



DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND, MID-ATLANTIC
9742 MARYLAND AVENUE
NORFOLK, VA 23511-3095

IN REPLY REFER TO:

5090
Code OPNEEV4/SWC
27 February 2008

MEMORANDUM

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

Please note that the location of the meeting has been changed!

The Navy would like to announce that a Restoration Advisory Board (RAB) meeting has been scheduled for Wednesday, April 16, 2007. This meeting is open to the general public and will begin at 7:00 PM. The location of the meeting is:

Being Determined at this time

Items that will be discussed during this meeting will include:

- Bethpage Property Transfer and Lease
- Site 1 Soil Vapor Results
- Site 1 Demolition Actions.
- Site 4 Status
- Offsite Groundwater Investigation
- GM-38 Construction Status

Attached are the minutes from the November 7, 2007 meeting for your review. The Navy requests that you review the meeting minutes and provide comments that you have to wither myself or to the RAB Community Co-Chair, Mr. Jim McBride. These minutes will be discussed and approved at the April 16th meeting. If you need additional information, I am available by telephone, 757-444-0781, or email, lora.fly@navy.mil.

Sincerely,

Lora Fly

Remedial Project Manager

By direction of the Commanding Officer

Enclosures: (1) RAB Minutes from the 11/07/07 Meeting

**RESTORATION ADVISORY BOARD MEETING
NAVAL WEAPONS INDUSTRIAL RESERVE PLANT (NWIRP), BETHPAGE
BETHPAGE, NEW YORK
WEDNESDAY, NOVEMBER 7, 2007**

The nineteenth meeting of the Restoration Advisory Board (RAB) was held in the NWIRP Bethpage Conference Room. Meeting attendees included representatives from the Navy (Susan Clarke), New York State Department of Environmental Conservation (Steven Scharf), New York State Department of Transportation (John Petroff), Town of Oyster Bay (Rich Pfaender), RAB community member (Rosemary Styne), Tetra Tech NUS, Inc. (David Brayack and Debbie Cohen), ECOR Solutions, Inc. (Al Taormina), and ARCADIS (David Stern). Two Bethpage residents and a member of the Bethpage School Board also attended the meeting. The meeting sign-in sheet is provided as Attachment 1.

WELCOME AND AGENDA REVIEW

The Navy representative, Ms. Susan Clarke, welcomed everyone to the RAB meeting and reviewed the meeting agenda. The agenda for the meeting is included as Attachment 2. The presentation for the meeting is included as Attachment 3.

COMMUNITY UPDATE AND REVIEW AND APPROVAL OF MEETING MINUTES

Ms. Clarke asked whether the RAB members received the August 2007 minutes, which were distributed in October 2007, and asked whether there were questions or comments on the minutes. There were no questions or comments, but the approval of the minutes was tabled again because of the limited number of RAB community members present at the meeting. Minutes requiring approval to date include the RAB meetings held in August 2007, November 2006, August 2006, and March 2006.

SITE 1 - FEASIBILITY STUDY/NET ENVIRONMENTAL BENEFIT ANALYSIS

Ms. Clarke indicated that the Navy will conduct a Net Environmental Benefit Analysis (NEBA) for Site 1. The analysis is conducted to evaluate potential impacts and benefits for a remedial action to support risk management decisions and selection of a remedy that balances risks with cleanup benefits. The Navy hopes the NEBA will help the Navy and NYSDEC come to an agreement on a remedy for Site 1. The Navy and NYSDEC had a facilitated technical meeting

on September 17, 2007 to discuss the NEBA. A kick-off meeting for the NEBA will be held in Norfolk, VA on November 29, 2007.

SITES 1, 2, AND 3 – FIVE YEAR REVIEW

Ms. Clarke presented an update on the status of the Five-Year Review for NWIRP Bethpage Sites 1, 2, and 3. Five-year reviews are conducted as part of the CERCLA process after remedy implementation to determine whether the remedy remains protective of human health and the environment. For each site, the review provides a protectiveness statement or identifies additional action required to provide protection of human health and the environment.

The review for NWIRP Bethpage is almost complete, and the Navy has identified potential concerns that were not present during remedy selection for Site 1. Since 2000, Nassau County has been using a portion of the site as a vehicle impoundment lot. Oil and fuel spills from vehicles on the asphalt in the impound area may have impacted environmental media in the area. Additional investigation of the area was needed to ensure that the impoundment lot has not caused problems in the area and that the remedy remains protective of human health and the environment. The Navy investigated soil directly under the asphalt where spills were evident. The Navy also investigated sediment from storm drains in the area. In addition, the Site 1 remedy did not include the possibility that residual volatile organic compound (VOC) contamination in groundwater could migrate off site to a residential area. The remedy included clean up of VOCs in soil and groundwater at the site. The clean up addressed 90 percent or more of the VOC contamination; however, residual concentrations in groundwater are greater than NYSDEC standards. The Navy will conduct a soil gas survey to evaluate the potential for residual VOCs to migrate to groundwater, and update the conclusions of the Five-Year Review. The soil gas survey is currently planned for early January 2008.

Mr. Brayack noted that five-year reviews are conducted for sites where the remedy includes site use restrictions. Even if property is transferred to the town, restrictions on groundwater use will continue to be in place for NWIRP Bethpage. Therefore, five-year reviews will continue to be conducted by the Navy at NWIRP Bethpage.

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GM-38 CONSTRUCTION STATUS

Ms. Clarke indicated that the Navy is continuing to negotiate access agreements for the construction of the groundwater treatment facility at GM-38 location. The Navy was not able to complete the negotiations by September 2007. Ms. Clarke explained that the contract for construction of the groundwater treatment facility at GM-38 has been awarded, but because the facility is not located on Navy property, the Navy needs to obtain access agreements from the property owners. The majority of the facility will be on property owned by the Town of Oyster Bay. Portions of the facility will also be located on property owned by NYS Department of Transportation (DOT) and by Long Island Rail Road (LIRR). Each entity has their own access agreement form and the Navy and property owners are determining the appropriate form to use and any modifications to the form. The lawyers for the Navy and property owners are working out the final details for the property access.

Richard Pfaender of the Town of Oyster Bay provided an update on the status of the access agreement for their property and for permitting for the facility. He indicated that the application for the building permit will be completed once the access agreement is completed. The Town's attorney is working on the access agreement and there are a few questions that the attorney would like to discuss with the Navy. Ms. Clarke will have the Navy attorney contact the Town's attorney to provide the necessary information. Because the majority of the facility is on the Town's property, the Navy contractor (TtEC) can begin preparation for construction once a Town agreement has been signed.

AOC 22/SITE 4 – CLB SYSTEM UPDATE

The Navy provided a presentation on AOC 22/Site 4 Closed Loop Bioreactor (CLB) at the August 2007 RAB meeting. Mr. Brayack indicated that the data report was submitted in August 2007 and the report provides recommended remedial alternatives for AOC 22/Site 4. The report indicates that there are no ongoing releases from the site and that contamination at the site is not mobile. The Navy is waiting for NYSDEC comments on the report.

BETHPAGE PROPERTY TRANSFER

Ms. Clarke indicated that on October 26, 2007, the Navy submitted the final package for the transfer to NWIRP Bethpage property to Nassau County. The County is performing its own

Environmental Review and transfer is expected to occur within three months. Navy is pursuing disposal of the property through GSA. If the transfer takes place before the April 2008 RAB meeting, then a new location for the RAB meetings will be needed. Mr. Tom Frost indicated that there may be a meeting location in one of the Bethpage schools. The April 2008 RAB meeting announcement will indicate whether the RAB meeting location will change.

GM-75 AREA INVESTIGATION

The work plan for the GM-75 investigation was presented at the August 2007 RAB meeting. Mr. Brayack indicated that the goal is to investigate an area of groundwater contamination that has migrated beyond the extent of the Northrop Grumman Groundwater Containment System. Other areas of hotspot contamination will also be investigated if feasible.

Mr. Brayack explained that south of Hempstead Turnpike there is a very deep (500 feet below ground surface) low concentration contaminant plume. The Northrop Grumman containment system is preventing additional contamination from impacting groundwater off site. Treatment of the contaminated soil from Navy source areas also prevents additional contamination from impacting groundwater. However before the containment system was implemented and the soil treated, contamination from these sites impacted groundwater off site. There are some areas of the offsite groundwater plume that have high concentrations of contaminants. Removal of these high concentrations will facilitate faster clean up of the offsite plume. The Navy is monitoring the offsite groundwater concentrations, and has seen a decrease in contaminant concentrations in the GM-75 area; however, some higher contaminant concentrations are moving south of this area. The investigation will determine where contamination is moving and whether the BWD Plant 6 treatment system may need to be modified to address this contamination. The Navy needs to know the size and migration pathway of the higher contaminant plume to determine what action is needed to reduce the high concentrations before reaching BWD Plant 6. In addition, the Navy will investigate another area of higher contamination (near GM-38) to determine whether the GM-38 plant may need to be operating longer than originally planned to address the contamination.

Three vertical profile borings (VPBs) are planned (VPB-120, 121, and 122) as part of the GM-75 investigation. Three additional borings may be drilled based on the results of the first three borings. The borings are being conducted in phases because the installation of these deep borings is time consuming and expensive. The borings will be installed to 800 feet below

ground surface and groundwater samples will be collected every 20 feet in the boring. The borings provide detailed information on the subsurface geology. The Navy will try to locate the borings to reduce the disturbance of residents during the drilling activities. The Navy received information recently on a recharge basin west of VPB-120 and the Navy plans to move the boring location to this recharge basin if possible and feasible. The Navy is arranging property access agreements to install the borings.

Mr. Brayack explained that the VPBs will be temporary monitoring locations. A permanent well would only be installed at a VPB location if the Navy determines that there is a data gap in the current monitoring well system. Drilling for VPBs takes about four to six weeks because many samples are collected during the installation of the borings. Installation of a well in a VPB location at a later time can take the same amount of time. The Navy and NYSDEC will need to discuss whether additional monitoring wells are needed for the off site contaminated area and determine whether any wells could be installed as part of the installation of the GM-38 system.

There was discussion about groundwater use and operational problems at BWD Plant 6. There is a hospital nearby that has a well that is used for its air conditioning system. The well was tested and no contamination was found. Residents are not allowed to have drinking water wells. Drinking water for the area is supplied by the water districts and the pumping wells for the system are tested regularly. The public supply wells at BWD Plant 6 have a treatment system to remove any contamination in the groundwater.

CLOSING REMARKS

Ms. Clarke thanked everyone for coming to the meeting and verified that the next RAB meeting would be held in April 2, 2008. A notice for the next RAB meeting will be sent out a few weeks before the meeting.

Several other items were discussed and include the following:

- Mr. Frost indicated that the community has expressed concerns related to the construction of the treatment system at GM-38 and the investigation of the GM-75 area groundwater contamination. Community members often come to the Bethpage School Board with questions. Ms. Clarke indicated that the Navy could hold an informational meeting for the community to discuss the current status of groundwater investigation and treatment.

- The Navy will provide Mr. Frost with information on the NWIRP Bethpage Administrative Record website so that he has access to the documents prepared as part of the environmental investigation and clean up for NWIRP Bethpage. The Navy also has a CD set containing the NWIRP Bethpage Administrative Record available at the Bethpage Library Reference Desk.
- Mr. Scharf mentioned there are deed restrictions identified in the Finding of Suitability to Transfer (FOST). He wants to make sure that the deed restrictions get properly filed and documented before the property transfer is complete. Ms. Clarke will provide documentation of the deed restrictions to the NYSDEC.

No other RAB members had closing remarks, and the meeting was adjourned at approximately 8:30 pm.

ATTACHMENT 1

NOVEMBER 7, 2007 RAB MEETING SIGN-IN SHEET

19th RAB Meeting for NWIRP Bethpage
November 7, 2007
Sign-In List

Name	Address (if interested in being on mailing list)	Organization	How Did You Hear of Meeting?
DAVID SIEGEL	2 HUNTINGTON QUAS MELVILLE, NY 11747	ARGUS15	
John Petroff		NYSDOT	
Dave Brayack		Tetra Tech	
Steven Scharf		NYSD&C	
John Doberck		Resident of Bethpage	Bethpage Tribune
SUSAN CLARK		Remedial P.M. NAVY	
Tom Frost		Bethpage Sch Dist Board of Ed.	
Rick Pfander		TIB	
Ah Taormina		ECOR	
Debbie Cohen		TENUS	

**19th RAB Meeting for NWIRP Bethpage
November 7, 2007
Sign-In List**

[illegible]

ATTACHMENT 2

NOVEMBER 7, 2007 RAB MEETING AGENDA

Agenda

Restoration Advisory Board Naval Weapons Industrial Reserve Plant Bethpage

**November 7, 2007
NWIRP Bethpage, Bethpage, NY
7:00 p.m.**

Welcome and Agenda Review
Susan Clarke, NAVFAC Mid-Atlantic

Meeting Minutes
All Members

Technical Progress

Site 1 - Feasibility Study/Net Environmental Benefit Analysis
Susan Clarke, NAVFAC Mid-Atlantic

Sites 1, 2, and 3 - Five Year Review - Susan Clarke

GM-38 Construction Status - Susan Clarke

AOC 22/Site 4 - CLB System Update
David Brayack, Tetra Tech NUS

Bethpage Property Transfer
Susan Clarke

GM-75 Area Investigation
David Brayack

Closing Remarks
Susan Clarke, NAVFAC Mid-Atlantic

Presenters will be available after the program for questions.

ATTACHMENT 3

NAVY AND TETRA TECH NUS, INC. PRESENTATIONS



Restoration Advisory Board (RAB) Meeting

Naval Weapons Industrial Reserve Plant (NWIRP) Bethpage November 7, 2007

November 2007

AGENDA



Agenda

**Restoration Advisory Board
Naval Weapons Industrial Reserve Plant Bethpage**

**November 7, 2007
NWIRP Bethpage, Bethpage, NY
7:00 p.m.**

Welcome and Agenda Review
Susan Clarke, NAVFAC Mid-Atlantic

Meeting Minutes
All Members

Technical Progress

Site 1 - Feasibility Study/Net Environmental Benefit Analysis
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Bethpage Property Transfer
Susan Clarke

GM-75 Area Investigation
David Brayack

Closing Remarks
Susan Clarke, NAVFAC Mid-Atlantic

Presenters will be available after the program for questions.

WELCOME AND MEETING MINUTES



- Approvals needed for:
 - November 2006
 - April 2007
 - August 2007

SITE 1 FEASIBILITY STUDY/NET ENVIRONMENTAL BENEFIT ANALYSIS



- More fully evaluates potential remedial impacts vice benefits.
- Evaluates basis for risk management decisions.
- Balances risks with cleanup benefits.
- Performed by New Fields, action awarded Sept 07.
- Held first facilitated meeting between Navy and NYSDEC on Sep 17 2007.
- NEBA kickoff meeting to be held in Norfolk on Nov 29, 2007.

SITES 1, 2, AND 3 FIVE-YEAR REVIEW



- In progress, report is draft.
- Significant difference since original is property use, County use as an impound lot.
- Navy conducted soil/sediment investigation in area.
- Finalize Five-year review in Feb 08, waiting for Site 1 Soil Gas results.

GM-38 CONSTRUCTION STATUS



- Site access agreements in progress.
 - New York State Department of Transportation
 - MTA/LIRR
 - Town of Oyster Bay

BETHPAGE PROPERTY TRANSFER



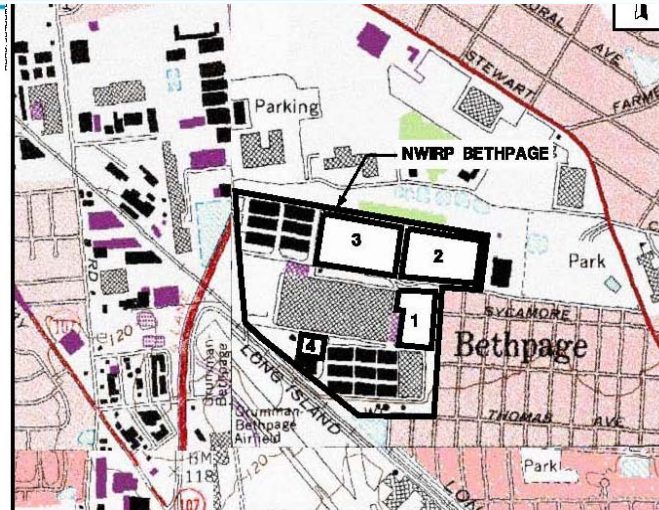
- Navy submitted final package to County on Oct 26, 2007.
- County is performing Environmental Review.
- Transfer is expected to occur within 3 months.
- Navy is pursuing GSA disposal route.

AOC 22/SITE 4 – CLB SYSTEM UPDATE

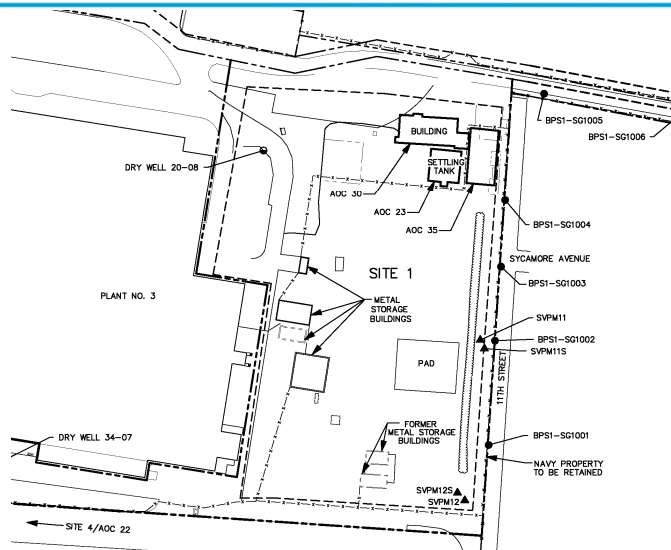


- Navy submitted data report for review in August 2007.
- Waiting for comments.

SITE MAP



SITE 1 SOIL GAS INVESTIGATION

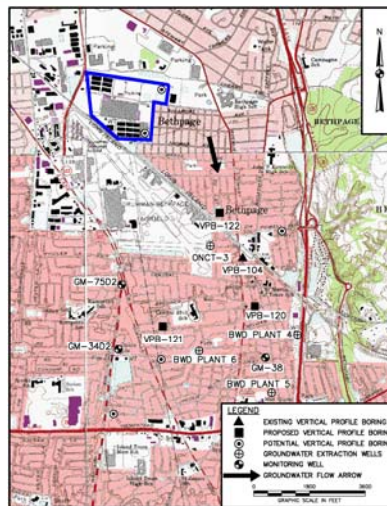


GM-75 INVESTIGATION



- **Goal:** Investigate an area of groundwater contamination that has migrated beyond the extent of the Northrop Grumman Groundwater Containment System.
- Address other area hotspots as feasible.
- Received recent data, move one location to the west.
- Arranging property access agreements.

GM-75 PROGRAM



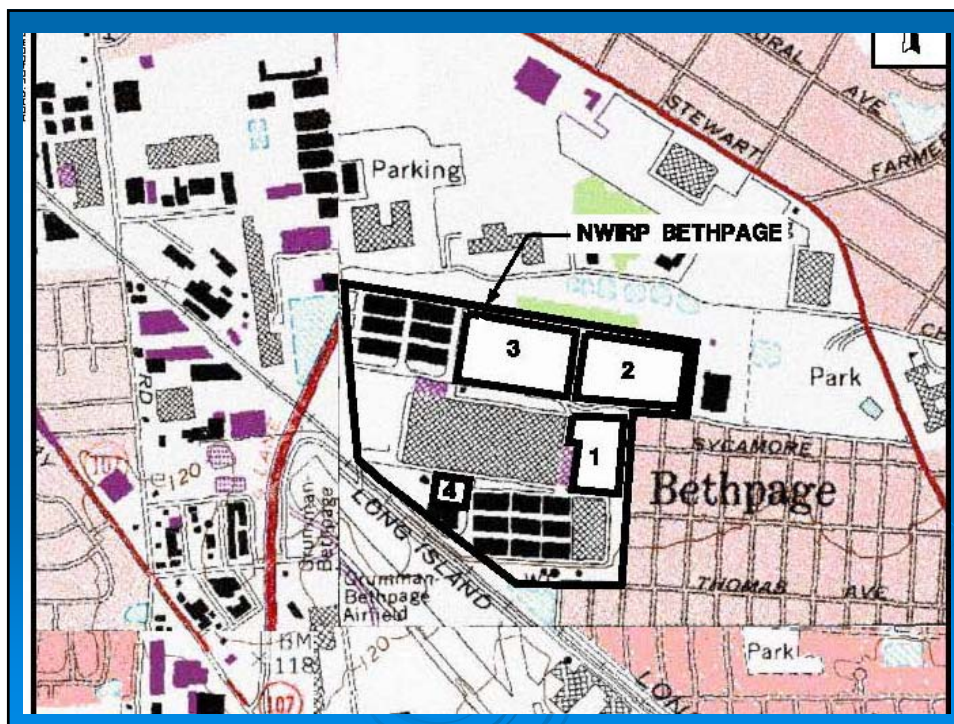
**Restoration Advisory Board (RAB) Meeting
Naval Weapons Industrial Reserve
Plant (NWIRP) Bethpage
November 7, 2007**

01Aug 2007

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01Aug 2007

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Tiger Team Study and Site 1 Soil Update

- Cleanup Review Tiger Team (CURTT) – established August 2006
- Evaluate/identify possible remedial alternatives for Site 1
- Members include individuals from Navy and private industry with relevant experience in Site 1 issues

Tiger Team Study and Site 1 Soil Update

- Site 1 remedial actions include:
 - AS/SVE system operation from 1998-2002
 - Approx 4,600 lbs of VOCs were removed
- In October 2002, Navy concluded that objectives were complete and recommended system shutdown and removal
- In December 2003, NYSDEC concurred

01Aug 2007

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Tiger Team Study and Site 1 Soil Update

- Post-ROD remedial design studies were conducted from 1995 through 2001 to delineate the vertical extent of PCBs in soils (1 mg/kg surface and 10 mg/kg subsurface)
- Studies also evaluated other contaminants of potential concern (PAHs and metals)
- Addition of two dry wells (20-08 and 34-07)

01Aug 2007

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Five-Year Review

- Purpose of 5 yr Review - evaluate implementation & performance of the remedies at the sites to determine whether the remedies remain protective of human health and the environment
- 5 yr Review required by statute - Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and the National Oil and Hazardous Substances Pollution Contingency Plan (NCP)
- First 5 yr Review of NWIRP Bethpage - Remedial actions completed at Sites 2 and 3 in 2002

01Aug 2007

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Five-Year Review

- Site 1 – Former Drum Marshalling Area
 - 2 concrete pads (storage of waste drums)
 - 120 abandoned sanitary cesspools
 - In 2005, Site 1 was expanded to include:
 - Drywell/Area of Concern (AOC) 34-07 (stormwater management system)
 - Drywell/AOC 20-08
 - AOC 23 – Former Above Ground Storage Tanks
 - AOC 30 – Storage Sheds
 - AOC 35 – Former Sludge Drying Beds
- COC are PCBs, metals, and PAHs
- Site 1 still under investigation/remedy determination

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Five-Year Review

- Site 2 –Recharge Basins
- Part of storm water system used to channel surface water underground
- Low-level soil contamination present (VOCs, metals, PAHs, PCBs)
- Remedial Actions performed:
 - Excavated 2,600 cy PCB-contaminated soil
 - Installed permeable 6-inch cover
 - Implemented deed restrictions

01Aug 2007

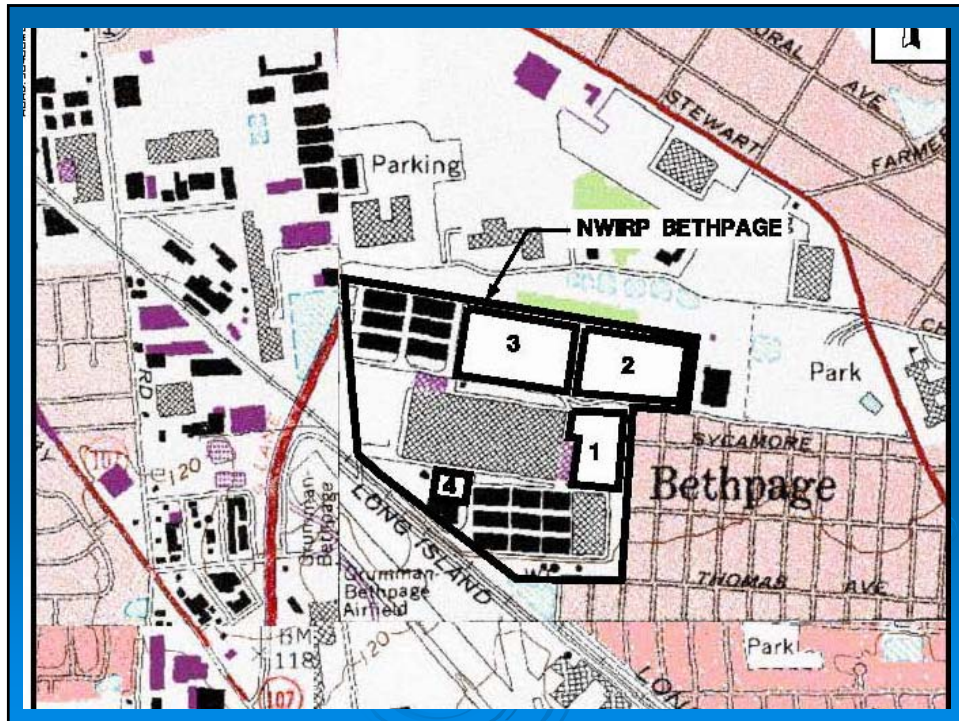
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Five-Year Review

- Site 3 - Salvage Storage Area
- Low-level soil contamination present (VOCs, metals, PAHs)
- Remedial actions performed
 - Implementation of deed restriction for future use

01Aug 2007

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GM-38 Construction Schedule

- Construction delayed – Long term easements are being developed
- Draft Final Easements – August 2007
- 3 Property Owners Involved– LIRR, DOT, TOB
- Final Easements – September 2007
- Construction begins – October 2007

01Aug 2007

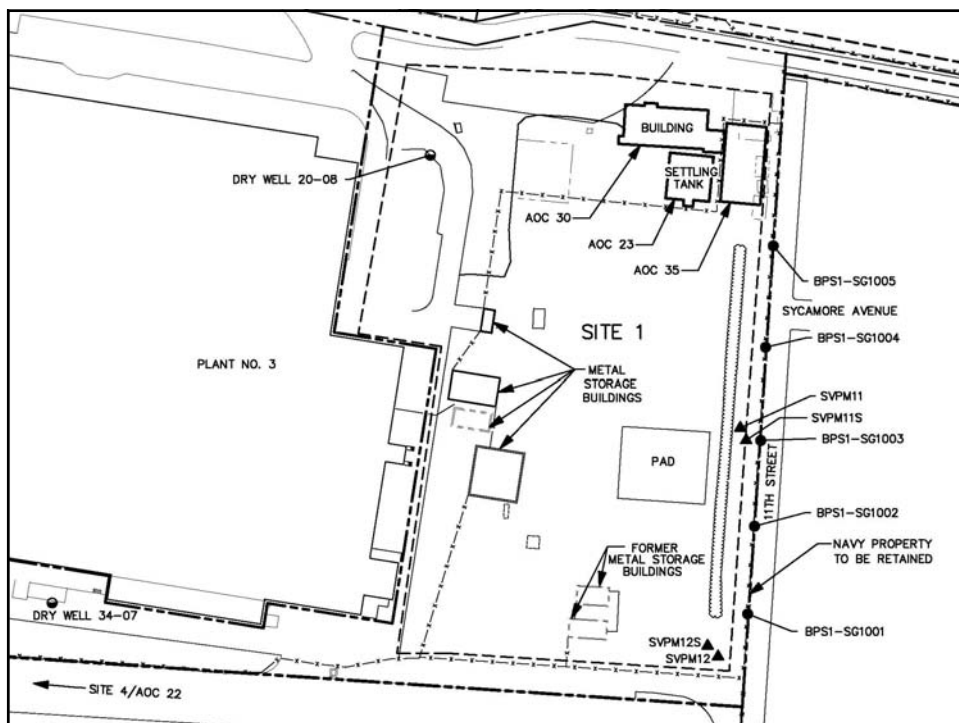
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Site 1 Soil Gas Investigation

- Goal: Evaluate the presence and potential migration of soil vapors from Site 1 off site
- Prepare Work Plan (Sept 2007)

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AOC 22/Site 4 Former Underground Storage Tank Area Update



01Aug 2007

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Site History

- Three underground storage tanks active in 1940s to 1960s
- Contained No. 6 Fuel Oil
- Tanks were removed at an unknown time, probably early 1980s
- Underground tank slabs/saddles remain

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Environmental Concerns

- Petroleum contamination, measured as total petroleum hydrocarbons (TPH), is primary concern
- Contamination is mostly adhered to soils – not mobile
- Polynuclear aromatic hydrocarbons (PAHs) primary chemicals of concern
- Majority of contamination is near the water table (60 feet below ground surface)
- Limited impact to groundwater

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Closed Loop Bioremediation System

- Treatment Goal: Provide 90 percent reduction in TPH concentration.
- Treat soils and petroleum through the use of surfactants and biodegradation.
- System operated from fall 2004 to spring 2006.
- System demobilized from site in August 2006.
- Based on soil data, approximately 15 percent removal of TPH as of September 2005.

01Aug 2007

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Status of Site 4

- Conducted final round of soil and groundwater testing, in December 2006
- Evaluated potential for formation of free product on groundwater and migration through groundwater
- Report in summer 2007

01Aug 2007

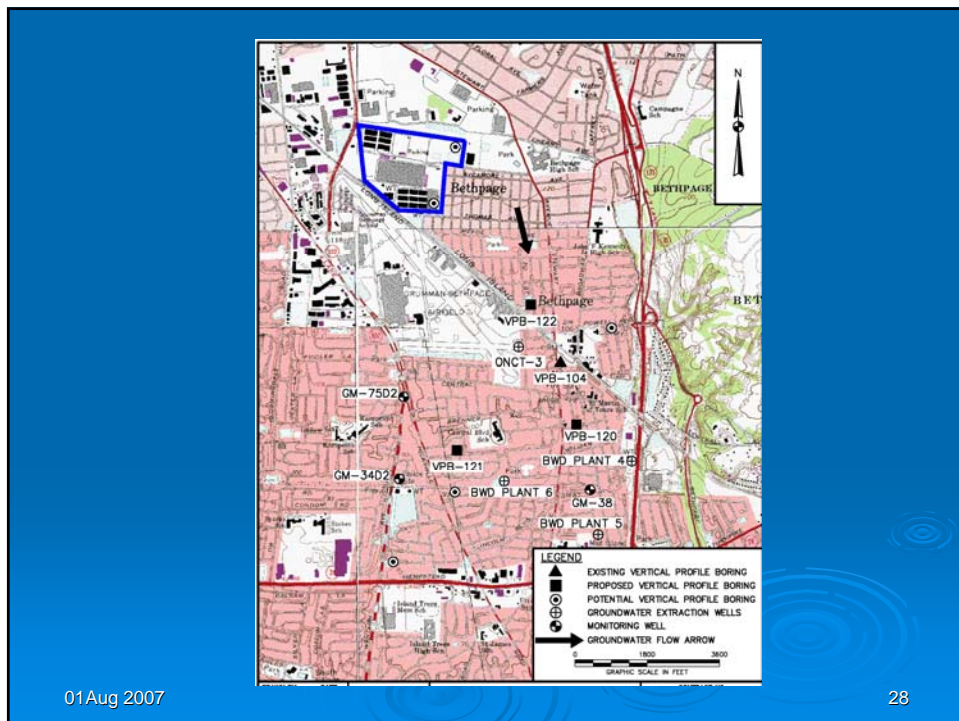
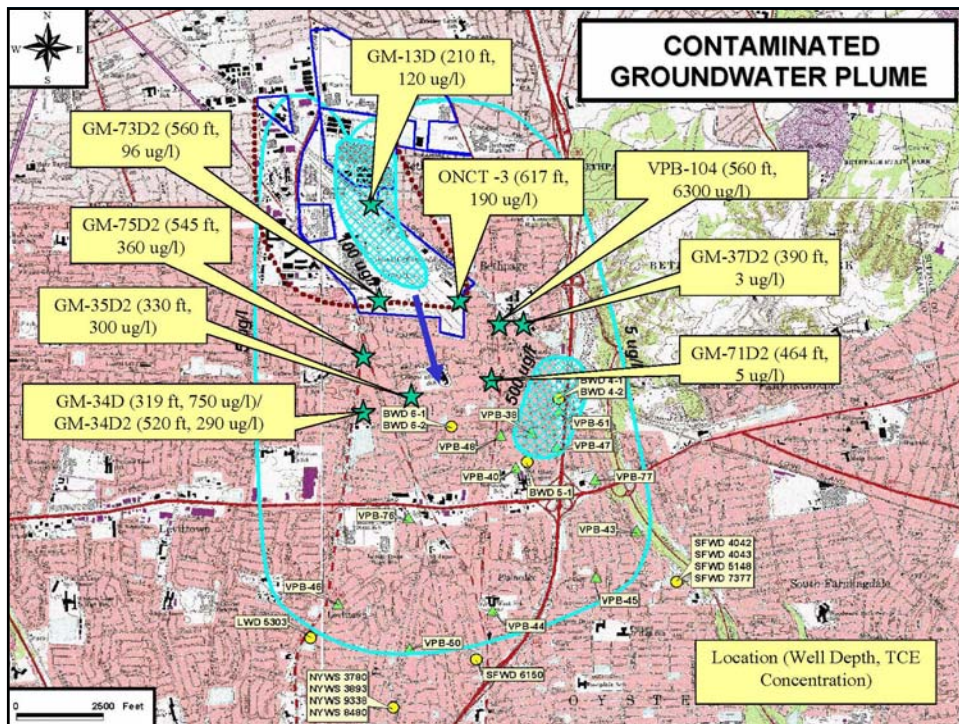
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01Aug 2007

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GM-75 AREA INVESTIGATION

The work plan for the GM-75 investigation was presented at the August 2007 RAB meeting. Mr. Brayack indicated that the goal is to investigate an area of groundwater contamination that has migrated beyond the extent of the Northrop Grumman Groundwater Containment System. Other areas of hotspot contamination will also be investigated if feasible.

Mr. Brayack explained that south of Hempstead Turnpike there is a very deep (500 feet below ground surface) low concentration contaminant plume. The Northrop Grumman containment system is preventing additional contamination from impacting groundwater off site. Treatment of the contaminated soil from Navy source areas also prevents additional contamination from impacting groundwater. However before the containment system was implemented and the soil treated, contamination from these sites impacted groundwater off site. There are some areas of the offsite groundwater plume that have high concentrations of contaminants. Removal of these high concentrations will facilitate faster clean up of the offsite plume. The Navy is monitoring the offsite groundwater concentrations, and has seen a decrease in contaminant concentrations in the GM-75 area; however, some higher contaminant concentrations are moving south of this area. The investigation will determine where contamination is moving and whether the BWD Plant 6 treatment system may need to be modified to address this contamination. The Navy needs to know the size and migration pathway of the higher contaminant plume to determine what action is needed to reduce the high concentrations before reaching BWD Plant 6. In addition, the Navy will investigate another area of higher contamination (near GM-38) to determine whether the GM-38 plant may need to be operating longer than originally planned to address the contamination.

Three vertical profile borings (VPBs) are planned (VPB-120, 121, and 122) as part of the GM-75 investigation. Three additional borings may be drilled based on the results of the first three borings. The borings are being conducted in phases because the installation of these deep borings is time consuming and expensive. The borings will be installed to 800 feet below

ground surface and groundwater samples will be collected every 20 feet in the boring. The borings provide detailed information on the subsurface geology. The Navy will try to locate the borings to reduce the disturbance of residents during the drilling activities. The Navy received information recently on a recharge basin west of VPB-120 and the Navy plans to move the boring location to this recharge basin if possible and feasible. The Navy is arranging property access agreements to install the borings.

Mr. Brayack explained that the VPBs will be temporary monitoring locations. A permanent well would only be installed at a VPB location if the Navy determines that there is a data gap in the current monitoring well system. Drilling for VPBs takes about four to six weeks because many samples are collected during the installation of the borings. Installation of a well in a VPB location at a later time can take the same amount of time. The Navy and NYSDEC will need to discuss whether additional monitoring wells are needed for the off site contaminated area and determine whether any wells could be installed as part of the installation of the GM-38 system.

There was discussion about groundwater use and operational problems at BWD Plant 6. There is a hospital nearby that has a well that is used for its air conditioning system. The well was tested and no contamination was found. Residents are not allowed to have drinking water wells. Drinking water for the area is supplied by the water districts and the pumping wells for the system are tested regularly. The public supply wells at BWD Plant 6 have a treatment system to remove any contamination in the groundwater.

CLOSING REMARKS

Ms. Clarke thanked everyone for coming to the meeting and verified that the next RAB meeting would be held in April 2, 2008. A notice for the next RAB meeting will be sent out a few weeks before the meeting.

Several other items were discussed and include the following:

- Mr. Frost indicated that the community has expressed concerns related to the construction of the treatment system at GM-38 and the investigation of the GM-75 area groundwater contamination. Community members often come to the Bethpage School Board with questions. Ms. Clarke indicated that the Navy could hold an informational meeting for the community to discuss the current status of groundwater investigation and treatment.

- The Navy will provide Mr. Frost with information on the NWIRP Bethpage Administrative Record website so that he has access to the documents prepared as part of the environmental investigation and clean up for NWIRP Bethpage. The Navy also has a CD set containing the NWIRP Bethpage Administrative Record available at the Bethpage Library Reference Desk.
- Mr. Scharf mentioned there are deed restrictions identified in the Finding of Suitability to Transfer (FOST). He wants to make sure that the deed restrictions get properly filed and documented before the property transfer is complete. Ms. Clarke will provide documentation of the deed restrictions to the NYSDEC.

No other RAB members had closing remarks, and the meeting was adjourned at approximately 8:30 pm.

ATTACHMENT 1

NOVEMBER 7, 2007 RAB MEETING SIGN-IN SHEET

19th RAB Meeting for NWIRP Bethpage
November 7, 2007
Sign-In List

Name	Address (if interested in being on mailing list)	Organization	How Did You Hear of Meeting?
DAVID SIEGEL	2 HUNTINGTON QUAS MAYICE, NY 11747	ARGUS15	
John Petroff		NYSDOT	
Dave Brayack		Tetra Tech	
Steven Scharf		NYSD&C	
John Doberck		Resident of Bethpage	Bethpage Tribune
SUSAN CLARK		Remedial P.M. NAVY	
Tom Frost		Bethpage Sch Dist Board of Ed.	
Rick Pfander		TIB	
Ah Taormina		ECOR	
Debbie Cohen		TENUS	

Name	Address (if interested in being on mailing list)	Organization	How Did You Hear of Meeting?
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Bethpage
resident

ATTACHMENT 2

NOVEMBER 7, 2007 RAB MEETING AGENDA

Agenda

Restoration Advisory Board Naval Weapons Industrial Reserve Plant Bethpage

**November 7, 2007
NWIRP Bethpage, Bethpage, NY
7:00 p.m.**

Welcome and Agenda Review
Susan Clarke, NAVFAC Mid-Atlantic

Meeting Minutes
All Members

Technical Progress

Site 1 - Feasibility Study/Net Environmental Benefit Analysis
Susan Clarke, NAVFAC Mid-Atlantic

Sites 1, 2, and 3 - Five Year Review - Susan Clarke

GM-38 Construction Status - Susan Clarke

AOC 22/Site 4 - CLB System Update
David Brayack, Tetra Tech NUS

Bethpage Property Transfer
Susan Clarke

GM-75 Area Investigation
David Brayack

Closing Remarks
Susan Clarke, NAVFAC Mid-Atlantic

Presenters will be available after the program for questions.

ATTACHMENT 3

NAVY AND TETRA TECH NUS, INC. PRESENTATIONS



Restoration Advisory Board (RAB) Meeting

Naval Weapons Industrial Reserve Plant (NWIRP) Bethpage November 7, 2007

November 2007

AGENDA



Agenda

**Restoration Advisory Board
Naval Weapons Industrial Reserve Plant Bethpage**

**November 7, 2007
NWIRP Bethpage, Bethpage, NY
7:00 p.m.**

Welcome and Agenda Review
Susan Clarke, NAVFAC Mid-Atlantic

Meeting Minutes
All Members

Technical Progress

Site 1 - Feasibility Study/Net Environmental Benefit Analysis
Susan Clarke, NAVFAC Mid-Atlantic

Sites 1, 2, and 3 - Five Year Review - Susan Clarke

GM-38 Construction Status - Susan Clarke

AOC 22/Site 4 - CLB System Update
David Brayack, Tetra Tech NUS

Bethpage Property Transfer
Susan Clarke

GM-75 Area Investigation
David Brayack

Closing Remarks
Susan Clarke, NAVFAC Mid-Atlantic

Presenters will be available after the program for questions.

WELCOME AND MEETING MINUTES



- Approvals needed for:
 - November 2006
 - April 2007
 - August 2007

SITE 1 FEASIBILITY STUDY/NET ENVIRONMENTAL BENEFIT ANALYSIS



- More fully evaluates potential remedial impacts vice benefits.
- Evaluates basis for risk management decisions.
- Balances risks with cleanup benefits.
- Performed by New Fields, action awarded Sept 07.
- Held first facilitated meeting between Navy and NYSDEC on Sep 17 2007.
- NEBA kickoff meeting to be held in Norfolk on Nov 29, 2007.

SITES 1, 2, AND 3 FIVE-YEAR REVIEW



- In progress, report is draft.
- Significant difference since original is property use, County use as an impound lot.
- Navy conducted soil/sediment investigation in area.
- Finalize Five-year review in Feb 08, waiting for Site 1 Soil Gas results.

GM-38 CONSTRUCTION STATUS



- Site access agreements in progress.
 - New York State Department of Transportation
 - MTA/LIRR
 - Town of Oyster Bay

BETHPAGE PROPERTY TRANSFER



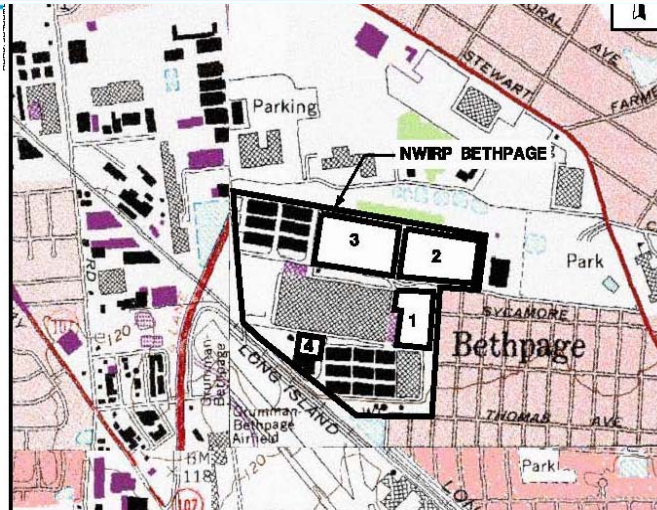
- Navy submitted final package to County on Oct 26, 2007.
- County is performing Environmental Review.
- Transfer is expected to occur within 3 months.
- Navy is pursuing GSA disposal route.

AOC 22/SITE 4 – CLB SYSTEM UPDATE

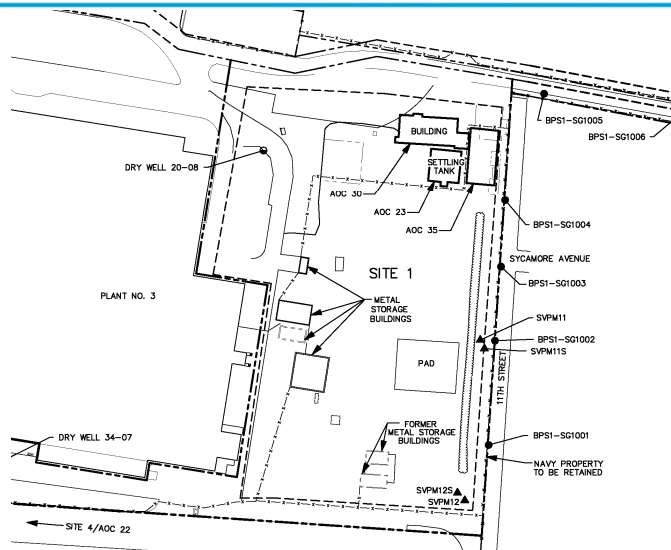


- Navy submitted data report for review in August 2007.
- Waiting for comments.

SITE MAP



SITE 1 SOIL GAS INVESTIGATION

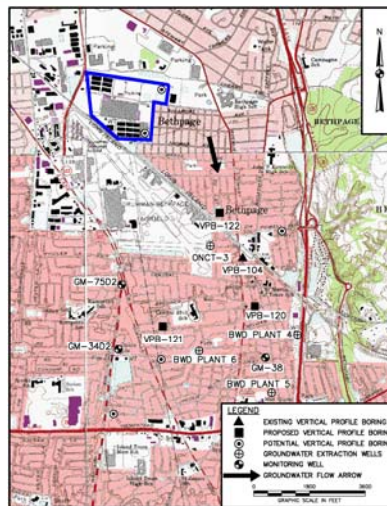


GM-75 INVESTIGATION



- **Goal:** Investigate an area of groundwater contamination that has migrated beyond the extent of the Northrop Grumman Groundwater Containment System.
- Address other area hotspots as feasible.
- Received recent data, move one location to the west.
- Arranging property access agreements.

GM-75 PROGRAM



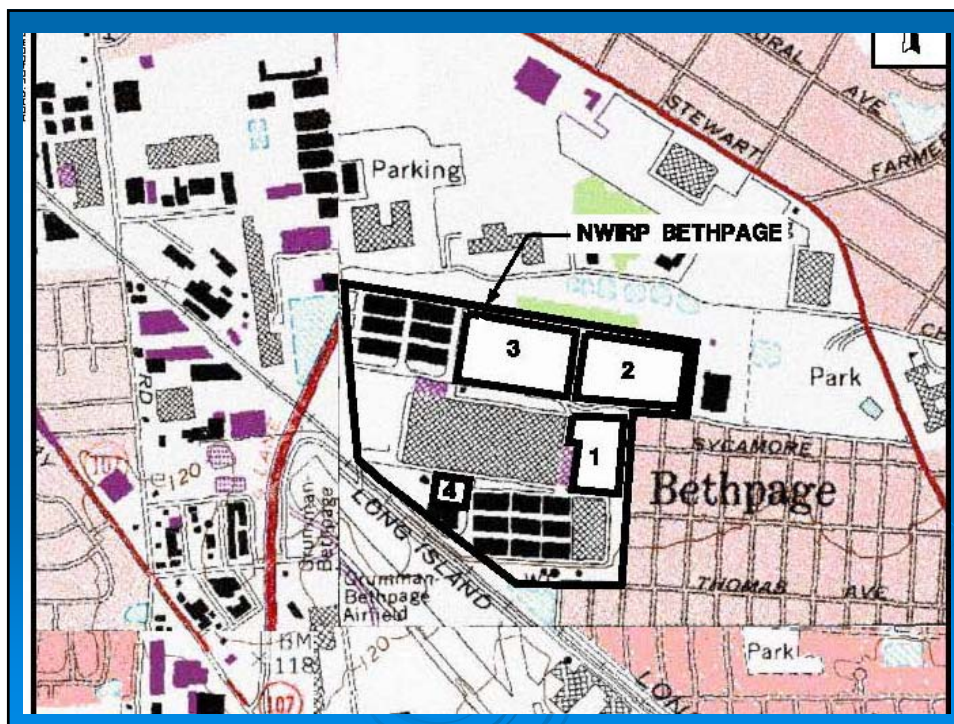
**Restoration Advisory Board (RAB) Meeting
Naval Weapons Industrial Reserve
Plant (NWIRP) Bethpage
November 7, 2007**

01Aug 2007

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01Aug 2007

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Tiger Team Study and Site 1 Soil Update

- Cleanup Review Tiger Team (CURTT) – established August 2006
- Evaluate/identify possible remedial alternatives for Site 1
- Members include individuals from Navy and private industry with relevant experience in Site 1 issues

Tiger Team Study and Site 1 Soil Update

- Site 1 remedial actions include:
 - AS/SVE system operation from 1998-2002
 - Approx 4,600 lbs of VOCs were removed
- In October 2002, Navy concluded that objectives were complete and recommended system shutdown and removal
- In December 2003, NYSDEC concurred

01Aug 2007

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Tiger Team Study and Site 1 Soil Update

- Post-ROD remedial design studies were conducted from 1995 through 2001 to delineate the vertical extent of PCBs in soils (1 mg/kg surface and 10 mg/kg subsurface)
- Studies also evaluated other contaminants of potential concern (PAHs and metals)
- Addition of two dry wells (20-08 and 34-07)

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Five-Year Review

- Purpose of 5 yr Review - evaluate implementation & performance of the remedies at the sites to determine whether the remedies remain protective of human health and the environment
- 5 yr Review required by statute - Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and the National Oil and Hazardous Substances Pollution Contingency Plan (NCP)
- First 5 yr Review of NWIRP Bethpage - Remedial actions completed at Sites 2 and 3 in 2002

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Five-Year Review

- Site 1 – Former Drum Marshalling Area
 - 2 concrete pads (storage of waste drums)
 - 120 abandoned sanitary cesspools
 - In 2005, Site 1 was expanded to include:
 - Drywell/Area of Concern (AOC) 34-07 (stormwater management system)
 - Drywell/AOC 20-08
 - AOC 23 – Former Above Ground Storage Tanks
 - AOC 30 – Storage Sheds
 - AOC 35 – Former Sludge Drying Beds
- COC are PCBs, metals, and PAHs
- Site 1 still under investigation/remedy determination

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Five-Year Review

- Site 2 –Recharge Basins
- Part of storm water system used to channel surface water underground
- Low-level soil contamination present (VOCs, metals, PAHs, PCBs)
- Remedial Actions performed:
 - Excavated 2,600 cy PCB-contaminated soil
 - Installed permeable 6-inch cover
 - Implemented deed restrictions

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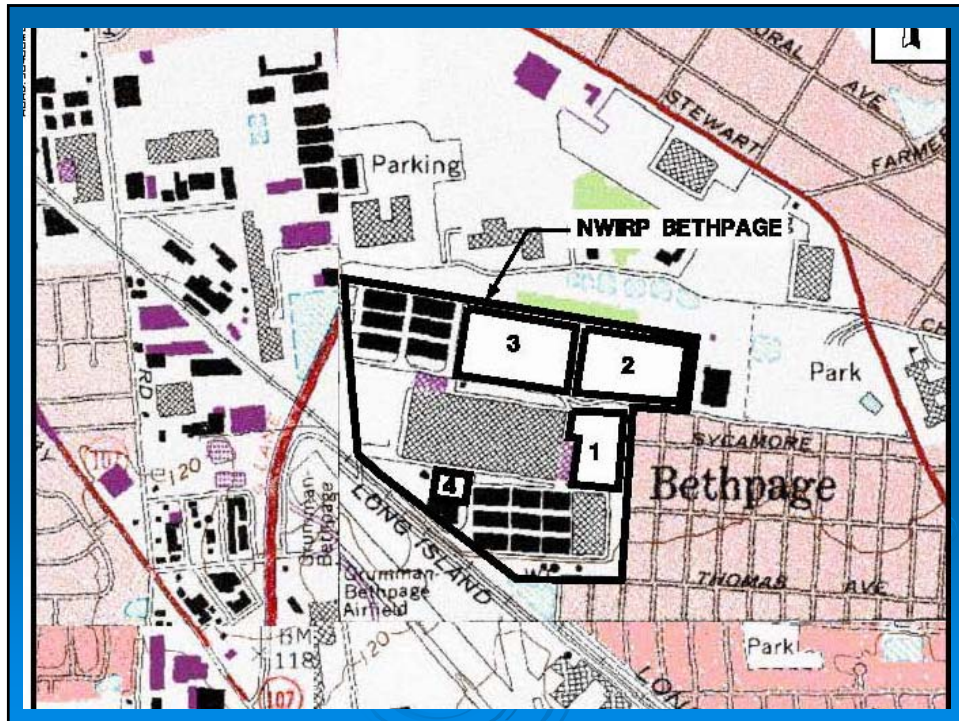
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Five-Year Review

- Site 3 - Salvage Storage Area
- Low-level soil contamination present (VOCs, metals, PAHs)
- Remedial actions performed
 - Implementation of deed restriction for future use

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GM-38 Construction Schedule

- Construction delayed – Long term easements are being developed
- Draft Final Easements – August 2007
- 3 Property Owners Involved– LIRR, DOT, TOB
- Final Easements – September 2007
- Construction begins – October 2007

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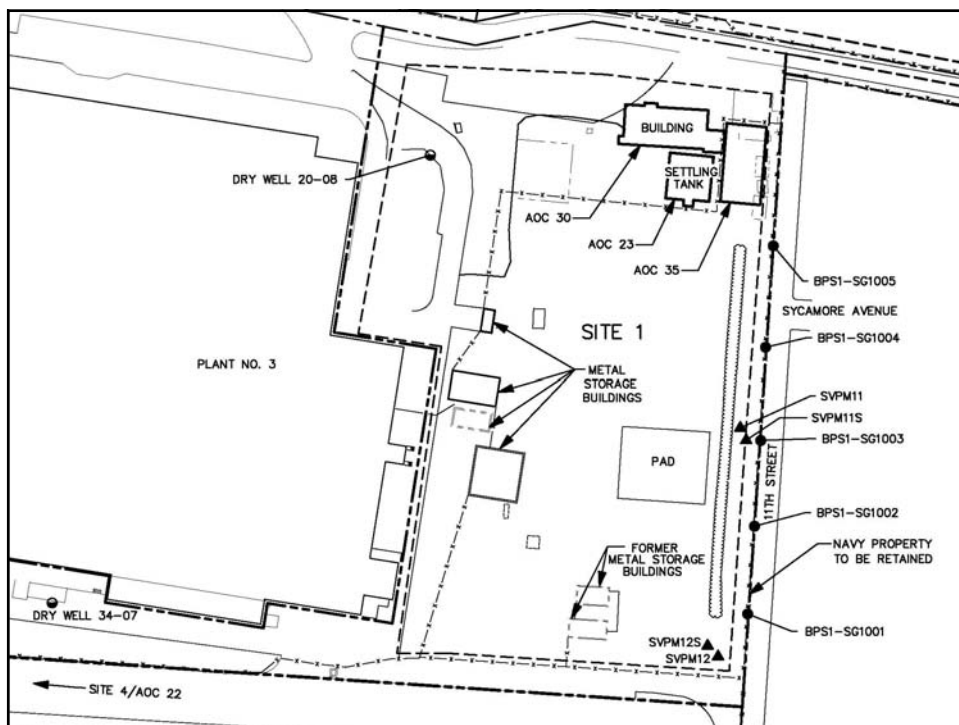
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Site 1 Soil Gas Investigation

- Goal: Evaluate the presence and potential migration of soil vapors from Site 1 off site
- Prepare Work Plan (Sept 2007)

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AOC 22/Site 4 Former Underground Storage Tank Area Update



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Site History

- Three underground storage tanks active in 1940s to 1960s
- Contained No. 6 Fuel Oil
- Tanks were removed at an unknown time, probably early 1980s
- Underground tank slabs/saddles remain

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Environmental Concerns

- Petroleum contamination, measured as total petroleum hydrocarbons (TPH), is primary concern
- Contamination is mostly adhered to soils – not mobile
- Polynuclear aromatic hydrocarbons (PAHs) primary chemicals of concern
- Majority of contamination is near the water table (60 feet below ground surface)
- Limited impact to groundwater

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Closed Loop Bioremediation System

- Treatment Goal: Provide 90 percent reduction in TPH concentration.
- Treat soils and petroleum through the use of surfactants and biodegradation.
- System operated from fall 2004 to spring 2006.
- System demobilized from site in August 2006.
- Based on soil data, approximately 15 percent removal of TPH as of September 2005.

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Status of Site 4

- Conducted final round of soil and groundwater testing, in December 2006
- Evaluated potential for formation of free product on groundwater and migration through groundwater
- Report in summer 2007

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GM-75 Investigation

- Goal: Investigate an area of groundwater contamination that has migrated beyond the extent of the Northrop Grumman Groundwater Containment System
- Address other area hotspots as feasible

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