

5/1/08 - 002135



# Restoration Advisory Board Meeting

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May 2008

Naval Station Norfolk  
Installation Restoration Program



# RAB Meeting Agenda

Topic	Speaker
Welcome/Introduction	Winoma Johnson, NAVFAC MIDLANT
Status of NAVSTA IR Program	Holly Rosnick, CH2M HILL
Project Status (Site 18, Site 23, SWMU 14, Bousch Creek)	Holly Rosnick, CH2M HILL
Five Year Review of Seven Sites under Remediation	Holly Rosnick, CH2M HILL
FY08 Goal Update	Winoma Johnson, NAVFAC MIDLANT
Community Involvement Opportunities	Steve Hirsh, USEPA
Closing Remarks and Announcements	Winoma Johnson, NAVFAC MIDLANT



# Naval Station Norfolk





# Presentation

- OBJECTIVE
  - Informational presentation
  - Provide status of NSN IR Program
- DESIRED OUTCOME
  - RAB is familiar with the NSN IR site status and path forward



# Status of Naval Station Norfolk Installation Restoration Program

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## Naval Station Norfolk



# Naval Station Norfolk IR Program

- National Priorities List (NPL) – Apr 1997
- Federal Facilities Agreement (FFA) – Feb 1999
  - Investigated 170 sites
    - 18 IR sites (10 required clean up and 8 addressed with Institutional Controls)
    - 5 Site Screening Areas (SSAs)
    - 15 Areas of Concern (AOCs)
    - 132 Sites require No Further Action (NFA)



# Naval Station Norfolk

## Status of IR Sites

September 2007



### LEGEND

- NFA Sites Per FFA Close-out Reports
- Remedial/Removal Action Complete
- Remedial/Removal Action in Progress
- Remedial/Site Investigation in Progress

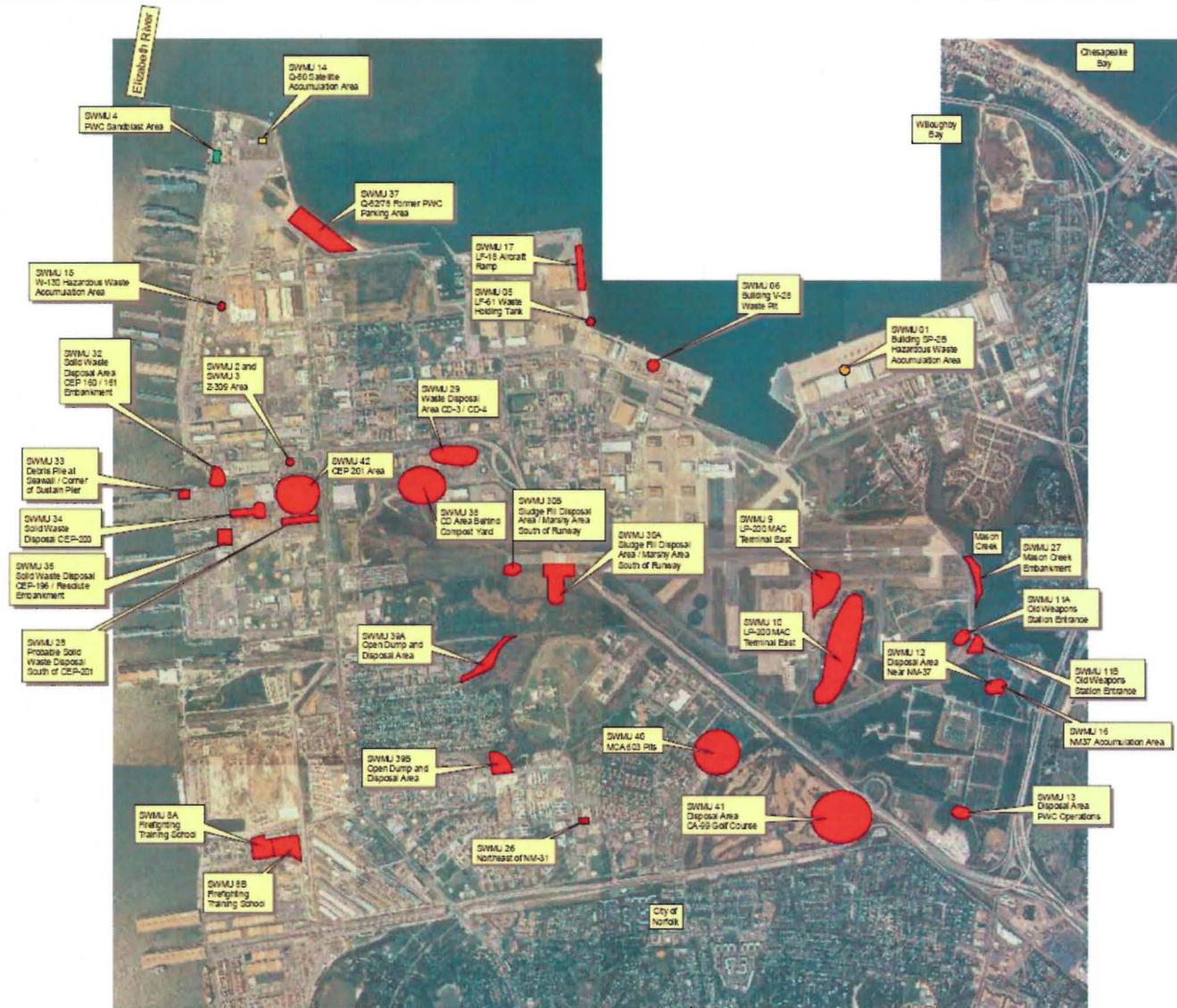
- Groundwater Source Area
- Deep Aquifer Groundwater Plume
- Shallow Aquifer Groundwater Plume



# Naval Station Norfolk

## Status of SWMUs

### September 2007



#### LEGEND

- NFA Sites Per FFA Close-out Reports
- Remedial/Removal Action Complete
- Remedial/Site Investigation in Progress
- Transferred from CERCLA Program



# Naval Station Norfolk Partnering Team Members

- Winoma Johnson, NAVFAC MIDLANT
- Steve Hirsh, USEPA
- Eric Salopek, VDEQ
- Holly Rosnick, CH2M HILL
- Paul Landin, CH2M HILL



# Naval Station Norfolk

## IR Program

- **Significant Accomplishments**

- 18 sites have been closed out through either remediation or Risk Assessment/Closeout reports since 1998
- All of the sites at NSN currently have remedies in place or are targeted to have remedies in place by the end of FY2008
- Innovative remediation technologies have included: air sparging, vapor extraction, dual phase extraction, soil stabilization, use of trident probe for evaluating groundwater discharge
- Use of on-site soils at CD Landfill remediation resulted in savings of over \$300,000
- Partnering with the regulators has reduced remediation costs by over an estimated \$7M and reduced the cleanup time by over 3 years



# Project Status

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## Project Status

- Site 18 (Former NM Waste Storage Area)
- Site 23 (former Plating Shop) Upper
- SWMU 14 (Q-50 Satellite Accumulation Area)
- Upper Reaches of Bousch Creek



# Specific Updates

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Site 18

Former NM Waste Storage Area

Naval Station Norfolk



# Site 18 - Former NM Waste Storage Area

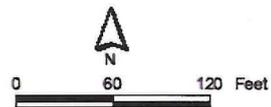


Figure 2-2  
Total CVOs, July 2007  
Site 18 EE/CA  
Naval Station Norfolk  
Norfolk, Virginia

**CH2MHILL**



## Site 18 Background

- Open unpaved yard used to store drums from 1975-1979
- Drums contained hazardous waste consisting of waste oil, metal plating solutions and sludges, chlorinated organic acids, and paint stripping solutions
- Spillage of waste oil and hazardous wastes occurred



## Site 18 Background

- October 1980 - VA Dept. of Solid Waste issued a one-time landfill permit to dispose contaminated soil and grade/seed site
  - After 55 months of monitoring, no significant contamination was observed and the State Water Control Board agreed to discontinue monitoring
- 1995 – Hazardous Waste inspection
  - No signs of adverse impacts or threats to human health or the environment
- 1995 - Relative Risk Ranking Study
  - Surface soil samples analyzed; no further action recommended (industrial risk)
- 2000 – Partnering team evaluated soil against risk based concentrations and determined soil was not a media of concern; initiated additional groundwater investigation



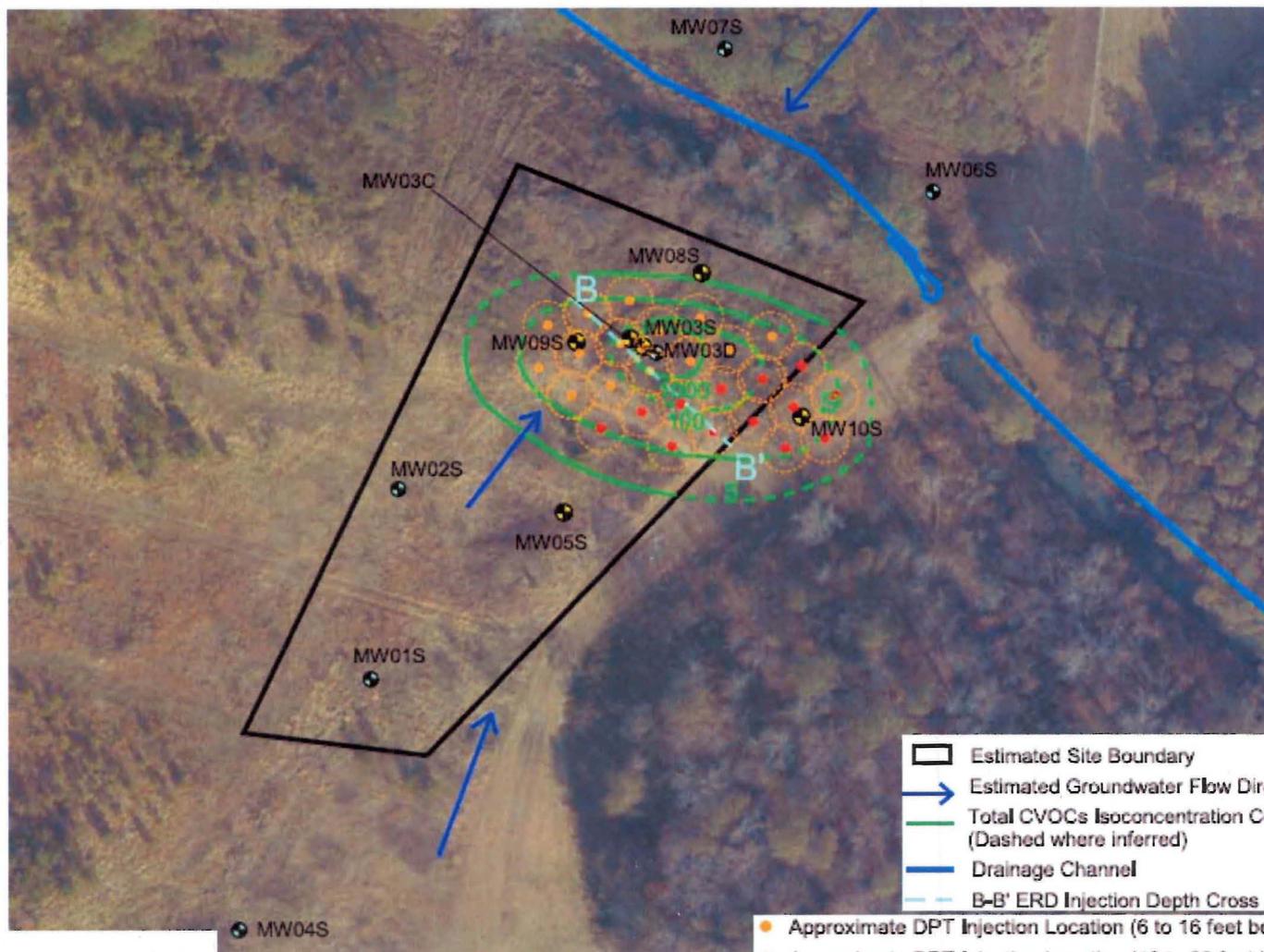
## Site 18 Investigations

- Investigation Activities
  - November 2002
  - June 2004
  - December 2004
  - June 2006
- Based on the investigation activities, the Team has identified an interim action option for treating a limited volatile organic compound hot spot area in groundwater



## Site 18 Investigations

- The objective is to implement measures to mitigate potential unacceptable human health risk associated with exposure to contaminants in groundwater
- Temporary injection points will be utilized to inject an electron donor substrate into the groundwater where contamination has been identified



Note:  
DPT locations are approximated  
and based on an assumed 12 foot  
radius of influence

- Estimated Site Boundary
- Estimated Groundwater Flow Direction (October 2006)
- Total CVOCs Isoconcentration Contour (µg/L)  
(Dashed where inferred)
- Drainage Channel
- B-B' ERD Injection Depth Cross Section Transect
- Approximate DPT Injection Location (6 to 16 feet below ground surface)
- Approximate DPT Injection Location (12 to 22 feet below ground surface)
- Performance Monitoring Well
- Monitoring Well



## Site 18 Path Forward

- Groundwater monitoring will be conducted for one year following the injection to monitor contaminant concentrations against concentrations that are protective of human health
- Additional action (continued monitoring, additional injection) will be taken until groundwater no longer poses a potential risk



# Specific Updates

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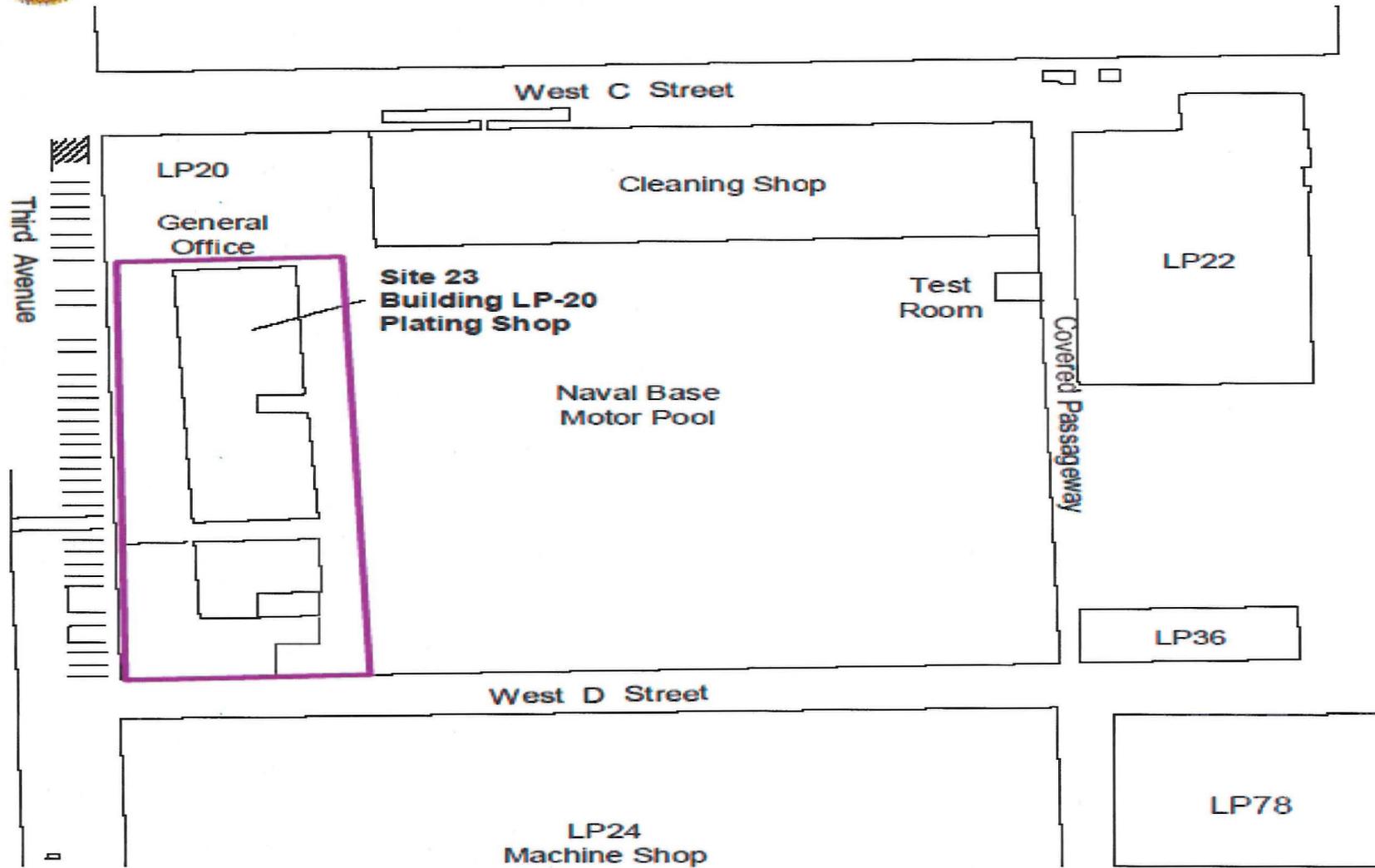
Site 23

Building LP-20 Plating Shop

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# Site 23 – Former LP-20 Plating Shop



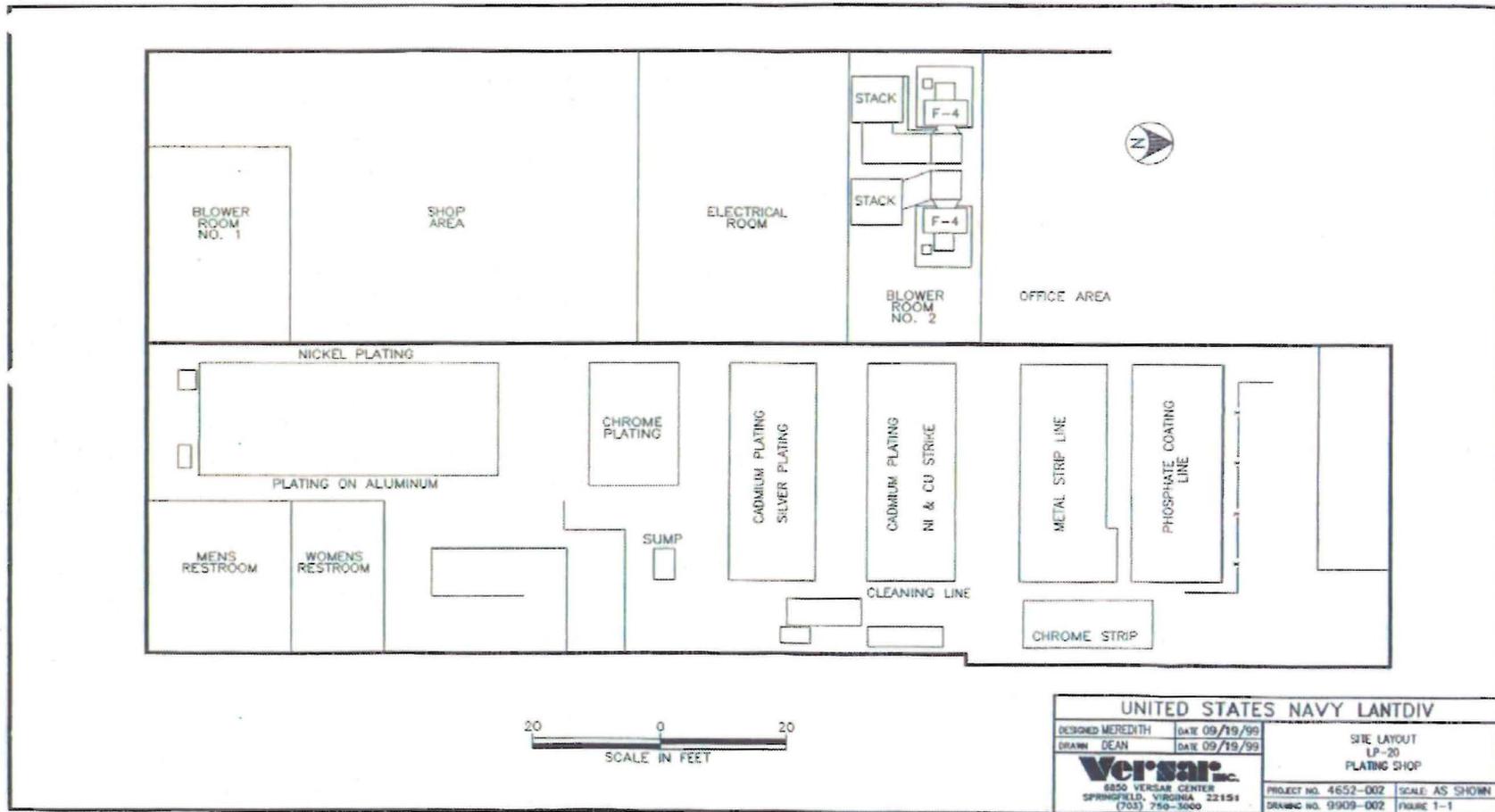


## Site 23 Background

- LP-20 includes the cleaning shop, motor pool, plating shop, and offices
- The building was used as an engine overhaul facility for disassembling and reworking jet engines and is currently used as a motor pool and office space
- The plating shop is located on west side of building and is currently not used. The plating shop included:
  - 7 process pits beneath concrete slab floor used for cleaning, stripping, and plating engine parts
  - A drainage system for collection of wastewater from the pits and conveyance to the Industrial Wastewater Treatment Plant
  - Corrosion resistant brick tiles to line the floor and pits



# Site 23 – Former LP-20 Plating Shop





## Site 23 Background

- 1989 - RCRA inspection - VDEQ observed violations of hazardous waste regulations
- Dec 1990 - Enforcement Order effective
- Feb 1993 - RCRA Clean Closure Plan and Contingency Plan were completed (Plans were approved by VDEQ in Sept 1994)



## Site 23 Background

- Partial site closure activities were implemented under the Hazardous Waste Program
- The Navy and Regulators agreed to move the site from the Hazardous Waste Program to the Installation Restoration Program
- Under the IR program, the Partnering Team agreed to a concrete cover as the remedy for contaminated soils at the site



## Site 23 Current Status

- April 2006 - Site 23 Site Investigation finalized
- December 2006 - Final Site 23 Engineering Evaluation/Cost Analysis completed
- Non-Time Critical Removal Action conducted from June to October 2007 with the construction of a concrete cover over the site



## Site 23 – During Construction





## Site 23 –Following Filling of Pits





## Site 23 –After Floor Sealant Application





## Specific Updates

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SWMU 14 - Q-50 Satellite  
Accumulation Area/Site 9 - Q  
Area Landfill

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# SWMU 14/Site 9





# SWMU 14/Site 9 Background

- SWMU 14 and Site 9 are co-located
- SWMU 14
  - Concrete storage pad constructed on top of the Site 9 landfill that served as a 90-day accumulation area where wastes were processed before shipping for eventual disposal
  - Pad has subsequently been removed
- Site 9
  - Landfill in operation from 1974 to 1978 for disposal of construction debris
  - Filling activities formed much of Sewell's Point peninsula
  - NFA was declared for Site 9 on Dec. 3, 1997



## SWMU 14/Site 9 Current Status

- Revetment around perimeter damaged during Hurricane Isabel was reconstructed in 2005
- Completed Remedial Investigation
- Completed Trident Probe Survey and Preliminary Data Evaluation in March 2007
  - Potential impact of possible chemical migration via groundwater from SWMU 14 to Willoughby Bay is negligible
  - Recommend no further action for ecological receptors at SWMU 14



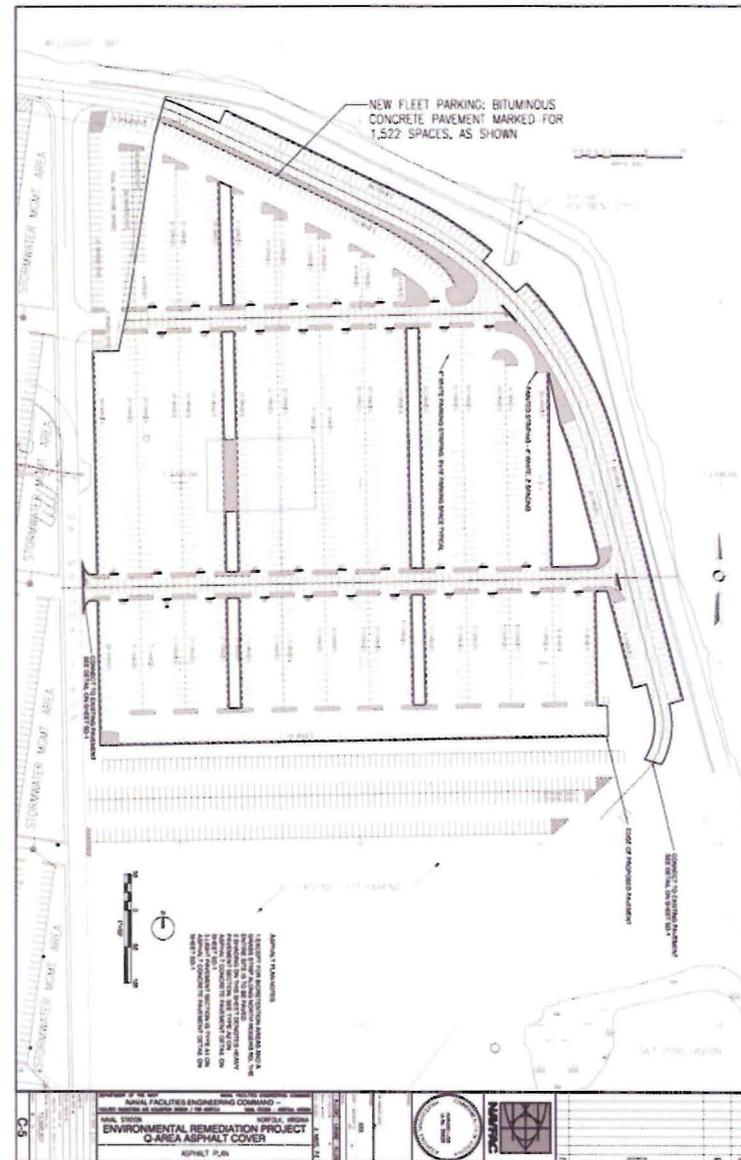
## SWMU 14/Site 9 Current Status

- Engineering Evaluation/Cost Analysis completed March 2008
  - Evaluated alternatives for actions to be protective of human health
- Based upon the EE/CA, a design for an asphalt cover over the contaminated soils to serve as parking lot to support the scheduled new pier completed in May 2008
- Work Plan for parking lot construction completed May 2008



# SWMU Proposed Parking Layout

- Addition of approximately 1,500 parking spaces for fleet parking
- Provision for perimeter running/walking trail
- Utilize low impact development approaches to contain and filter stormwater runoff prior to discharge from the site to the bay





## SWMU 14 Path Forward

- Construction scheduled for May through September 2008



# Specific Updates

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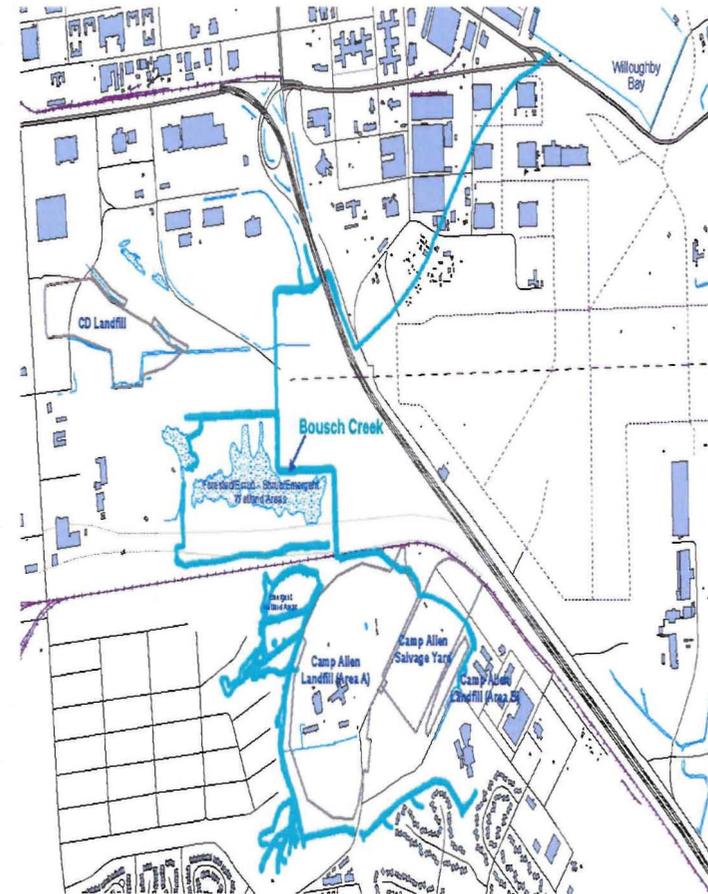
## Upper Reaches of Bousch Creek

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# Upper Reaches of Bousch Creek

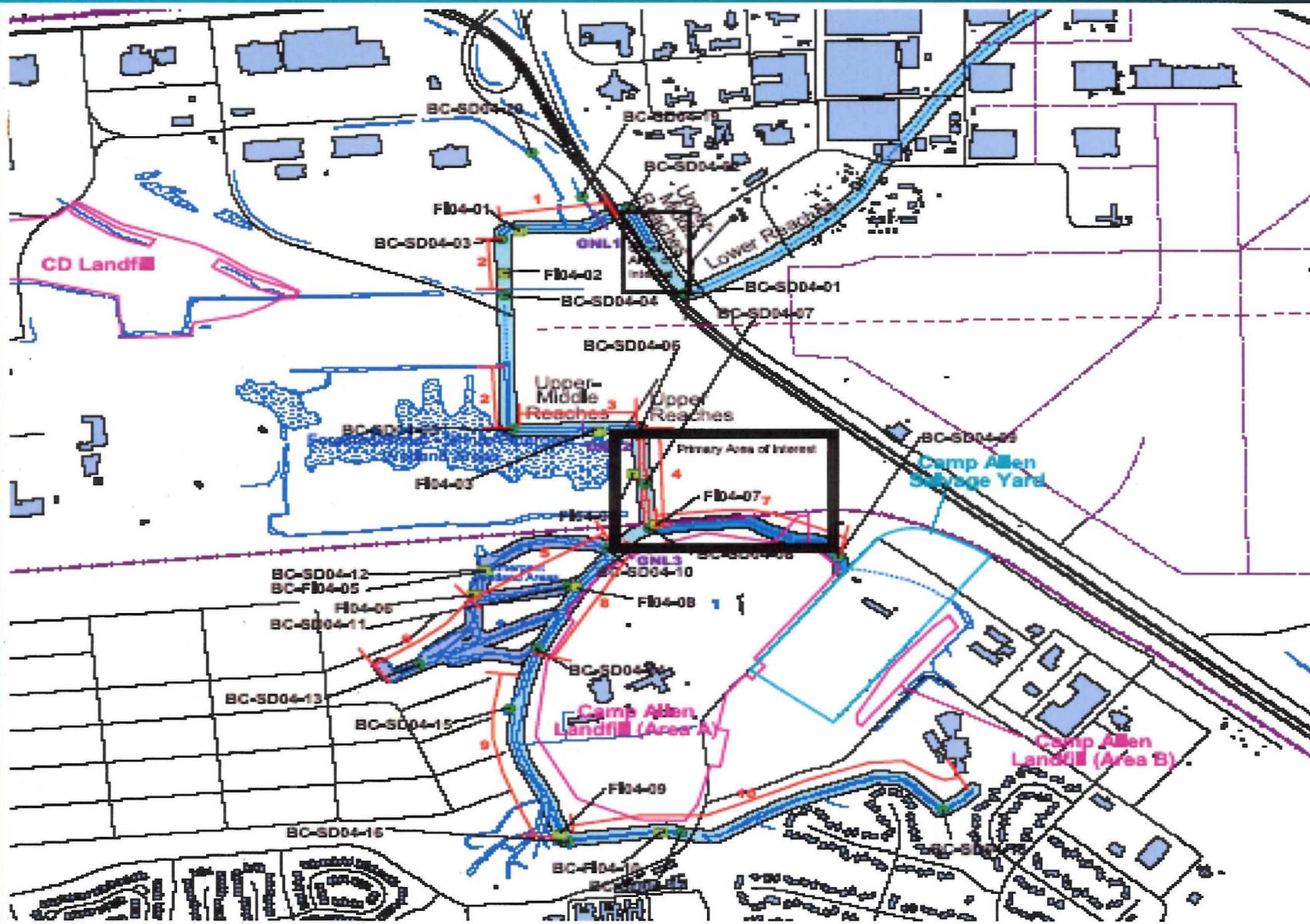
- Bousch Creek flows through NSN adjacent to Camp Allen Landfill, Camp Allen Salvage Yard, and CD Landfill
- Creek channeled and flows through underground culverts for portions of its length
- 29 outfalls discharge directly to Bousch Creek
- Ecological Risk Assessment evaluated risks to wildlife exposed to the Upper Reaches of the creek only





## Upper Reaches of Bousch Creek

- Portions of the creek north of the Camp Allen Landfill appear most impacted by metals
- Major remedial/removal actions have been completed at all major Installation Restoration sites in the upper portion of Bousch Creek, eliminating the potential for contaminant migration to the creek





## Upper Reaches of Bousch Creek

- Removal action occurred from December 2007 through April 2008 and included:
  - Removal of 2 feet of contaminated sediment in impacted hot spot areas
  - Backfill with 1 foot of clean fill



# Upper Reaches of Bousch Creek





# Upper Reaches of Bousch Creek





# Upper Reaches of Bousch Creek





# Specific Updates

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Five Year Review of Seven Sites  
Undergoing Remediation

Naval Station Norfolk



# Status of Five Year Review

- Objectives
  - Review of remedial action sites that have restricted land use due to exceedance of acceptable risk-based levels
  - Meet CERCLA requirements for five-year reviews
  - Continue the five year review schedule for all remedial action sites that was established with the 2003 report
  - Evaluate the effectiveness of existing remedial action programs
  - Assess the effectiveness of existing long term monitoring programs



## Status of Five Year Review

- Six Sites Included:
  - Site 1 – Camp Allen Landfill
  - Site 2 – NM Area Slag Pile
  - Site 3 – Q Area Drum Storage
  - Site 6 – CD Landfill
  - Site 20 – LP 20 Site
  - Site 22 - Camp Allen Salvage Yard
  - Site 23 – Former LP-20 Plating Shop



# Status of Five Year Review

- Draft Report currently being reviewed by Navy, USEPA, and VDEQ
- A summary fact sheet will be prepared for distribution to the community upon completion of the final document



# FY08 Goal Update

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## FY08 Goals

- The NSN Partnering Team has the Goal to Reach Remedy In Place (RIP) by the end of FY 2008 – **On track to meet this goal**
- Complete 2007 Annual LTM Report - **Complete**
- Complete 2008 Site Management Plan - **Complete**
- Complete Five Year Review Report – **On track to meet this goal**
- Complete EE/CA for Site 18 - **Complete**
- Complete Interim Removal Action at Site 18 – **On track to meet this goal**
- Complete Non-Time Critical Removal Action at Site 23 - **Complete**



## FY08 Goals

- Complete Proposed Remedial Action Plan (PRAP) for Site 23 – **On track to meet this goal**
- Complete Record of Decision for Site 23– **On track to meet this goal**
- Complete SWMU 14 Soil EE/CA - **Complete**
- Complete Remedial Action and Construction Completion Report for the Upper Reaches of Bousch Creek– **On track to meet this goal**
- Prepare Conceptual Site Model for the Lower Reaches of Bousch Creek – **On track to meet this goal**



# Community Involvement

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# Public Participation Opportunities in the Environmental Restoration Program

- **Administrative Record**
  - Document available for public inspection
- **Public Notices**
  - Published in local newspapers to announce public comment periods on documents, public meetings, etc.
- **Fact Sheets**
  - Distributed to share more detailed information about activities that are planned or completed
- **Public Meetings**
  - Held to share information and invite questions or comments
- **Restoration Advisory Board (RAB)**
  - Meets regularly to discuss ongoing cleanup issues
  - Vital link between community and cleanup decision-makers
  - Prefer diverse membership
  - RAB meetings are open to the general public



## Projected Public Meetings in FY2008

- **Site 23 Proposed Remedial Action Plan (PRAP) – expected to be published for public review and comment in 2008**
- **Site 23 Record of Decision (ROD) – expected to be published for public review and comment in 2008**



## Community Involvement Opportunities

- The Administrative Record is available at:  
Kirn Memorial library  
301 East City Hall Avenue  
Norfolk, VA 23510
- Hours of operation are:
  - Monday-Thursday from 10:00 am to 9:00 pm
  - Friday from 10:00 am to 5:30 pm
  - Saturday from 1:00 pm to 5:00 pm
- Next RAB Meeting: 18 November 2008



# Community Involvement Contacts

**Ms. Winoma Johnson**

**(757) 444-3418**

**Attention: Remedial Project Manager  
NAVFAC MIDLANT**

**Code EV3, Building N-26, Room 3208  
9742 Maryland Avenue  
Norfolk, VA 23511-3095**

**Mr. Steve Hirsh**

**(215) 814-3352**

**Remedial Project Manager  
USEPA, Region III (3HS12)**

**1650 Arch Street  
Philadelphia, PA 19103**

**Mrs. Terri Davis**

**(757) 322-2576**

**Attention: Public Affairs Officer,  
Commander Navy Region**

**Naval Station Norfolk  
1530 Gilbert Street, Suite 200  
Norfolk, VA 23511-2722**

**Mr. Eric Salopek**

**(804) 698-4427**

**Virginia Dept. of Environmental Quality  
Federal Facilities Program**

**629 East Main Street, 4<sup>th</sup> Floor  
Richmond, VA 23240-0009**



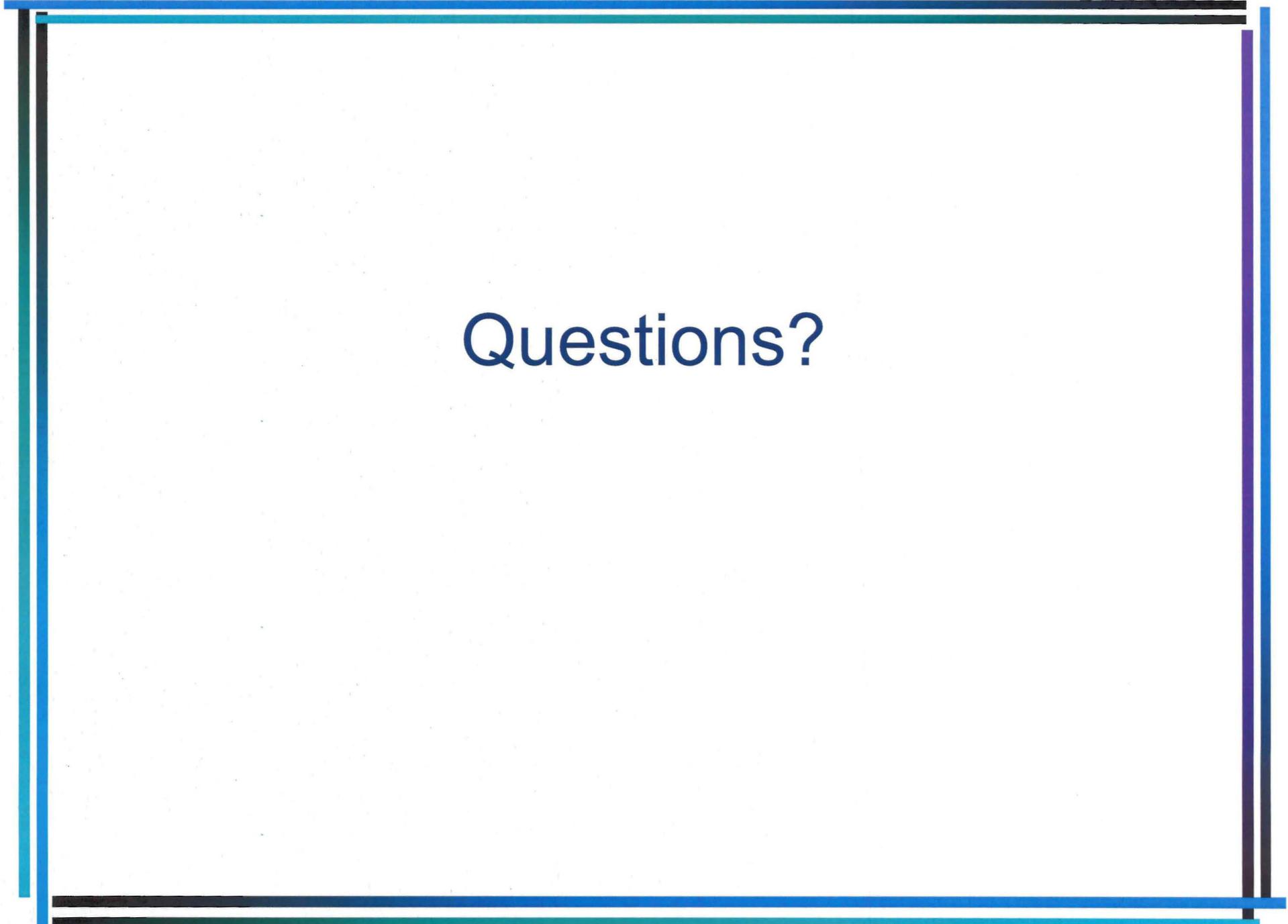
# Closing and Announcements

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Next meeting scheduled for Tuesday,  
18 November 2008



Questions?