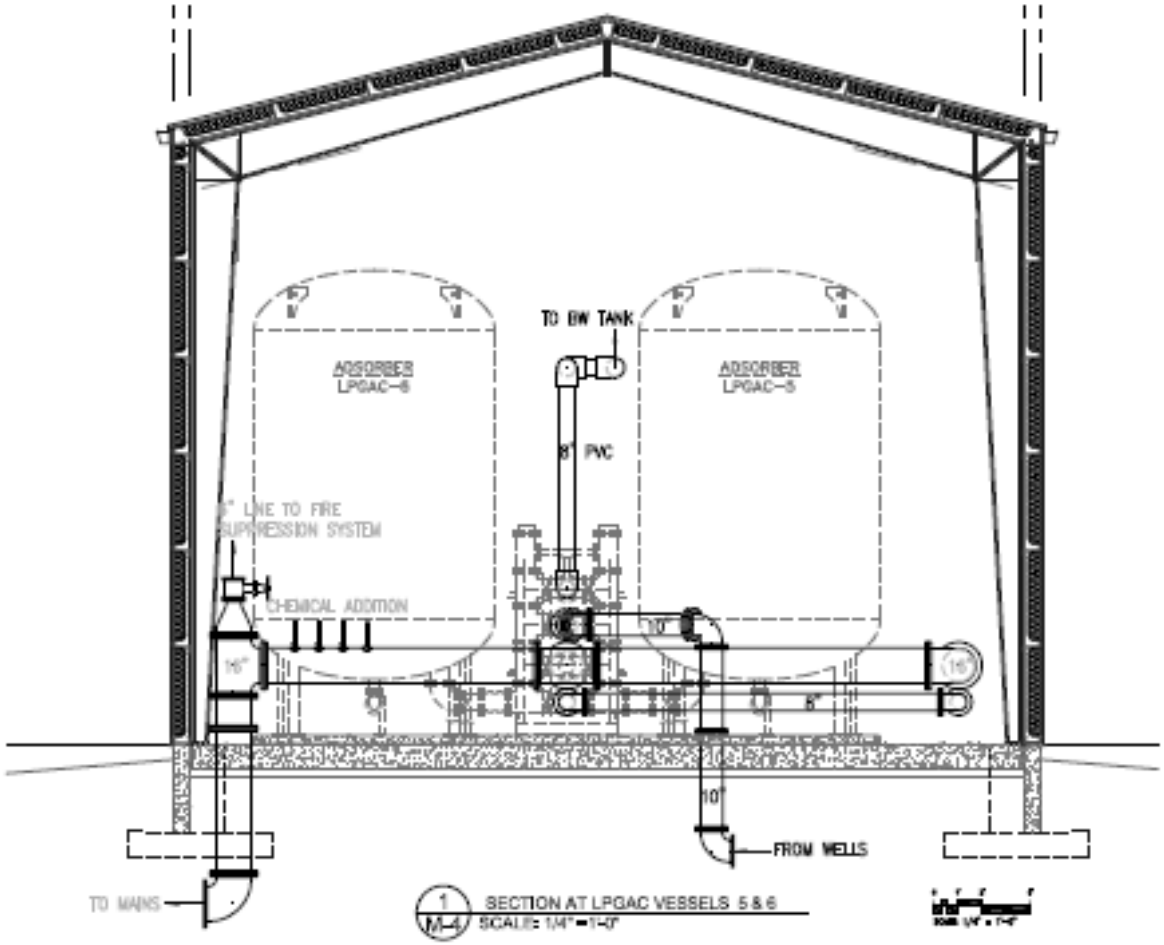
OU2 INVESTIGATION - VERTICAL PROFILE BORING PROGRAM

OU 2 PUBLIC WATER SUPPLY DESIGN

- Navy is currently designing a Granular Activated Carbon treatment system for an offsite Public Water Supply
- Design started in 2009 and will be completed in 2011
- Working with TOH and DOH
- Construction is anticipated to start in early 2012
- Interim treatment planning in progress

OU 2 PUBLIC WATER SUPPLY DESIGN

Liquid Phase Granular Activated Carbon System - Profile



OU2 ACTIVITIES

Questions