



Technical Assistance Committee (TAC) Meeting

OU2 - Offsite Groundwater Investigation and
Public Water Supply Design

Naval Weapons Industrial Reserve
Plant (NWIRP) Bethpage
June 17, 2011

OU2 GROUNDWATER INVESTIGATION - BACKGROUND



- NGC operated the NWIRP Bethpage from 1941 until 1996; also owned and operated its own facility adjacent to NWIRP
- NYSDEC OU2 ROD selected a remedy for Northrop Grumman and the Navy to address the regional groundwater contaminant plume
 - Operation of the ONCT
 - Hot Spot Treatment at GM-38
 - Additional Groundwater investigation of the plume
 - Long Term Monitoring of the groundwater
- Navy expanded GM-75 Area program to address other areas within the OU2 Plume: Program now called OU2 Groundwater Investigation to reflect expansion

OU2 GROUNDWATER INVESTIGATION - PURPOSE



- Delineate area of groundwater contamination in areas south of NGC/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 AND MONITORING WELL 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 840 feet below ground surface
- 36 groundwater samples will be collected per boring and analyzed for VOCs

OU2 INVESTIGATION - VERTICAL PROFILE BORING AND MONITORING WELL PROGRAM



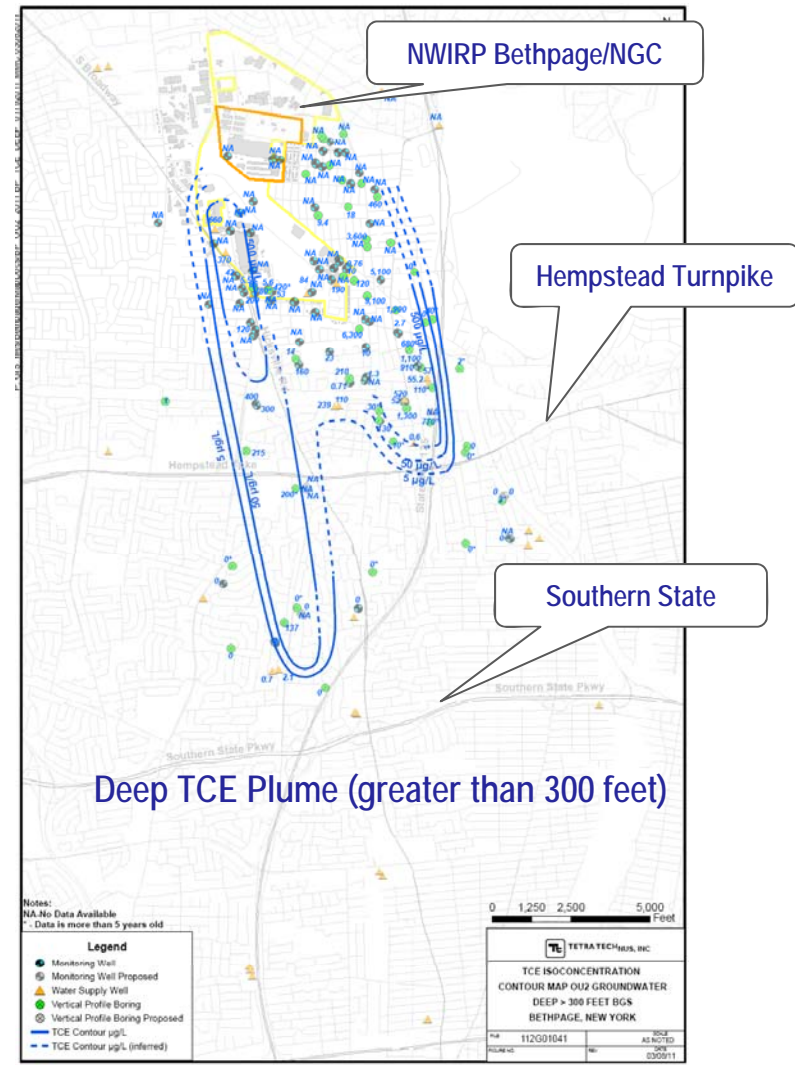
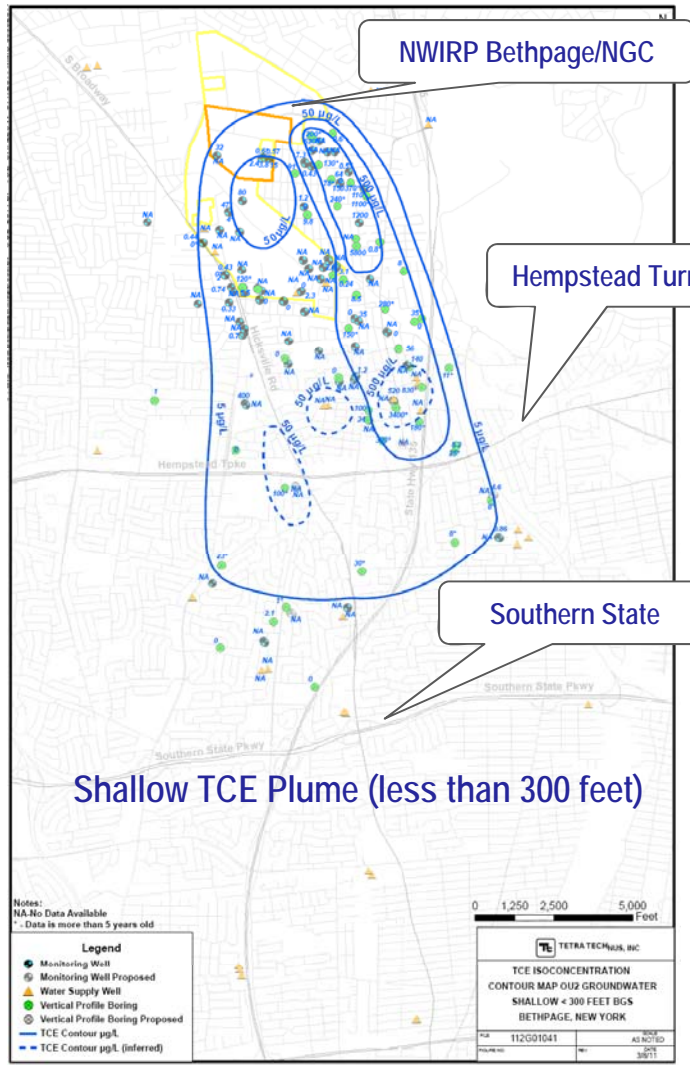
- Each boring requires 4 to 6 weeks to complete
- Six locations were completed in 2009
- Additional borings and monitoring wells are currently being installed through 2012
 - Two borings and five wells have been completed since October 2010; northwest of Aqua New York and north of SFWD Plant No. 1
 - One boring is in progress; north of SFWD Plant No. 3
 - One boring is planned for an area between SFWD Plant No. 3 and Aqua New York

OU2 INVESTIGATION - VERTICAL PROFILE BORING AND MONITORING WELL PROGRAM



- One boring and two (+/-) wells are planned south of GM-34D
- One boring and two (+/-) wells are planned north of SFWD Plant No. 6
- Several borings are planned north and northwest of BWD Plant 6
- One boring and two (+/-) wells are planned north of MWD
- Conduct connectivity evaluations of water supply wells and monitoring wells
- Long-term monitoring of wells by NGC

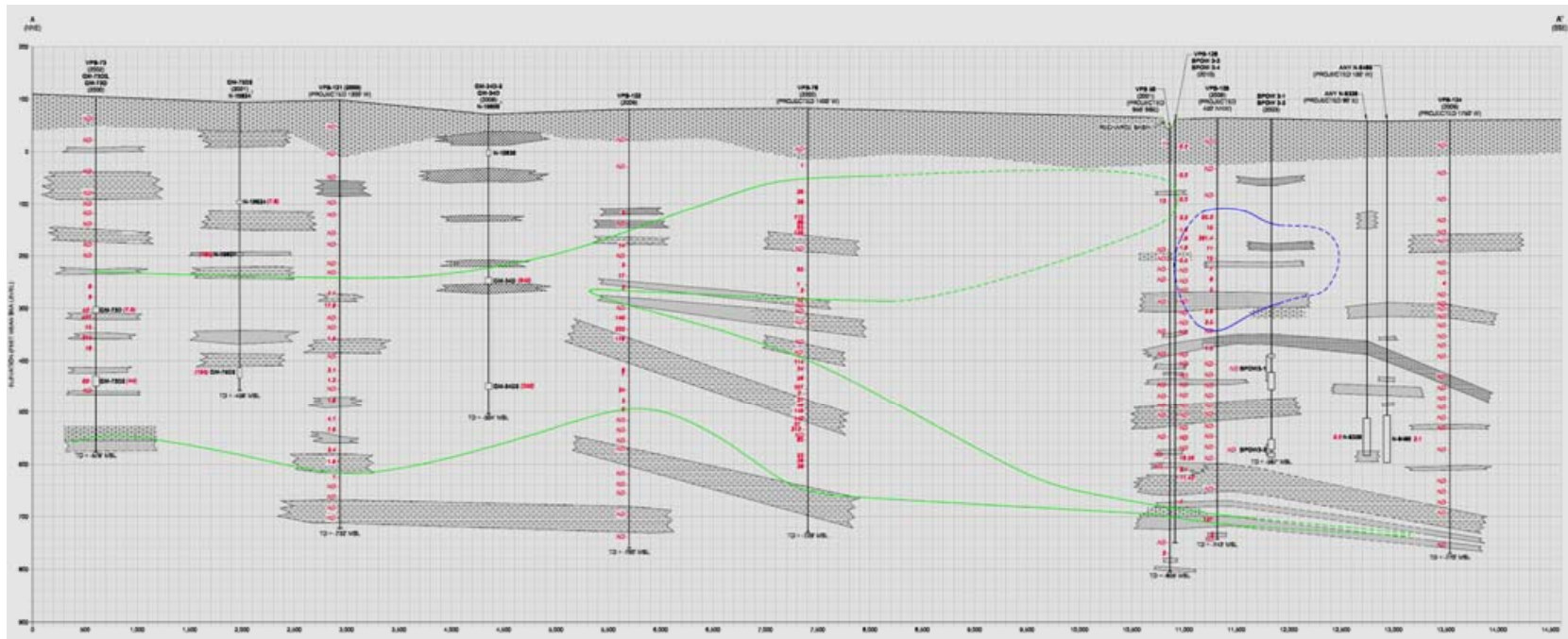
OU2 INVESTIGATION - VERTICAL PROFILE BORING AND MONITORING WELL PROGRAM



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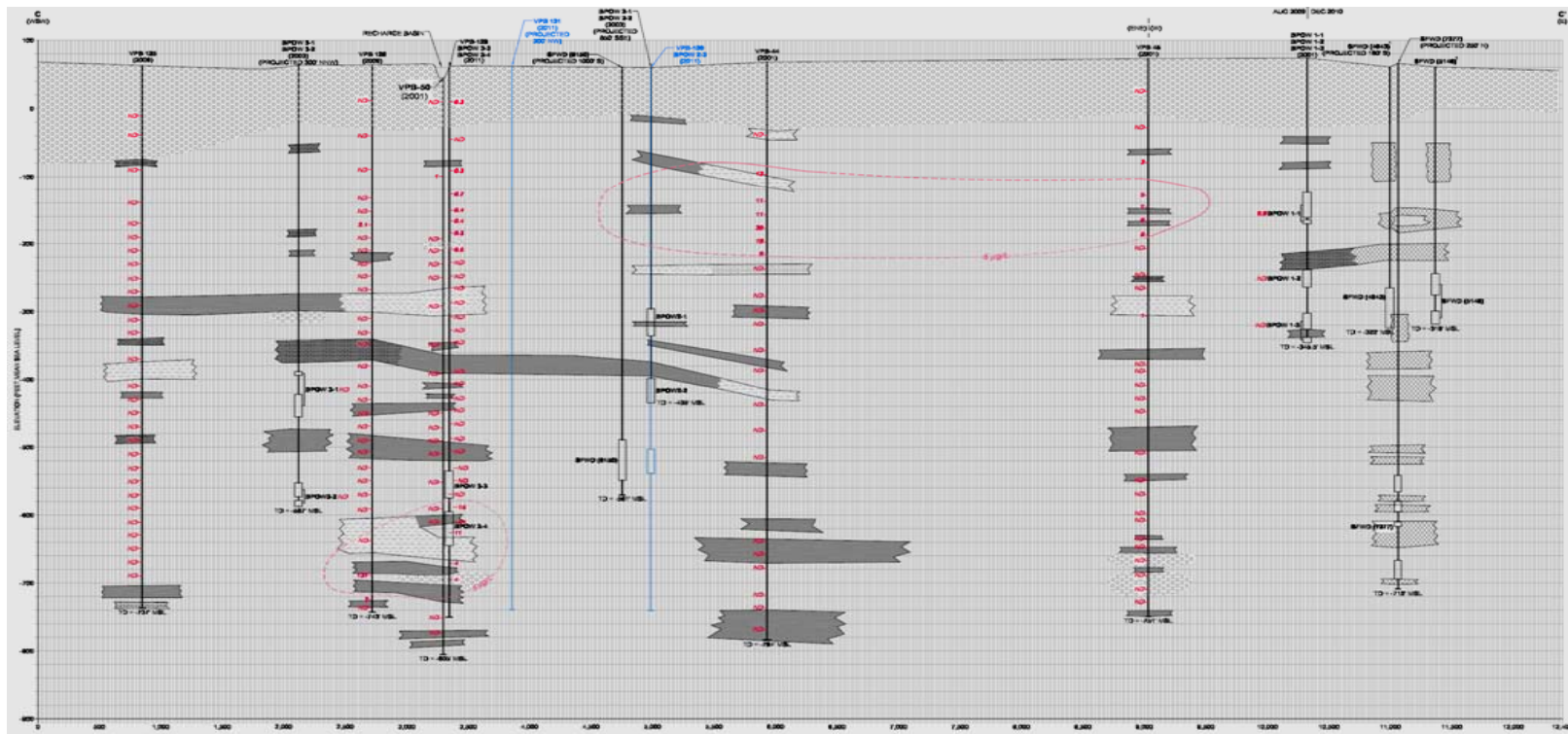
Cross Section A-A', North to South, Western Plume



OU2 INVESTIGATION - VERTICAL PROFILE BORING AND MONITORING WELL PROGRAM



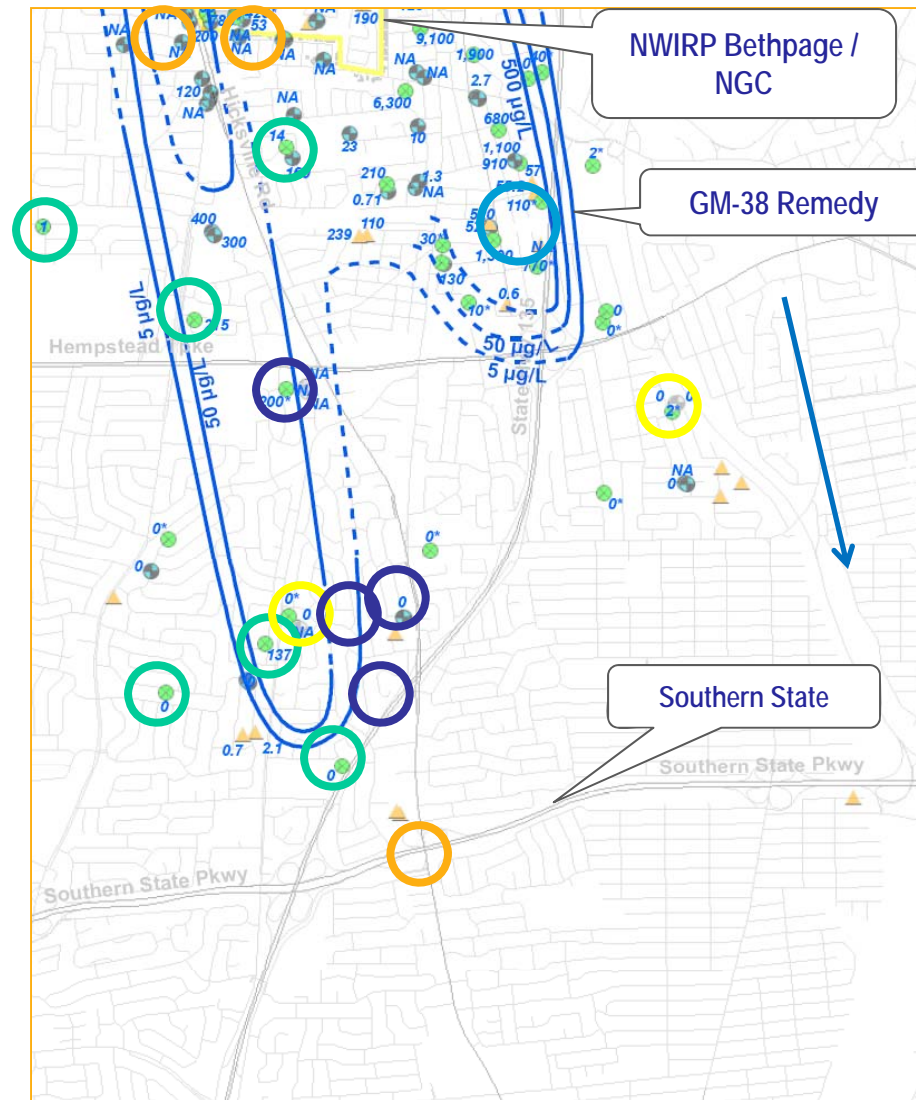
Cross Section C-C', West to East, South of Hempstead Road



OU2 INVESTIGATION - VERTICAL PROFILE BORING AND MONITORING WELL PROGRAM



- 2009 VPBs Installed
- 2010/2011 VPBs and Wells Installed
- 2010/2011 VPBs and Wells In progress (6 months)
- 2011/2012 VPBs and Wells Being Evaluated



OU2 INVESTIGATION - VERTICAL PROFILE BORING AND MONITORING WELL PROGRAM



OU2 INVESTIGATION - VERTICAL PROFILE BORING AND MONITORING WELL PROGRAM



Questions

OU 2 PUBLIC WATER SUPPLY DESIGN

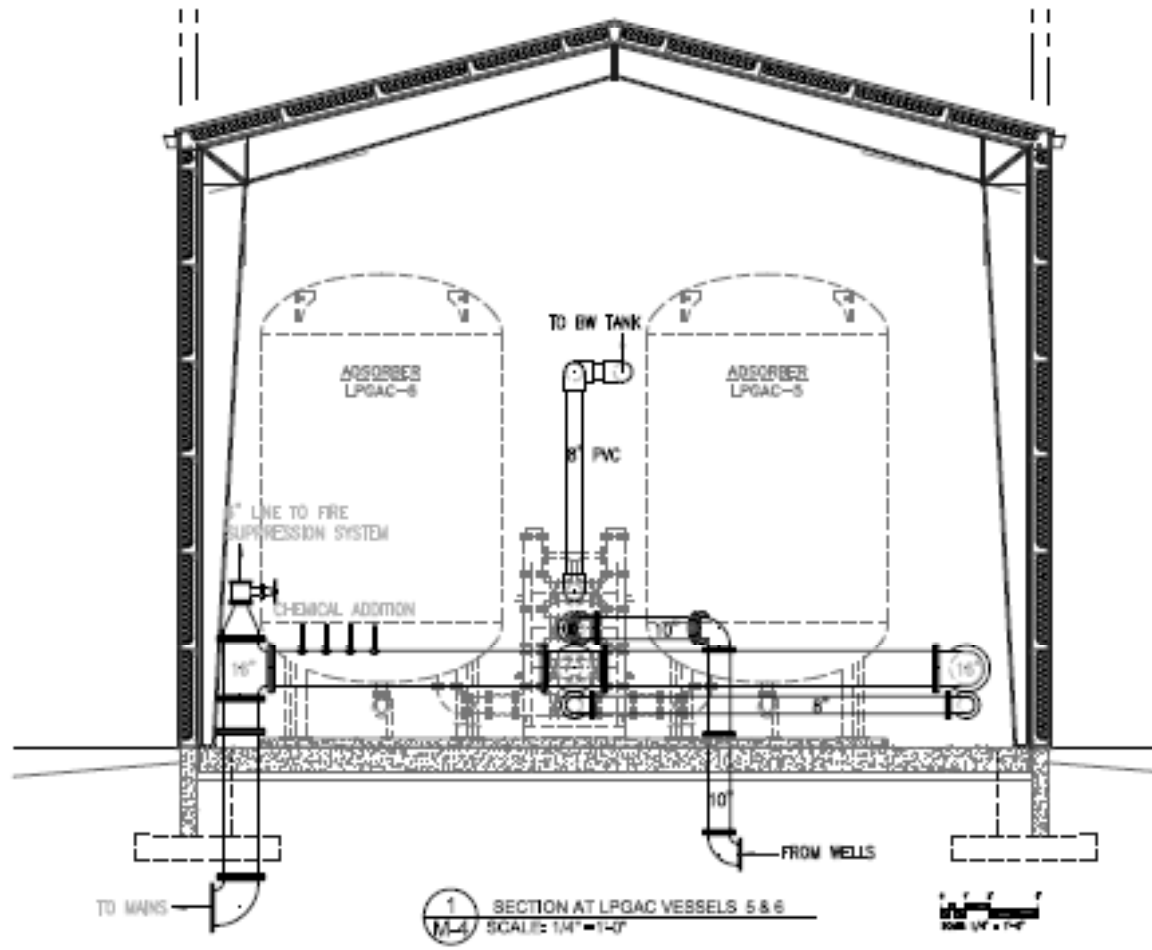


- Navy is currently designing a Granular Activated Carbon treatment system for an offsite Public Water Supply
- 4,200 gallons per minute system
- Design started in 2009 and will be completed in 2011
- Currently are working with NCDOH and Town of Hempstead on permits
- Construction is anticipated to start in early 2012

OU 2 PUBLIC WATER SUPPLY DESIGN



Liquid Phase Granular Activated Carbon System - Profile



OU2 ACTIVITIES



Questions