

AGENDA**ENVIRONMENTAL RESTORATION ADVISORY BOARD****NAVAL WEAPONS STATION YORKTOWN AND CHEATHAM ANNEX**

**Yorktown Library Meeting Room
5600 George Washington Highway
Yorktown, Virginia 23692**

WEDNESDAY, 14 NOVEMBER 2007

WELCOME/INTRODUCTION	Ms. Linda Cole Navy Co-Chair	5 min
NAVY REMARKS	LCDR William Johnson Commanding Officer	5 min
COMMUNITY REMARKS	Mr. Barry Moss Community Co-Chair	5 min
MASTER SCHEDULE UPDATE/FY07 ACCOMPLISHMENTS	Ms. Linda Cole	10 min
REMOVAL ACTION AND RESTORATION UPDATES (CAX SITE 1)	Skip Dunham Shaw Environmental	20 min
CAX SITE 7 WORK PLAN	Skip Dunham Shaw Environmental	20 min
BREAK		15 min
FIVE-YEAR REVIEW UPDATE	Ms. Donna Caldwell CH2M Hill	20 min
COMMUNITY INVOLVEMENT PLAN SURVEY	Ms. Amy Brand CH2M HILL	15 min
FINAL COMMENTS/CLOSING REMARKS	Ms. Linda Cole	5 min

FUTURE RAB MEETINGS:

Wednesday, 22 May 2008
Wednesday, 19 November 2008

*Navy Fuel
Farm*

Mary Margaret Kutz NAVFAC

*Shaw Environmental is the company monitoring
plumes on Navy property contact*

*Mark Pisawick 757-640-6924
call Skip Dunham*

Naval Weapons Station Yorktown/Cheatham - Master Schedule

Note: Changes since last RAB are noted in **bold red** or **bold blue** (red doesn't show well in maroon boxes) text.

A change can be an updated timescale (e.g., a shift to the right to reflect the current anticipated timeframe) and/or a revised planned path for site closure.

NAVAL WEAPONS STATION YORKTOWN ENVIRONMENTAL RESTORATION PROGRAM SUMMARY

CALENDAR YEAR/ SITE NAME	Media	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Remedial Investigation/Feasibility Study (RI/FS) Sites (On-going) <i>Yorktown Sites</i>																								
Site 1 - Dudley Road Landfill	Soil	Round One RI	Round One RI	Habitat Evaluation	Round Two RI	Round Two RI	FS/Proposed Plan	ROD Signed	Remedial Action	LTM	5 YEAR REVIEW	LTM	LTM	LTM	Remedial Design for Soil in Progress	5 YEAR REVIEW	LTM	LTM	LTM	RA-C/RA-O	5 YEAR REVIEW	LTM	LTM	LTM
	GW								LTM		GW RI (Phase 1)	GW RI (Phase 1)	GW RI (Phase 1)	GW RI (Phase 1)	GW RI (Phase 1)	GW RI (Phase 2)	GW RI (Phase 2)	FS/Proposed Plan	ROD	Remedial Design	RA-C/RA-O	RA-C/RA-O	RA-C/RA-O	RA-C/RA-O
Site 2 - Turkey Road Landfill <i>NWS</i>	Soil	Round One RI	Remedial Action	Habitat Evaluation		Round Two RI									Soil Characterization	Soil Characterization		Transfer to MRP						
	GW														<i>discarded munitions found which went to Munitions Cleanup. probably by FY11</i>									
Site 3 - Group 16 Magazine Landfill	Soil			Habitat Evaluation		Round Two RI	FS/Proposed Plan	ROD Signed	Remedial Action	LTM	LTM	LTM	LTM	LTM	LTM	5 YEAR REVIEW	Finalize TM (soil/waste)/ESD for NFA			<i>there are no unacceptable uses to human health & env</i>				
	GW								LTM		GW RI (Phase 1)	GW RI (Phase 1)	GW RI (Phase 1)	GW RI (Phase 1)	GW RI (Phase 1)	GW RI (Phase 2)	GW RI (Phase 2)	FS/Proposed Plan	ROD	Remedial Design	RA-C/RA-O	RA-C/RA-O	RA-C/RA-O	RA-C/RA-O
Site 4 - Burning Pad Residue Landfill	Soil	Round One RI	Remedial Action	Habitat Evaluation						FS/Proposed Plan	Remedial Action	Remedial Action	Remedial Action	ROD Signed	No Further Action									
	GW							Round Two RI	Round Two RI						GW Investigation	GW Investigation	FS/Proposed Plan	Record of Decision	No Further Action					
Site 6 - Explosives-Contaminated Wastewater Impoundment	Sediment			Habitat Evaluation				Remedial Action	Remedial Action LTM	Remedial Action	5 YEAR REVIEW	Remedial Action	Remedial Action	Remedial Action	No Further Action									
Site 6 - Excavated Area	Soil	Round One RI	Round Two RI		Round Two RI		FS/Proposed Plan/ROD Signed	Remedial Action	LTM	LTM	5 YEAR REVIEW	LTM	LTM	LTM	LTM	5 YEAR REVIEW	LTM	LTM	LTM	LTM	5 YEAR REVIEW	LTM	LTM	LTM
Site 6 Groundwater	GW										GW RI (Phase 1)	GW RI (Phase 1)	GW RI (Phase 1)	GW RI (Phase 1)	GW RI (Phase 1)	GW RI (Phase 2)	GW RI (Phase 2)	ROD Amendment	Remedial Design	RA-C/RA-O	RA-C/RA-O	RA-C/RA-O	RA-C/RA-O	RA-C/RA-O
Site 7 - Plant 3 Explosives-Contaminated Wastewater Discharge Area	Soil	Round One RI	Round Two RI	Habitat Evaluation	Round Two RI	Remedial Action	FS/Proposed Plan/ROD Signed		LTM	LTM	5 YEAR REVIEW	LTM	LTM	LTM	Remedial Design in Progress	5 YEAR REVIEW/LTM	LTM	LTM	LTM	LTM	5 YEAR REVIEW/LTM	LTM	LTM	LTM
	GW										GW RI (Phase 1)	GW RI (Phase 1)	GW RI (Phase 1)	GW RI (Phase 1)	GW RI (Phase 1)		LTM	LTM	LTM	LTM		LTM	LTM	LTM
Site 8 - NEDED Explosives-Contaminated Wastewater Discharge Area	Soil	Round One RI		Habitat Evaluation		Draft Round Two RI							Final Round Two RI	EE/CA					FS/Proposed Plan	Record of Decision	No Further Action			
	GW								Revised Draft Round Two RI						GW Investigation	GW Investigation	GW Investigation							
Site 9 - Plant 1 Explosives-Contaminated Wastewater Discharge Area	Soil	Round One RI	Remedial Action	Habitat Evaluation	Round Two RI	FS/Proposed Plan	ROD Signed	No Further Action																
	GW																	GW Investigation	GW Investigation	FS/Proposed Plan	ROD	No Further Action		
Site 11 - Abandoned Explosives Burning Pits	Soil	Round One RI		Habitat Evaluation	Round Two RI			FS/Proposed Plan	ROD Signed/Remedial Action	No Further Action						5 YEAR REVIEW								
	GW										GW RI (Phase 1)	GW RI (Phase 1)	GW RI (Phase 1)	GW RI (Phase 1)	GW RI (Phase 1)	GW RI (Phase 1)	ROD	No Further Action						
Site 16 - West Road Landfill	All Media	RI	Remedial Action	NFA PP/ROD Signed/Remedial Action	No Further Action						5 YEAR REVIEW				TM for GW in Progress	5 YEAR REVIEW	ESD for NFA ROD	No Further Action						
Site 17 - Holm Road Landfill	Soil	Round One RI		Habitat Evaluation	Round Two RI	FS/Proposed Plan	ROD Signed/Remedial Action	No Further Action								5 YEAR REVIEW								
	GW										GW RI (Phase 1) - GW	GW RI (Phase 1) - GW	GW RI (Phase 1) - GW	GW RI (Phase 1) - GW	GW RI (Phase 1) - GW	GW RI (Phase 1) - GW	ROD (GW)	No Further Action						
Site 19 - Conveyor Belt Soils at Building 10	Soil	Round One RI		Habitat Evaluation	Round Two RI	FS/Proposed Plan	ROD Signed/Remedial Action				5 YEAR REVIEW				Remedial Design in Progress	5 YEAR REVIEW	LTM	LTM	LTM	LTM	5 YEAR REVIEW	LTM	LTM	LTM
	GW																	GW Investigation	GW Investigation	FS/Proposed Plan	ROD	No Further Action		
Site 21 - Battery and Drum Disposal Area	Soil	Round One RI	Remedial Action	Habitat Evaluation	Round Two RI					FS/Proposed Plan	Remedial Action	ROD Signed	No Further Action											
	GW														GW Investigation	GW Investigation	FS/Proposed Plan	Record of Decision	No Further Action					

NWS sites

LEGEND

-  - Studies/Investigations
-  - Decisions
-  - Clean-ups
-  - Delist/Closeout
-  - Long Term Management

AOC = Area of Concern
 BERA = Baseline Ecological Risk Assessment
 EE/CA = Engineering Evaluation/Cost Analysis
 FS = Feasibility Study
 GW = Groundwater
 HH = Human Health
 IRA = Interim Remedial Action
 LUC = Land Use Control
 NFA = No Further Action
 RA-C = Remedial Action Construction
 RA-O = Remedial Action Operation
 RI = Remedial Investigation
 ROD = Record of Decision
 SSA = Site Screening Area
 SSP = Site Screening Process

NAVAL WEAPONS STATION YORKTOWN ENVIRONMENTAL RESTORATION PROGRAM SUMMARY

CALENDAR YEAR		1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	
Remedial Investigation/Feasibility Study (RI/FS) Sites (On-going) - Continued from page 1																									
Site 22 - Burn Pad	Soil			Habitat Evaluation					Dioxin Investigation	Round Two RI/FS/Proposed Plan	Remedial Action	ROD Signed	No Further Action												
	GW														GW Investigation	GW Investigation	FS/Proposed Plan	Record of Decision	No Further Action						
Site 23 - Building 428 Teague Road Disposal Area	Soil		Remedial Action	SSP Investigation							Draft Final RI	Remedial Action	Remedial Action	Post Removal Action Soil Remediation	Revised Draft Final RI in Progress	Revised Draft Final RI in Progress	Final RI	IRA	FS/Proposed Plan	Record of Decision	No Further Action				
	GW					Round One RI Field sampling												GW investigation							
Site 24 - Aviation Field	Soil		Geophysical Survey	SSP Investigation							Draft Final RI				Revised Draft Final RI in Progress	Revised Draft Final RI (soil) in Progress	Final RI (soil)/ RI (all media)	FS/Proposed Plan	ROD	Remedial Design	Remedial Action	No Further Action			
	GW					Round One RI (sampling)															RA-C/RA-O	RA-C/RA-O	RA-C/RA-O	RA-C/RA-O	
Site 25 - Building 373 Rocket Plant	Soil		SSP Investigation								Draft Final RI				Revised Draft Final RI in Progress	Revised Draft Final RI (soil) in Progress	Final RI (soil)/ RI (all media)	FS/Proposed Plan	ROD	Remedial Design	Remedial Action	No Further Action			
	GW					Round One RI (sampling)															RA-C/RA-O	RA-C/RA-O	RA-C/RA-O	RA-C/RA-O	
Site 26 - Building 1816 Mark 48 Waste Otto Fuel Tank	Soil		Soil Assessment	SSP Investigation							Draft Final RI				Revised Draft Final RI in Progress	Final RI	TM (for NFA documentation)	FS/Proposed Plan	ROD	Remedial Design	Remedial Action	No Further Action			
	GW					Round One RI (sampling)															RA-C/RA-O	RA-C/RA-O	RA-C/RA-O	RA-C/RA-O	
Site 28 - Building 28 X-Ray Facility Tank Drain Field	Soil					Relative Risk Ranking/SSP Investigation			RI field Work						Round One RI	Eco Risk Assessment (BERA) in Progress	Eco Risk Assessment (BERA) in Progress	FS/Proposed Plan	ROD	Remedial Design	Remedial Action	No Further Action			
	GW																				No Further Action				
Site 29 - Lee Pond	Soil					SSP Investigation			RI field Work						Round One RI			FS/Proposed Plan	ROD	No Further Action					
	GW															Tech Memo (Surface Water)									
Site 30 - Bracken Road Incinerator and Environs	Soil					SSP Investigation			RI field Work						Round One RI	EE/CA	EE/CA	Removal Action	FS/Proposed Plan	ROD	No Further Action				
	GW																								
SSA 14 - Building 537 Discharge to Felgates Creek	Soil			Relative Risk Ranking		Draft Round Two RI			Revised Draft Round Two RI				Final Round Two RI	EE/CA	IRA	IRA		FS/Proposed Plan	Record of Decision	No Further Action					
	GW														GW Investigation	GW Investigation	GW Investigation								
SSA 25 - Wetlands Downgradient of Beaver Pond	Sediment														Eco Risk Assessment (BERA) in Progress	Eco Risk Assessment (BERA) in Progress	Eco Risk Assessment (BERA) in Progress	FS/Proposed Plan	Record of Decision	Remedial Design for Sediment	Remedial Action	LTM	LTM	LTM	LTM
	GW																			No Further Action					
Investigations for All Media Complete. Long-term Monitoring In-Place																									
Site 12 - Barracks Road Landfill	All Media	Round One RI	Round Two RI	Habitat Evaluation	FS/Proposed Plan	Remedial Action	LTM	LTM	LTM	LTM	5 YEAR REVIEW	LTM	LTM	LTM	Remedial Design in Progress	5 YEAR REVIEW	LTM	LTM REVIEW	LTM	LTM REVIEW	5 YEAR REVIEW	LTM	LTM REVIEW	LTM	
No Further Action Sites																									
Site 5 - Surplus Transformer Storage	All Media	RI	No Further Action																						
Site 18 - Building 476 Discharge Area	All Media	Round One RI		Habitat Evaluation		Round Two RI								Proposed Plan/ROD Signed	No Further Action										
Site 27 - Building 1751 Chemistry Laboratory Neutralization Unit	All Media					Relative Risk Ranking			RI Field Work					Round One RI/Proposed Plan	ROD Signed	No Further Action									

LEGEND

- Studies/Investigations
- Decisions
- Clean-ups
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AOC = Area of Concern
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SSA = Site Screening Area
SSP = Site Screening Process
TM = Technical Memo

ROD are signed by the EPA administrator

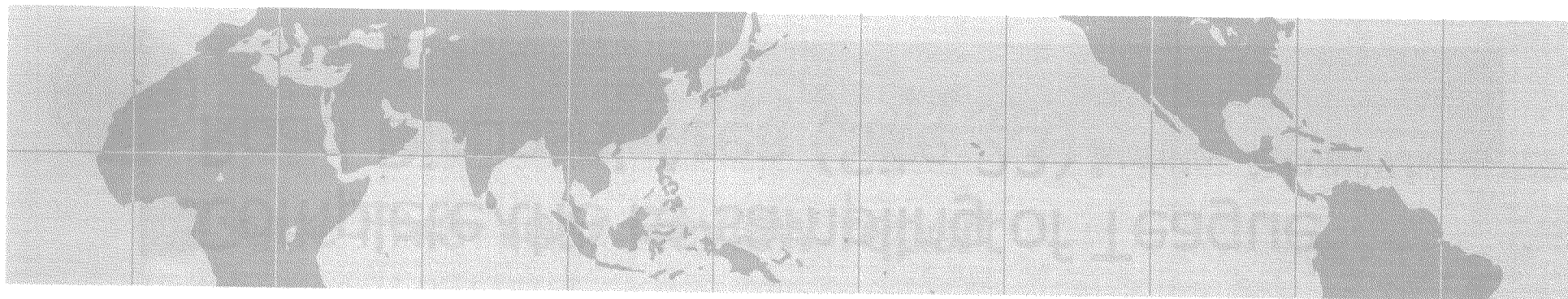
CHEATHAM ANNEX ENVIRONMENTAL RESTORATION PROGRAM SUMMARY

CALENDAR YEAR/ SITE NAME	Media	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Remedial Investigation/Feasibility Study (RI/FS) Sites (On-going)																							
Site 1 - Landfill Near Incinerator	All Media		SI			SSP Investigation	RI	EE/CA/ Remedial Action and Shoreline Protection	Focused Feasibility Study			EE/CA Remedial Action	Final RI	Wetland Eco Risk Assessment	Tech Memo (Sediment)		Proposed Plan/ ROD	No Further Action					
Site 4 - Outdated Medical Supply Disposal Area	All Media						Surface Debris Removal			Site Inspection Report/Trenching Study				Screening-Level Eco Risk Assessment (including Step 3a refinement)			SSP Investigation	NFA SSP Decision Document or RI					
Site 9 - Transformer Storage Area	All Media													Screening-Level Eco Risk Assessment (including Step 3a refinement)			SSP Investigation	NFA SSP Decision Document or RI					
Site 11 - Bone Yard	All Media		SI			SSP Investigation		Field Investigation			RI Report				Revised Draft RI (to include Step 3a) Report	Final RI	IRA	FS/Proposed Plan	ROD		No Further Action		
Site Screening Process Sites/Areas of Concern (AOC) (On-going)																							
Site 7 - Old DuPont Disposal Area	All Media												Trenching Study				Site Screening Investigation	Site Closeout Decision Document	No Further Action				
AOC 1 - Scrap Metal Dump	All Media							Field Investigation		Site Inspection Report							Site Screening Investigation	Site Closeout Decision Document	No Further Action				
AOC 2 - Dextrose Dump	All Media						Remedial Action	Field Investigation									Site Screening Investigation	Site Closeout Decision Document	No Further Action				
AOC 3 - CAD 11/12 Pond Bank	All Media							Field Investigation									Site Screening Investigation	Site Closeout Decision Document	No Further Action				
AOC 6 - Penniman AOC	All Media																Site Screening Investigation	Site Closeout Decision Document	No Further Action				
AOC 7 - Drum and Can Disposal Area	All Media												Identified as AOC				Site Screening Investigation	Site Closeout Decision Document	No Further Action				
AOC 8 - Unnamed Area South of Site 7	All Media							Field Investigation (thought to be Site 7)								Identified as AOC 8	Site Screening Investigation	Site Closeout Decision Document	No Further Action				
No Further Action Sites																							
Site 2 - Contaminated Food Disposal Area													No Further Action										
Site 3 - Submarine Dye Disposal Area													No Further Action										
Site 5 - Photographic Chemical Disposal Area							Site Visit						No Further Action										
Site 6 - Spoiled Food Disposal Area													No Further Action										
Site 8 - Landfill Near Building CAD 14													No Further Action										
Site 10 - Decontamination Agent Disposal Area Near First Street						SSP Investigation							No Further Action										
Site 12 - Disposal Site Near Water Tower											Field Investigation		No Further Action										

LEGEND

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Naval Weapons Station Yorktown/ Cheatham Annex FY07 Accomplishments

WPNSTA Yorktown/CAX
RAB Meeting
14 November 2007



What Did We Want to Accomplish this Year at WPNSTA Yorktown?

- Complete remedial action at the Explosives-Contaminated Wastewater Impoundment (Site 6 Flume Area)
- Issue Action Memo for removal of contaminated soils at Bracken Road Incinerator (Site 30)
- Complete the re-sampling of Teague Road Disposal Area (Site 23) *mercury contamination*



There's More?

- Issue Five-Year Review report
- Prepare remedial investigation of the wetlands down gradient of the beaver pond (SSA 25) (NPS project)
- Issue draft work plans for two groundwater investigations
- Finalize remedial investigation of groundwater of eight separate sites



And What About CAX?

- Complete Geotextile Tube Installation at Old DuPont Disposal Area (Site 7) *(along York River)*
- Complete removal ^{FINAL} action at Landfill Near Incinerator (Site 1)
- Complete Round 1 remedial investigation of Bone Yard (Site 11)
Identified some hot spots. & will remove.



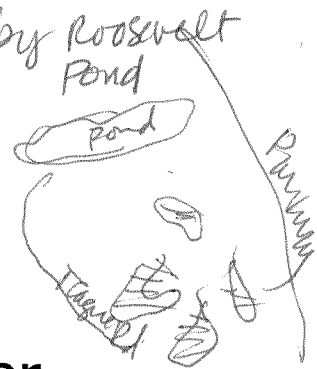
So Where Does all the Money Go?

- ⊕ Obligated \$6,017,710 (\$2,796,165 more than last year)
- ⊕ Removal/remedial actions (\$2,778,436)
 - ⊠ Complete remediation of impoundment at Ammo Loading Plant No. 2
 - ⊠ Removal action at Bracken Rd incinerator
 - ⊠ Remove Old DuPont disposal area
 - ⊠ Removal action of hot spots at Bone Yard
- ⊕ Studies (\$3,233,845)
- ⊕ Natural resources (\$5,429)



So What Still Needs to be Done?

- Complete removal action at NEDED Complex (NWS) goes into Pelgates Creek.
- Issue community survey
- Figure out what's next for Teague Road Disposal Area (Site 23) soils and sediment (off Colonial Parkway by Roosevelt Pond)
- Complete remedial investigation for four sites at WPNSTA (funding issue)
- Investigate areas of concern at Cheatham Annex
- Complete remedial investigation of two groundwater study areas – (thirteen sites)
- Investigate PCB transformer storage yard (Site 9) and outdated medical waste disposal (Site 4) Cheatham.



VADEQ - go to Brownfields website



Questions or Comments?

For additional information contact:

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PROJECT UPATE:
Cheatham Annex Site 1 Hot Spot
Removal / Pond Recovery
and
Yorktown Site 30 Bracken Road
Incinerator Removal

WPNSTA Yorktown/CAX
RAB Meeting
14 November 2007



Presentation Goals

Provide status of work planning and remedial activities at Cheatham Annex Site 1 and WPNSTA Yorktown Site 30

- Background
- Removal Action Goals
- Project timeline
- Removal activities



CAX Site 1 - Background

Landfill

5th & final removal action.

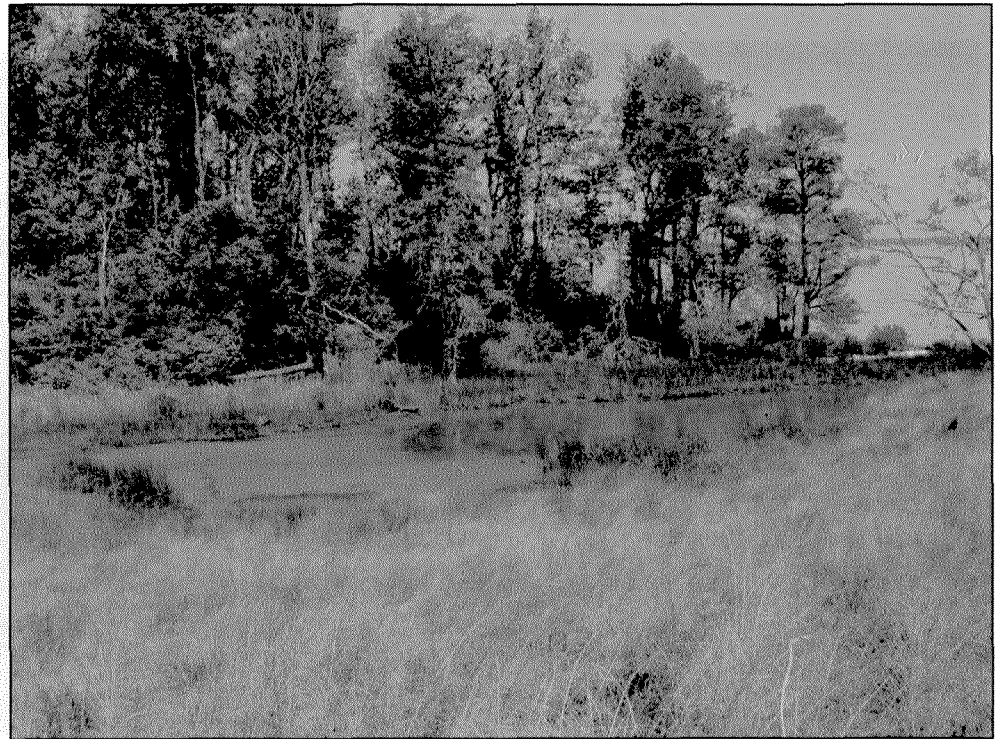
- ❑ Site is adjacent to York River and behind former incinerator
- ❑ Former landfill debris exposed by Hurricane Isabel in 2003
- ❑ Debris and contaminated soil removed from the south side of the site, August 2005
- ❑ Upper Slope and shoreline restored, August 2005
- ❑ Contaminated depression pond removal action initiated June 2006 – Present Efforts





CAX Site 1 – Removal Action Goals

- ⊕ Remove contaminated sediments from the depression pond and adjacent hot spots
- ⊕ Contaminants of Concern
 - ▣ Aromatic Hydrocarbons
 - ▣ Pesticides
 - ▣ PCBs
 - ▣ Metals
- ⊕ Analytical goals established from Engineering Evaluation / Cost Analysis (EE/CA)





CAX Site 1 - Hot Spot Removal and Pond Recovery Remedial Action

- ⊕ Task Order awarded – June 2006
- ⊕ Work Plan approved – February 2007
- ⊕ Field Work – February 2007 thru November 2007
- ⊕ Field Efforts since May 2007:
 - ⊗ Completed depression pool and Hot Spot excavation and backfill
 - ⊗ Disposed off-site ~4,600 tons of contaminated sediments
 - ⊗ Verified attainment of remediation goals via confirmation sampling
 - ⊗ Removed water control berms and mixing cell
 - ⊗ Completed final backfill contouring to create a meandering flow path to river
 - ⊗ Seeded and established riparian buffer
- ⊕ Construction Completion Report – January 2008



Depression Pond Area Initial Conditions



Looking Away from River



Looking Toward River



Completion of Depression Pond / Hot Spot Excavation and Restoration Backfill





Removal of Water Control Berms





Depression Pool Flow Path Establishment





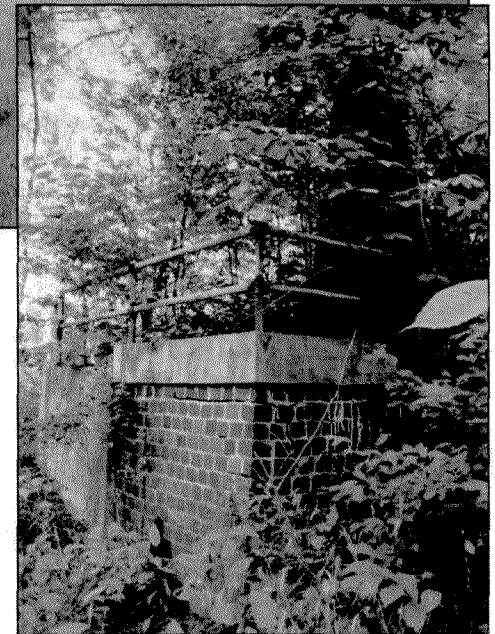
CAX Site 1 - Present Condition





Yorktown Site 30 - Background

- Wooded area adjacent to Bracken Road and near York River
- Site is within an industrial use area with access limited to Navy personnel
- Approx $\frac{3}{4}$ acre area where burning of waste crude oil and low-grade aviation fuel occurred
- Approximate $\frac{1}{10}$ acre area with foundation and brick chimney of old incinerator used to burn municipal waste from prior nearby housing area
- Soils in prior burn area contain elevated Sulfur, Nickel, Vanadium and other metals





Yorktown Site 30 – Removal Action Goals

- Remove contaminated soils, and incinerator stack and building foundation
- Contaminants of Concern
 - Metals
 - Primarily Vanadium
- Analytical goals established from Engineering Evaluation / Cost Analysis (EE/CA)



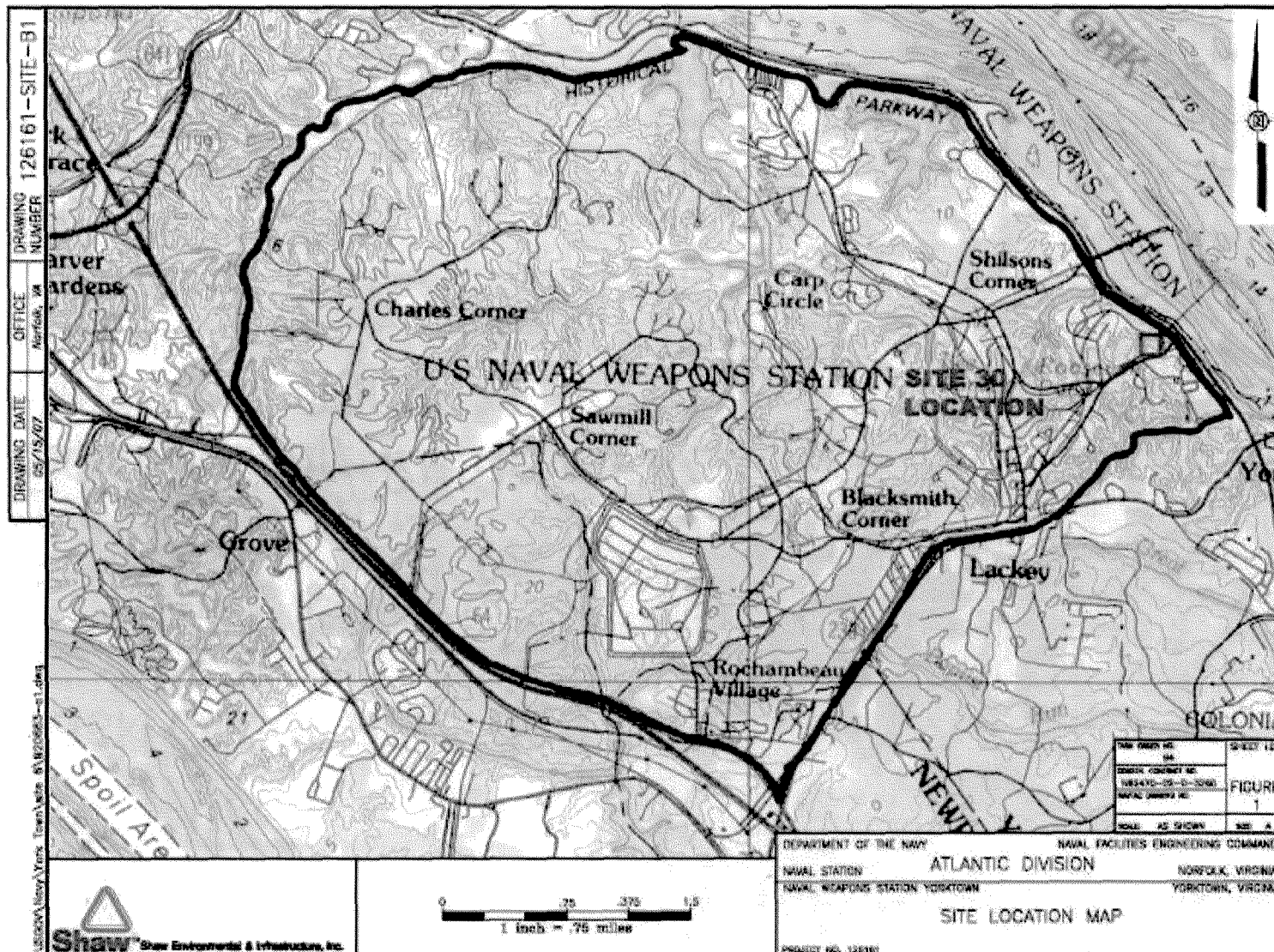


Yorktown Site 30 - Project Timeline

- Task Order awarded – April 2007
- Work Planning – thru December 2007 (In Progress)
- Field Work / Removal Activities – February 2008 thru April 2008



Yorktown Site 30 - Location





Yorktown Site 30 Removal Activities - Setup

- ⊕ Mark existing utilities
- ⊕ Perform clearing and grubbing
- ⊕ Install silt fence around perimeter of proposed excavation area
- ⊕ Collect pre-excavation confirmation samples
 - One sample collected from each pre-excavation corner and side
 - Reason: To delineate extent of contamination
- ⊕ Construct temporary access road
- ⊕ Perform pre-excavation site survey

State is doing water monitoring of Elgar, King, Queens creek for organic & inorganic contaminants. Impaired waters has been declared of those creeks.





Yorktown Site 30 Removal Activities - Excavation

- Remove and dispose of remnants of incinerator stack and building foundation
- Excavate soil to a depth of 4-feet and collect confirmation samples
- Load-out, transport, and dispose of ~4,200 cubic yards soil and debris at a permitted off-site facility
- Additional excavation if needed based on confirmation sample results
- Close groundwater monitoring well A24GW02, located within the excavation area



Yorktown Site 30 Confirmation Sampling

- ⊕ Perform confirmation composite sampling of excavation bottom and sidewalls of excavated area
- ⊕ Analyze samples for: Metals (Chromium, Iron, Lead, Mercury, Nickel, Thallium, Vanadium, and Zinc)



Yorktown Site 30 Site Restoration

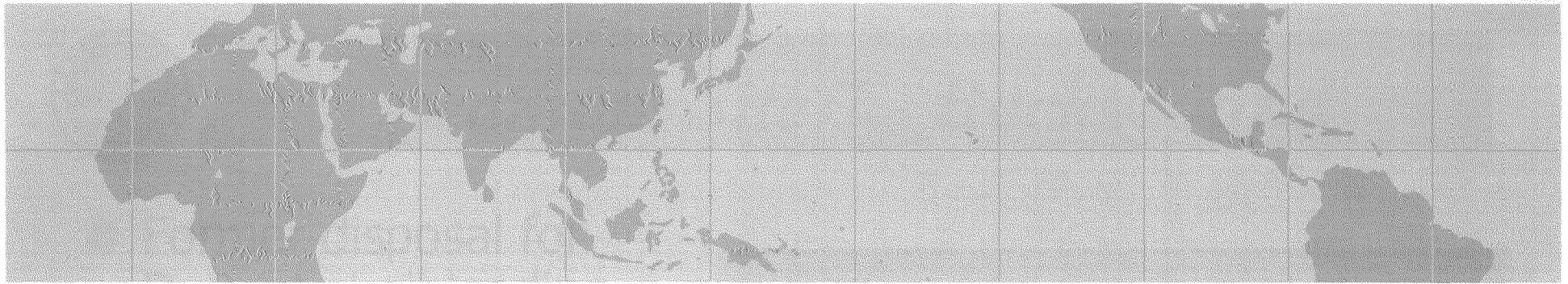
- ⊕ All excavated areas will be restored to approximate original grade
- ⊕ Clean fill to 6-inches below original grade
- ⊕ Topsoil cover to original grade
- ⊕ Seed with native grasses
- ⊕ Plant trees and shrubs to compliment surrounding area
- ⊕ Provide project closure report to Navy

For additional information contact:

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***PROJECT UPATE:
Cheatham Annex Site 7
Presumptive Removal***

**WPNSTA Yorktown/CAX
RAB Meeting
14 November 2007**



Presentation Goals

Provide status of work planning and remedial activities at Cheatham Annex Site 7

- Background
- Removal Action Goals
- Project timeline
- Removal activities



Cheatham Site 7 - Background

- ⊕ Former disposal for DuPont shell loading facility and the City of Penniman
- ⊕ Approximate one-acre area along the west bank of York River
- ⊕ Shoreline is eroding exposing debris (ash, glass, metal, and charred wood)
- ⊕ Geotextile tubes installed for shoreline protection





Cheatham Site 7 – Removal Action Goals

- ⊕ Presumptive removal per Virginia solid waste regulations (No disposal within 100 feet of any regularly flowing surface water body or river)
- ⊕ Remove visible debris from disposal area and former cabin site areas



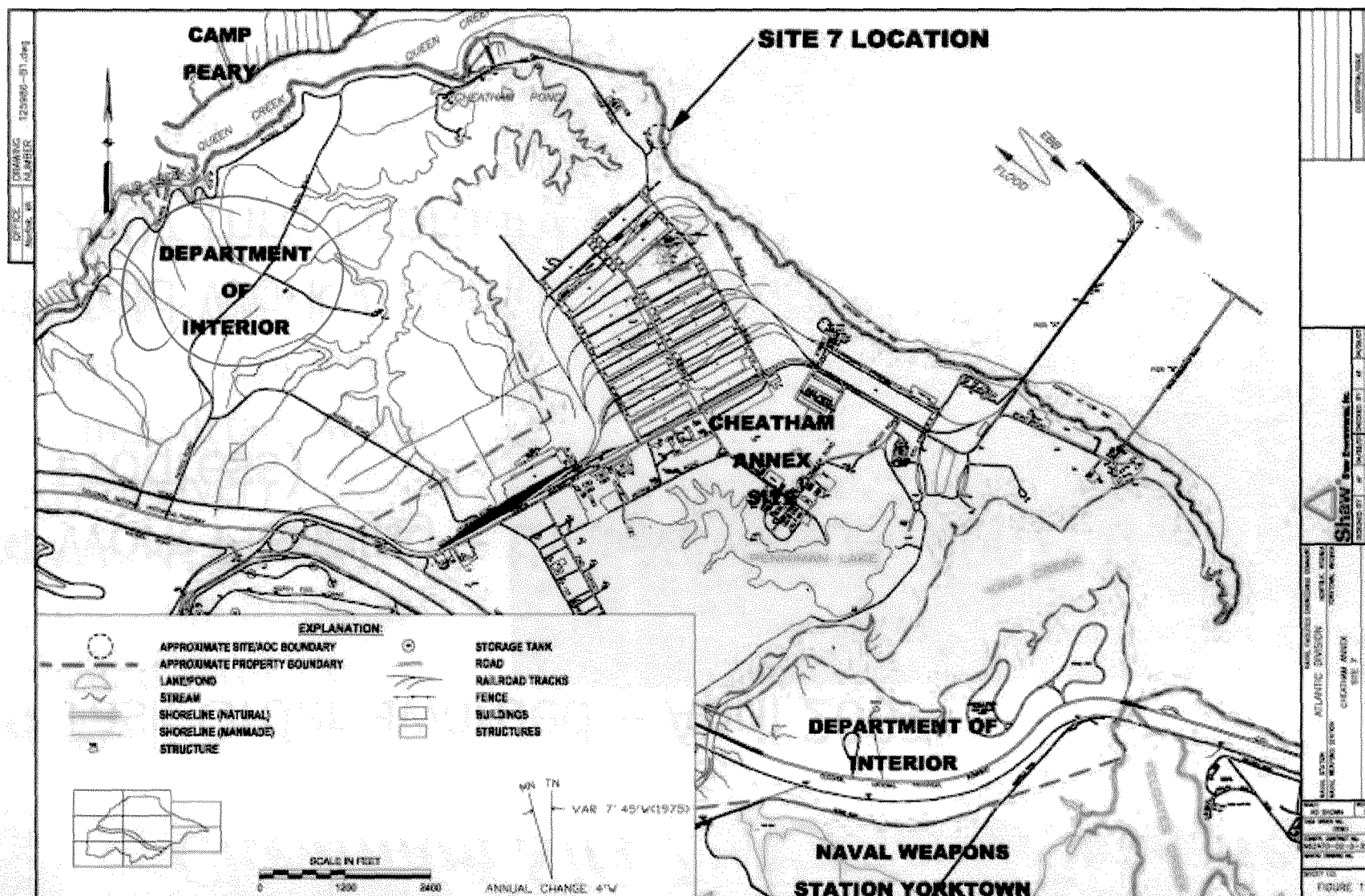


Cheatham Site 7 - Project Timeline

- Task Order awarded – April 2007
- Work Planning – thru November 2007 (In Progress)
- Field Work / Removal Activities – December 2007 thru February 2008



Cheatham Site 7 - Location





Cheatham Site 7 Removal Activities - Setup

- Mark existing utilities
- Install silt fence around perimeter of proposed excavation area
- Perform clearing and grubbing
- Expand site entrance
- Construct lay down and decon area





Cheatham Site 7 Removal Activities - Excavation

- ⊕ Excavate soil to one-foot depth in cabin footprint
- ⊕ Excavate soil to visually remove debris in disposal area
- ⊕ Loadout, transport and dispose of ~6000 cubic yards soil and debris at a permitted off-site facility
- ⊕ Maintain integrity of existing geotubes



Cheatham Site 7 Post-Excavation Sampling

- ⊕ Perform post excavation composite sampling of excavation bottom and sidewalls of disposal area and cabin foot print areas
- ⊕ Analyze samples for:
 - ⊠ Volatile and Semi Volatile Organics
 - ⊠ Aromatic Hydrocarbons
 - ⊠ Pesticides
 - ⊠ Metals and Cyanide
 - ⊠ Dioxin (2,3,7,8)
- ⊕ Supplement post-excavation composite samples with discrete samples to demonstrate clean-up and mitigation of potential risk



Cheatham Site 7 Site Restoration

- ⊕ All excavated areas will be restored to original grade
- ⊕ Clean fill to 4-6 inches below original grade
- ⊕ Topsoil cover to original grade
- ⊕ Seeding with native grass mix (no fescue)
- ⊕ Geotextile stabilization on hillside
- ⊕ Split rail fence rebuilt
- ⊕ Further restoration will be performed in accordance with guidance from NAVFAC Mid-Atlantic Natural Resources
- ⊕ Provide project closure report to Navy



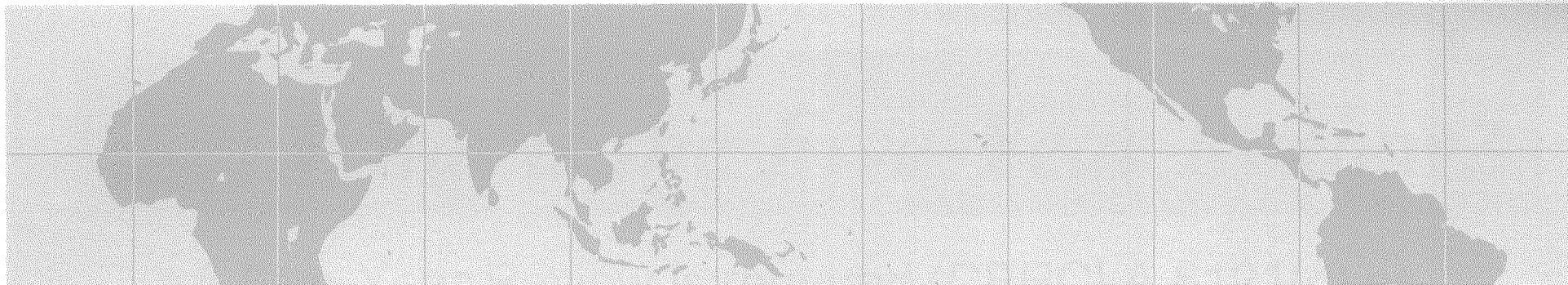
Questions or Comments?

For additional information contact:

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Naval Weapons Station Yorktown 2007 Five-Year Review

WPNSTA Yorktown/CAX

RAB Meeting

14 November 2007



Presentation Objectives

- Provide a summary of the 2007 WPNSTA Yorktown Five-Year Review Report
- Describe how the Five-Year Reviews were conducted through select site examples
- Offer open discussion of Site reviews



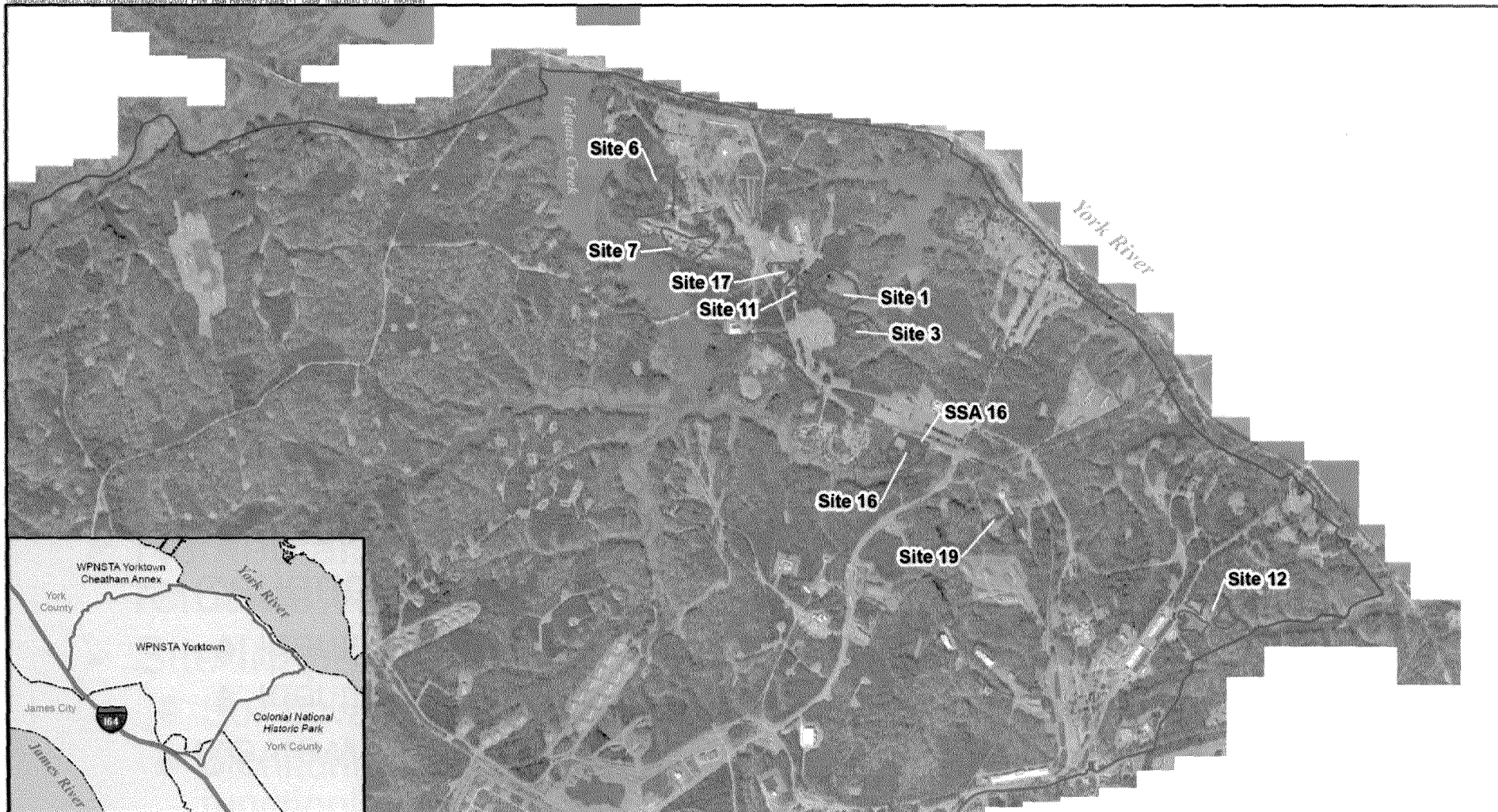
What is the Five-Year Review?

- A Five-Year Review is required (CERCLA §121(c) as amended) for remedial actions documented in a Record of Decision (ROD) that results in contamination remaining at a site at levels that do not allow for unlimited use and unrestricted exposure (UU/UE)
- Reviews are conducted no less than every five years after the remedial action to assure that human health and the environment are being protected
- The Navy is the lead agency responsible for ensuring Five-Year Reviews are conducted on IR sites on Navy property
- WPNSTA Five-Year Review process was triggered with the 1997 remedial action for Site 12 and signature of the first Five-Year Review Report November 20, 2002.



Five-Year Review Sites

- Site 1 - Dudley Road Landfill
- Site 3 - Group 16 Magazine Landfill
- Site 6 - Explosives-Contaminated Wastewater Discharge Area
- Site 7 - Plant 3 Explosives-Contaminated Wastewater Discharge Area
- Site 11 - Abandoned Explosives Burning Pits
- Site 12 - Barracks Road Landfill
- Site 16/SSA 16 - West Road Landfill/Building 402 Metal Disposal Area and Environs
- Site 17 - Holm Road Landfill
- Site 19 - Conveyor Belt Soils at Building 10



Legend

- Yorktown Naval Weapons Station Base Boundary
- Five-Year Review Sites and SSAs

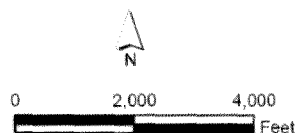


Figure 1-1
Base Map and Five-Year Review Sites and SSAs
2007 Five-Year Review
WPNSTA Yorktown
Yorktown, Virginia

CH2MHILL



How the Five-Year Review is Conducted

- Review site documentation
 - ◆ Identify remedial action objectives and clean up goals
 - ◆ Identify elements of Land Use Controls
- Conduct Site inspections
 - ◆ Inspect soil covers to ensure waste is covered
 - ◆ Inspect monitoring wells to ensure they are intact and functioning properly
 - ◆ Inspect Land Use Control institutional elements such as locked gates and fences
- Review must answer the following questions:
 - ◆ Is the remedy functioning as intended by the ROD?
 - ◆ Are the assumptions used to assess risk (toxicity values, clean up levels) still valid?
 - ◆ Has any new information become available that could call into question the protectiveness of the remedy?



Five-Year Review Site Example: Site 1 - Dudley Road Landfill

- Landfill operation ceased in 1985, potential risk from waste in place and contaminated soil
- 2001 Remedy for Soil and Waste:
 - ◆ Surface debris removal and excavation of contaminated soil
 - ◆ Restoration of soil cover
 - ◆ LUCs prohibiting residential development and disturbance of the soil cover
- Remedial action objective (prevent exposure to waste) remains valid
- Site Inspection
 - ◆ Soil cover inspected for evidence of erosion
 - ◆ Monitoring wells inspected to ensure they are intact and functioning
 - ◆ Fences and gate access inspected for security



Five-Year Review Site Example: Site 1 - Dudley Road Landfill (contd.)

- **Protectiveness Summary:** The soil cover remedy is protective of human health and the environment and the remedy is functioning as intended by the ROD
- **Issues:** A LUC Remedial Design (RD) detailing how LUCs are maintained is in development with the USEPA
- **Recommended Actions:** Navy and USEPA will finalize the LUC RD



Five-Year Review Site Example: Site 11 – Abandoned Explosives Burning Pits

- Explosives burn pit operation 1930 to 1950 resulted in soil contamination posing unacceptable ecological risk
- 2000 Remedy for Soil:
 - ◆ Excavate contaminated soil and ash material, area backfilled and 4" of topsoil placed over area
 - ◆ Post-action confirmation samples demonstrate copper (<1.2 mg/kg) and mercury (ND) were below clean up levels
- Remedial action objective (prevent exposure to contaminated soil) remains valid - risk eliminated
- Protectiveness Summary: All potentially unacceptable risks to ecological receptors from soil (and surface water/sediment via runoff) have been addressed through the soil removal action. No future Five-Year Reviews required
- Issues: None
- Recommended Actions: Risk Mitigated, no future Five-Year Reviews required

**Naval Weapons Station Yorktown
2007 Five-Year Review Summary**

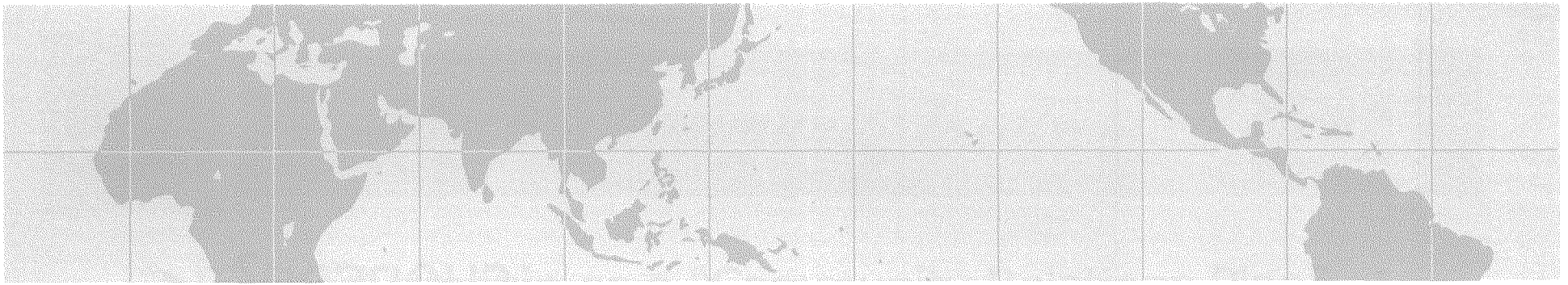
Site	Remedy	5-Year Review Findings	Issues	Recommendations
Site 1 - Dudley Road Landfill	ROD for soil and waste: Soil cover with Land Use Controls (LUCs)	Remedy protective: Soil cover and LUCs maintained preventing exposure	LUC Remedial Design (RD) in negotiation with EPA	Navy and EPA to finalize LUC RD
Site 3 - Group 16 Magazine Landfill	ROD for soil and waste: Removal of surface debris, PAH-contaminated soil, and LUCs	Remedy protective: All waste and soil removed have mitigated risk to human health and the environment	Document that all risks have been mitigated with removal of all waste and contaminated soil	Document in Explanation of Significant Difference (ESD) or ROD Amendment
Site 6 - Explosives-Contaminated Wastewater Discharge Area	ROD for soil and sediment: Flume area - excavation ex-situ treatment; Excavated area- soil cover & LUCs; Impoundment area - excavation & LTM	Remedy protective: LUCs prevent unacceptable exposure	Construction completion documentation to be completed 2007	Complete documentation
Site 7 - Plant 3 Explosives-Contaminated Wastewater Discharge Area	ROD for soil and sediment: LUCs for industrial land use	Remedy protective: LUCs prevent unacceptable exposure	No Issues	
Site 11 - Abandoned Explosives Burning Pits	ROD for soil: Excavation	Remedy protective: All risks mitigated, no future 5-Year Reviews required	No Issues	
Site 12 - Barracks Road Landfill	ROD for all media: Area A landfill cap & LUCs with LTM	Remedy protective: Landfill cap and LUCs prevent unacceptable exposure	Site is not source of VOCs in groundwater, monitoring network to focus on detecting potential releases at landfill waste boundary	Revise LTM plan; ESD or ROD Amendment
Site 16/SSA 16 - West Road Landfill/Building 402 Metal Disposal Area and Environs	ROD for soil and groundwater: LUCs	Remedy protective: LUCs prevent unacceptable exposure	No Issues	
Site 17 - Holm Road Landfill	ROD for soil and waste: Excavation of soil to industrial levels and LUCs	Remedy protective: LUCs prevent unacceptable exposure	Data indicate no unacceptable risk may remain at the site. Navy to work with EPA/VDEQ to reconsider the need for LUCs	ESD to remove LUCs
Site 19 - Conveyor Belt Soils at Building 10	ROD for soil: Dismantling of conveyor belt, excavation of contaminated soil and placement in conveyor belt excavation with soil cover, and LUCs	Remedy protective: LUCs prevent unacceptable exposure	No Issues	



Questions or Comments?

For additional information contact:

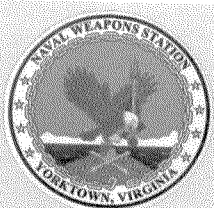
Donna Caldwell: 757-873-1442, ext. 28
donna.caldwell@ch2m.com



***Naval Weapons Station
Yorktown and Cheatham Annex

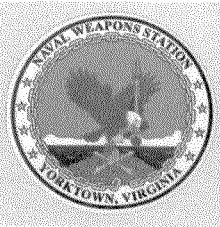
Community Involvement Plan
Survey***

WPNSTA Yorktown/CAX
RAB Meeting
14 November 2007



Community Involvement Plan Survey

- Quick Review - Community Involvement Plan (CIP) Update
- Updating the CIP
- CIP Survey
- Sample Survey Questions
- Schedule
- Questions?



What is a Community Involvement Plan?

- Formerly known as a "Community Relations Plan"
- A site-specific plan developed jointly by a DoD installation and the EPA to address cleanup actions at environmental sites owned by or formerly used by the Department of Defense
- Serves as the foundation for the community involvement program, specifying the outreach activities that will be used to address community concern and describing opportunities for the public to be involved in decision-making processes



Updating the CIP

- Updated RAB in May 2006, May 2007
- CIP updated in fall 2006
- Included interviews from 1991
- Consensus in August 2006 to conduct interviews and survey interviews/surveys to coincide with the decennial census
- Interim interview/survey to be done for 2007-8 CIP Update



Process for Updating the CIP

- ✓ Develop written survey instrument
- Distribute written survey
- Develop preliminary list of stakeholders
- Schedule and conduct interviews
- Analyze results of survey and interviews
- Analyze current CI techniques
- Update CIP and submit



CIP Survey

- 2000 surveys to be mailed
- Sample of residences within one mile of base boundaries and on-base residents
- One survey instrument covers both CAX and WPNSTA
- Designed to be quick-response format
- Will be sent with self-addressed, stamped envelope for return



Sample of Survey Questions

6

- a. On a scale of 1 to 5, with 5 being Excellent and 1 being Poor, how would you rank WPNSTA's and CAX's relationship with the surrounding community? *(If 1 or 2, please explain.)*

	5 Excellent	4 Better than Satisfactory	3 Satisfactory	2 Less than Satisfactory	1 Poor
Trusting Relationship					
Open Communication					
Committed to Being a Responsible Environmental Steward					
Involved in the Community					

- b. Which base are you rating?

☐ WPNSTA

☐ CAX

☐ Both

- c. Comments



Sample of Survey Questions

8

- a. How would you rate the public's attitude toward WPNSTA or CAX? ☐ Excellent ☐ Satisfactory ☐ Poor (*If poor, please explain below.*)
- b. How would you rate your attitude toward WPNSTA or CAX? ☐ Excellent ☐ Satisfactory ☐ Poor (*If poor, please explain below.*)
- c. Do you think the relationship between WPNSTA or CAX and the community needs to be improved? ☐ Yes (*If yes, please explain below.*) ☐ No
- d. Which base are you rating? ☐ WPNSTA ☐ CAX ☐ Both
- e. Comments _____
- _____
- _____



Sample of Survey Questions

10

a. Do you feel that environmental contamination at WPNSTA and/or CAX has affected the surrounding community?

WPNSTA:

☐ Yes

☐ No

CAX:

☐ Yes

☐ No

b. If yes, in what ways? (*check all that apply*)

WPNSTA:

☐ Health

☐ Economic impacts

☐ Perception of the community

☐ Quality of life

☐ Other (*please explain*) _____

CAX:

☐ Health

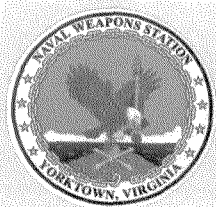
☐ Economic impacts

☐ Perception of the community

☐ Quality of life

☐ Other (*please explain*) _____

c. Do you have personal concerns about any of these issues? (*please explain*) _____



Sample of Survey Questions

14

- a. Do you know about the WPNSTA/CAX Restoration Advisory Board (RAB)? ☐ Yes ☐ No

The RAB is a community advisory team. The purpose of a RAB is to facilitate public participation in Environmental Restoration Program activities. RAB meetings are open to the public. Among other things, the agenda typically covers cleanup activities that have occurred since the last meeting. The WPNSTA/CAX RAB currently meets twice a year (May and November) on a weekday evening at the Charles Brown Park on Old Williamsburg Road (dates, times, and locations may change.) RAB meetings currently are advertised in the The Daily Press and The Virginia Gazette.

- b. How many meetings have you attended? ☐ None ☐ 1-2 ☐ 3-5 ☐ >5

- c. If none in (b), please check the reasons you may not have attended a RAB meeting (*check all that apply*)

- | | | | |
|---|---|--|---|
| ☐ Not aware of it | ☐ Inconvenient time | ☐ Inconvenient location | ☐ Not interested |
| ☐ Inconvenient day | ☐ Didn't know what was on the agenda | ☐ Other _____ | |



Sample of Survey Questions

16

a. Would you be interested in receiving information about the status of environmental cleanup at WPNSTA and/or CAX?

☐ Yes

☐ No

b. If yes, how frequently would you like to receive that information?

☐ Monthly

☐ Quarterly

☐ Annually

☐ Other _____

c. How would you like to receive that information?

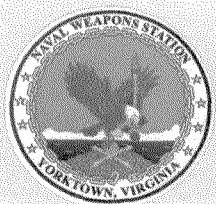
☐ Newsletters

☐ Radio announcements

☐ Email messages

☐ RAB meetings

☐ Other (please explain) _____



Sample of Survey Questions

17

a. How many times have you had contact with government officials (e.g., Navy, EPA, etc.) about the environmental cleanup program at WPNSTA and/or CAX? ☐ None ☐ 1-5 ☐ >5

b. How would you rate these officials' responsiveness to your concerns? ☐ Excellent ☐ Satisfactory ☐ Poor (*If poor, please explain below.*)

c. Comments _____

18

a. Do you believe that the public has confidence in the ability of the Navy and its contractors to investigate and clean up contaminated sites at the WPNSTA and CAX? ☐ Yes ☐ No

b. Why or Why Not? _____



Schedule for Updating CIP

- ✓ Develop written survey instrument done
- Distribute written survey 11/30/07
- Develop preliminary list of stakeholders 12/14/07
- Schedule and conduct interviews 1/14/08 to 2/15/08
- Analyze results of survey and interviews 2/29/08
- Analyze current CI techniques 3/14/08
- Update CIP and submit 5/16/08



Questions or Comments?

For additional information contact:

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