

**Naval Weapons Station Yorktown
Restoration Advisory Board Meeting
18 August 2004**

**Charles E. Brown Park Community Building
Old Williamsburg Road**

8/18/04 - 01520

EV32BC

AGENDA
INSTALLATION RESTORATION ADVISORY BOARD (RAB)
NAVAL WEAPONS STATION YORKTOWN
CHARLES E. BROWN PARK COMMUNITY BUILDING
OLD WILLIAMSBURG ROAD (Route 238)
Wednesday, 18 August 2004, 6:30 PM

Welcome/Introduction Jim Kemp
Public Affairs Officer

Navy Co-Chair Captain Phillip G. Beierl
Commanding Officer

Community Remarks Jay Dewing
Community Co-Chair

FY 2004 Accomplishments Channing Blackwell
CNRMA Environmental
(15 minutes)

CAX FFA Greyson Franklin
USEPA
(5 minutes)

CAX Site 7N Action Memorandum Linda Cole
NAVFAC Mid-Atlantic
Don Joiner
Baker Environmental
(20 minutes)

Break (15 minutes)

WPNSTA Site 4 Video Update Channing Blackwell
CNRMA Environmental
(5 minutes)

WPNSTA Groundwater OU I Don Joiner
Baker Environmental
(15 minutes)

WPNSTA Ballard Creek Mary Smith
Baker Environmental
(15 minutes)

Defense Program Goals Linda Cole
NAVFAC Mid-Atlantic
(15 minutes)

Final Comments/Closing Remarks/Adjourn Jim Kemp

Comments/Announcement of Future Meetings:
RAB Meetings: Wednesday, November 17, 2004, 6:30 PM



WPNSTA/CAX FY 2004 Accomplishments

Restoration Advisory Board Meeting
18 August 2004

Presented by Channing Blackwell
CNRMA Installation Restoration Manager



WPNSTA/CAX 2004 Accomplishments

◆ WPNSTA

- ❖ Site 4 – Soil clean up to residential goals
 - Removal of soil stock pile underway
- ❖ Sites 2, 8, 18, SSA 14 – Final Remedial Investigation (RI) with Screening Ecological Risk Assessment (SERA)
- ❖ Sites 27, 28, 29, and 30 – Draft RI with SERA
- ❖ Site 6 – Continued Bioremediation of Soil
- ❖ Master Project Plans Update



WPNSTA/CAX 2004 Accomplishments

⊕ WPNSTA

- ❖ Site Screening Areas (SSAs) 3, 4, 5, 21 Site Screening Process (SSP) Report Addendum with Final SERA Addendum
- ❖ SSP Report (SSAs 3 through 24) – Signed 5/12/2004
- ❖ Draft Site 12 LTM Report
- ❖ Groundwater OUI (Sites 1, 3, 6, 7, 11, 17, 24, 25) Final Round I RI Work Plan
- ❖ WPNSTA/CAX SMP FY 05-06



WPNSTA/CAX 2004 Accomplishments

⊕ CAX

- ❖ Site 1 – Completed NTCRA for contaminated soil
 - Lens of landfill soil exposed by Isabel removed
 - Sampling of wetlands sediment in support of BERA
- ❖ Site 7N Final Trenching Report
 - Delineation to determine path forward for Action Memorandum (AM)
- ❖ Site 7N AM – signed 7/1/2004
 - Beach Cleanup
- ❖ Site 11 – Draft RI



WPNSTA/CAX 2004 Accomplishments

● CAX

- ❖ Site 12 – Draft Limited Field Investigation Report
 - Changed to Tech Memo
- ❖ Site 12 – Final Limited Field Investigation Report
 - Changed to Tech Memo
- ❖ Site 12 – No Further Response Action Planned (NFRAP)
 - Signed 3/31/04
- ❖ EGIS – Draft Update
 - Updated Annually
- ❖ Background Study - Final



NWS Yorktown Cheatham Annex Federal Facilities Agreement

Restoration Advisory Board Meeting

18 August 2004

Presented by Greyson Franklin

USEPA Region III



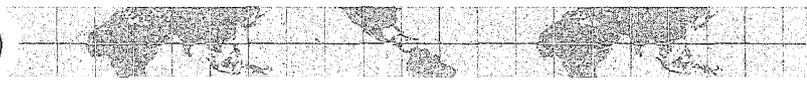
Objectives

- ◆ Cleanup of Federal Facilities under CERCLA
- ◆ Regulatory requirements for FFA
- ◆ Federal Facilities Agreements
- ◆ Primary Documents
- ◆ Existing FFA for NWS Yorktown (1994)
- ◆ Schedule for CAX FFA



Cleanup of Federal Facilities under CERCLA

- ◆ CERCLA (Comprehensive Environmental Response, Compensation, and Liability Act) provides two basic response authorities:
 - ❑ E.O. 12580 delegates authority to Federal agencies for releases at facilities under their jurisdiction
 - ❑ NCP describes the role of lead agency and prescribes procedures for conducting response actions



Regulatory Requirements for an FFA

- ◆ Under CERCLA Section 120, Federal Facilities on the NPL require an FFA/IAG which provides:
 - ❑ Selection of a remedy with EPA concurrence
 - ❑ Implementation of the remedy including O&M

Note: CAX was placed on the NPL in December 2000



Federal Facilities Agreements (FFAs)

- ◆ Execution of FFAs is based on a nationally negotiated agreement
- ◆ National model FFA focuses on the investigation and remedy selection phases and includes EPA review of Primary documents that lead to the ROD
- ◆ Most FFAs provide a schedule for submittal of draft Primary documents, but not a schedule for implementation for the selected remedy
- ◆ Within 60 days of remedy selection, FFAs generally provide that the Federal agency submit a schedule for the RD/RA phase for EPA review. Upon approval the schedule becomes an enforceable element of the FFA



Primary Documents in FFA

1. RI/FS Work Plans
2. RI Reports
3. FS Reports
4. Proposed Plans
5. RODs
6. Final RDs
7. RA Work Plans
8. RA Completion Document
9. Site Management Plan



Existing FFA for NWS Yorktown

An FFA for NWS Yorktown facility was signed in August 1994. Up until now, CAX sites have been addressed under terms of this FFA. More recently, it was agreed that a separate FFA would be prepared for CAX.



Schedule for CAX FFA

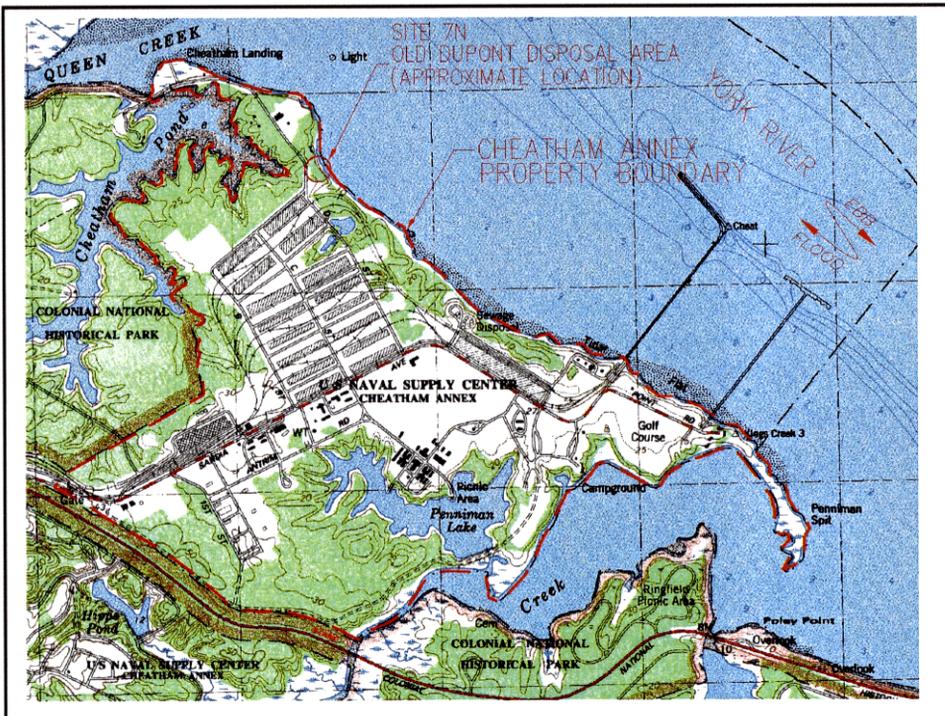
- Currently a NWS Yorktown team goal to have draft FFA for CAX by 1st Qtr 05
- CAX FFA signatories are Navy, VDEQ, and EPA



Update on Cheatham Annex Site 7N Old DuPont Disposal Area

Restoration Advisory Board Meeting
18 August 2004

Presented by Linda L. Cole, P.E.
NAVFAC Mid-Atlantic
Don Joiner, P.E.
Baker Environmental





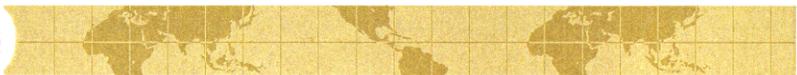
Background

- ◆ Received waste from the City of Penniman and the DuPont facility
- ◆ Located near recreational cabins
- ◆ As a result of Hurricane Isabel in September 2003, debris from disposal area is eroding onto beach and into York River



Background

CONSENSUS STATEMENT 10-30-03-31 - Based upon the landfill's proximity to the York River and the erosional damage associated with Hurricane Isabel, the team agrees that additional funding is necessary for a TCRA at CAX Site 7 in order to stabilize the shoreline. If additional FY 2004 funds can be obtained, the team agrees to delineate and characterize the landfill and determine the feasibility of landfill removal in the near term.





2004 Trenching Investigation

- ◆ February – April: Trenching with limited sampling
- ◆ Results of trenching investigation identified potential soil contamination in the area adjacent to and underlying Cabins 169 and 170
- ◆ Ash and debris also identified



Action Memorandum

- ◆ Action Memo for Time-Critical Removal Action (TCRA) signed July 1, 2004
- ◆ Purpose is to mitigate further erosion of the disposal area into the York River
- ◆ Interim action completed May 2004 removed surface debris on the beach



Beach Cleanup



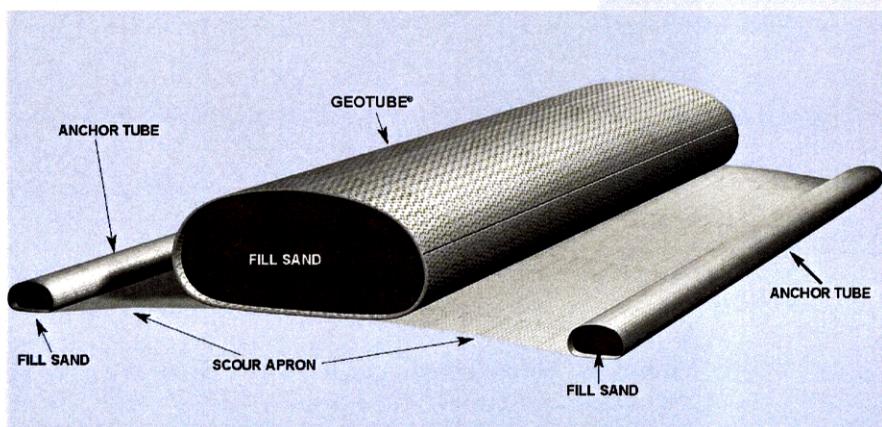
Beach Cleanup



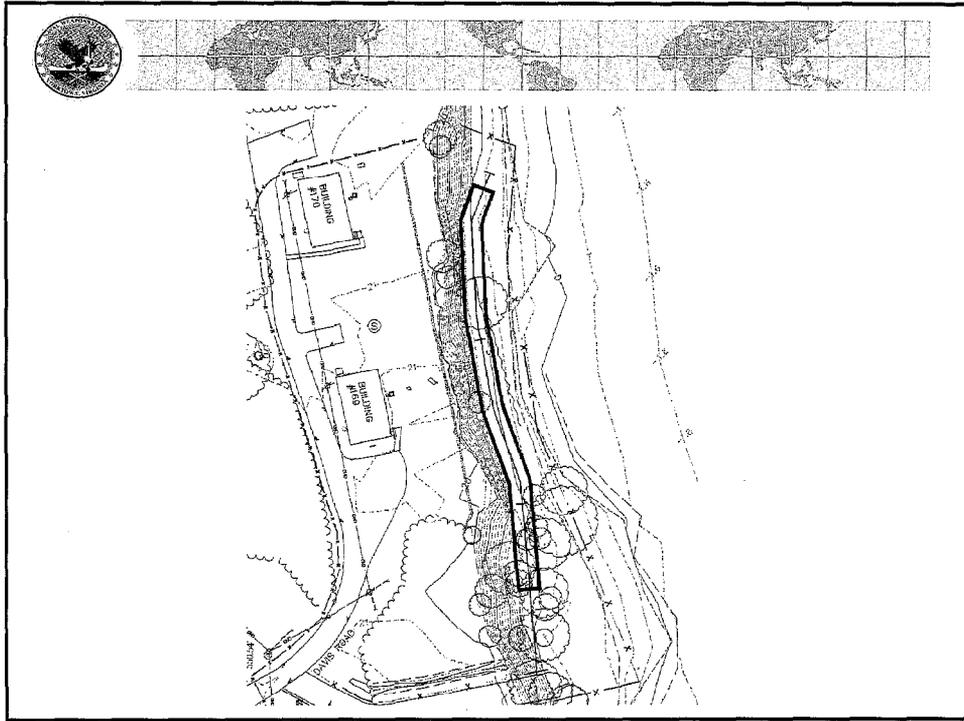


Time-Critical Removal Action

- ✦ Stabilize existing slope to prevent further migration of ash/debris into York River
- ✦ Geotextile tubes to stabilize slope from wave action and surface water runoff

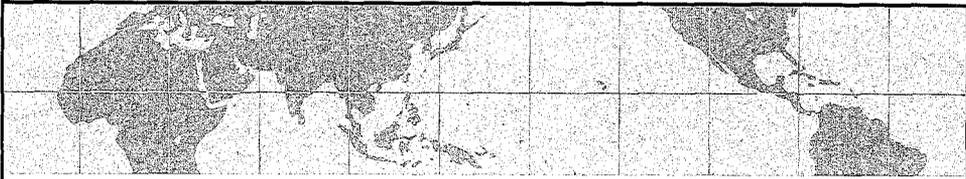


Typical cross-section showing the relationship between the Mirafi® **Geotube**® and the Scour Apron. The intent of the apron is for the anchor tubes to bury themselves and protect the **Geotube**® from scour.



Path Forward

- ◆ TCRA to start end of August 2004
- ◆ Future investigation and removal of remaining contaminated soil and debris when funding becomes available



WPNSTA/CAX Site 4 Removal Action Video Update

Restoration Advisory Board Meeting
18 August 2004

Presented by Channing Blackwell
CNRMA Installation Restoration Manager



Background

- ◆ **Site 4 – Burning Pad Residue Landfill**
 - ❖ Site 4 is approximately 10-acres in size
 - ❖ This area was used as a land disposal area from 1940 until 1975
 - ❖ Materials reportedly disposed at the site included:
 - Carbon-zinc batteries, burning pad residues, tree stumps, fly ash from coal-fired boilers, mine casings, electrical equipment, and transformers.
 - ❖ RI Report (Baker 2001)
 - ❖ FS Study (Baker 2001)
 - ❖ Draft Project Closeout Report (Shaw 2003)
 - ❖ Unitec, Inc currently performing follow-on removal





Naval Weapons Station Yorktown
Groundwater Operable Unit I
Sites 1, 3, 6, 7, 11, 17, 24, and 25

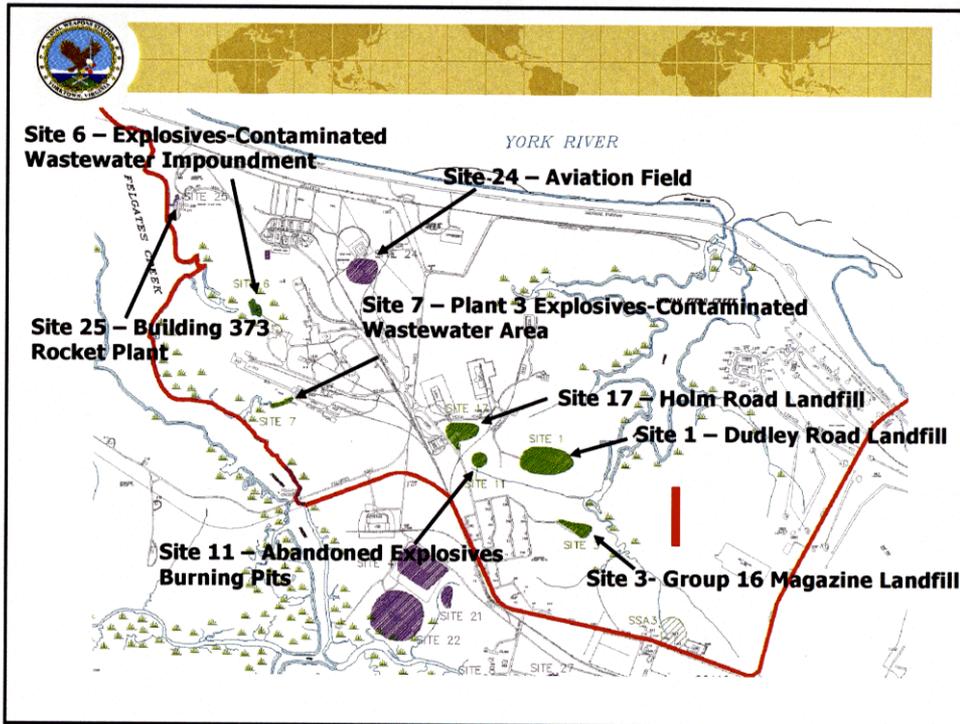
Restoration Advisory Board Meeting
18 August 2004

Presented by Don Joiner, P.E.
Baker Environmental, Yorktown Activity Manager



Background

- ◆ Groundwater at NWSY is defined in terms of Operable Units (OU)
- ◆ OU I includes Sites 1, 3, 6, 7, 11, 17, 24, and 25
- ◆ Final Work Plan for Round I Remedial Investigation submitted March 2004



Purpose

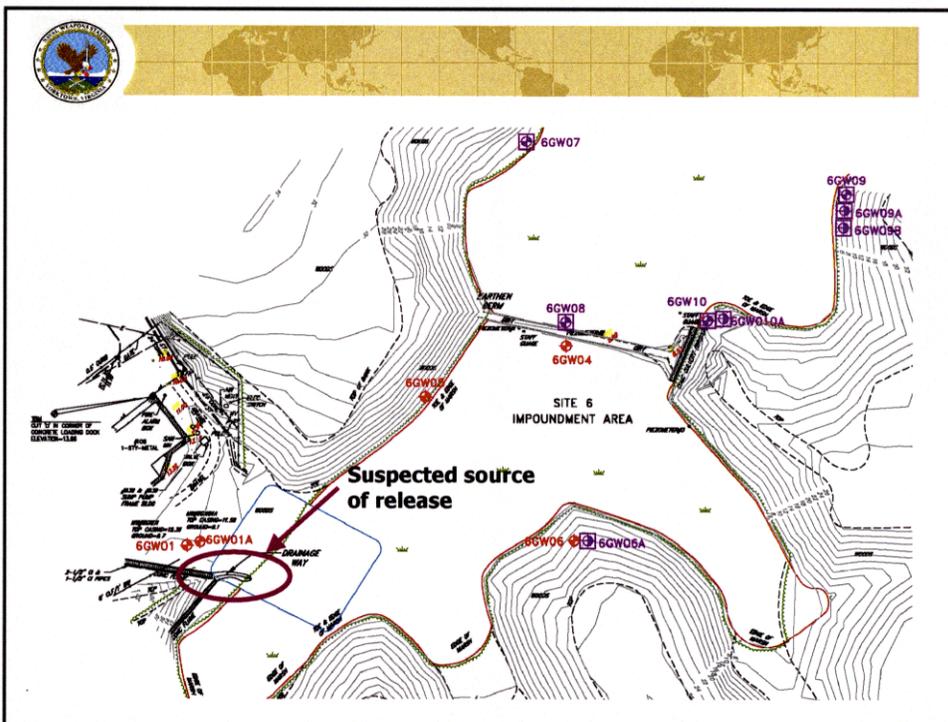
- Evaluate the impact that groundwater may have on human health and ecological receptors
- Round I will focus on groundwater
 - Evaluate potential for groundwater discharge to surface water
 - Evaluate conditions and potential impacts
 - Develop hydrogeologic conceptual model
- Round II will focus on surface water/sediment based on results of Round I results
 - Evaluate human health and ecological risk



Technical Approach Monitoring Well Installation

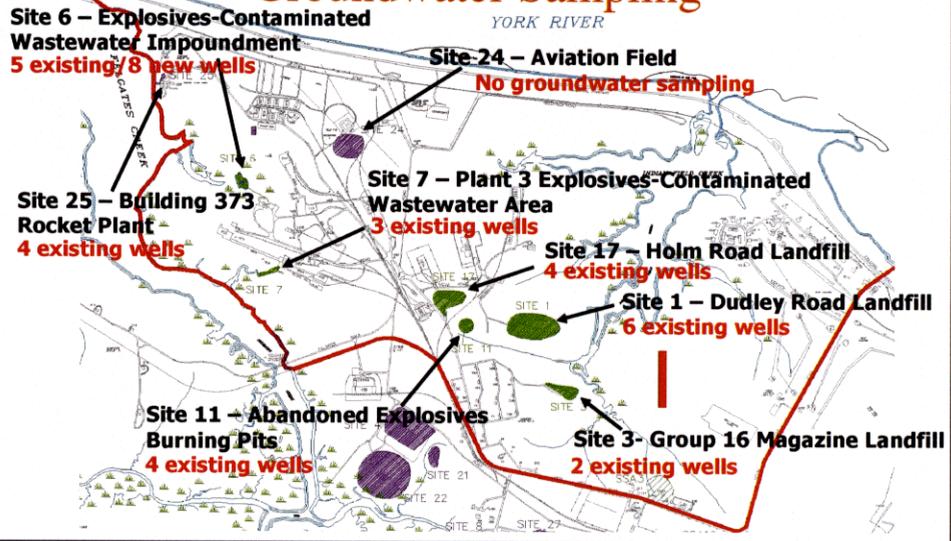
Site 6

- ❑ Installation of 8 additional monitoring wells
- ❑ Installed in the upper and lower portions of the Yorktown-Eastover aquifer





Groundwater Sampling

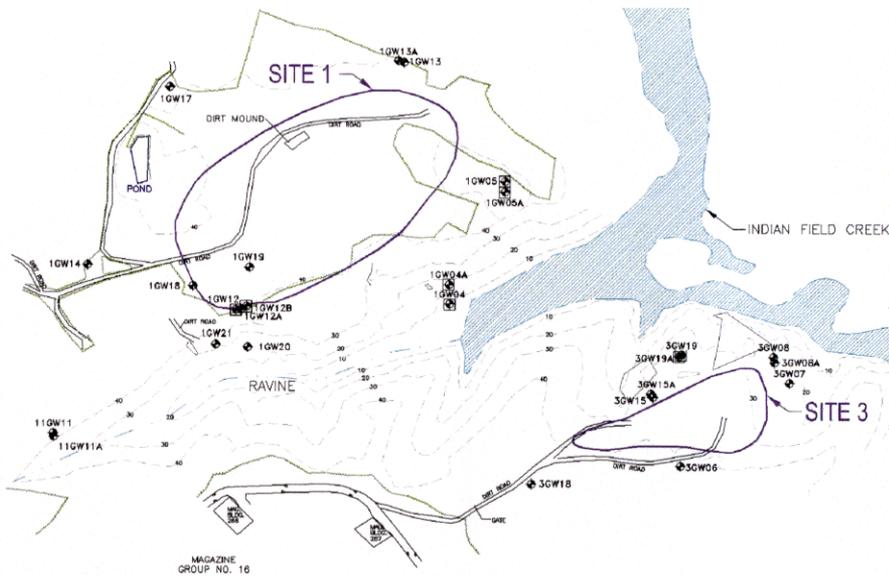
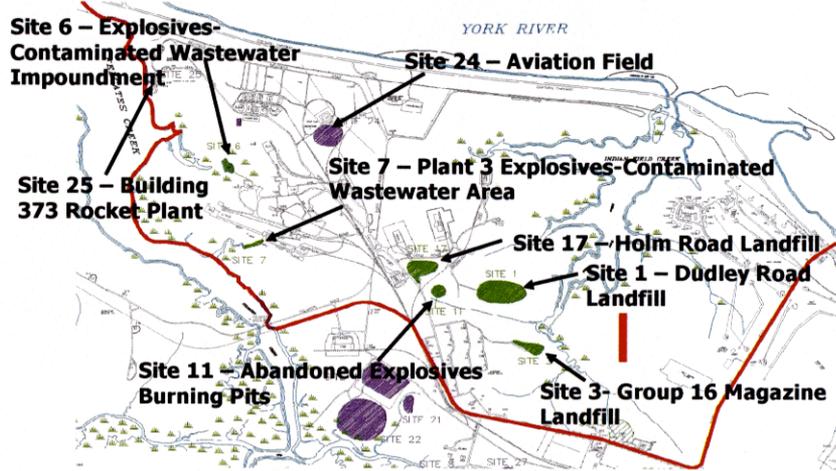


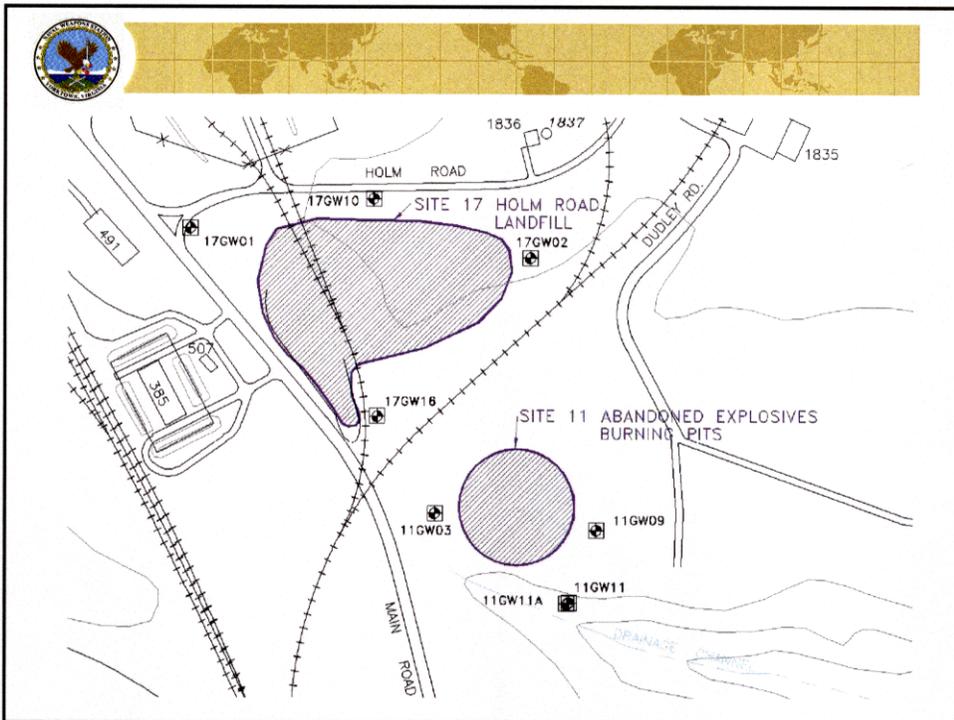
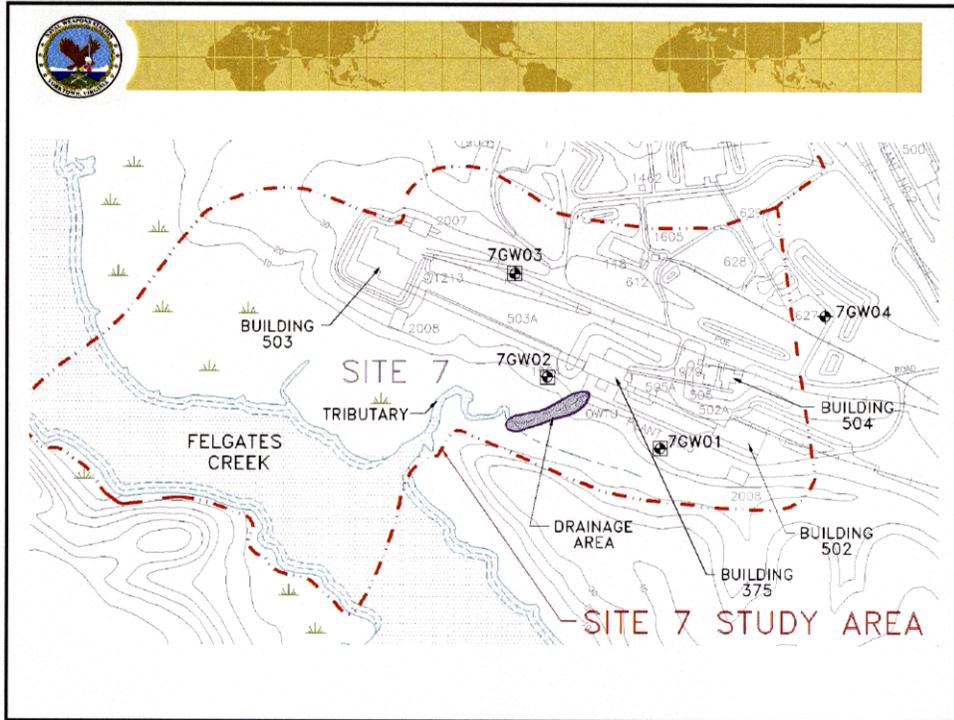
Path Forward

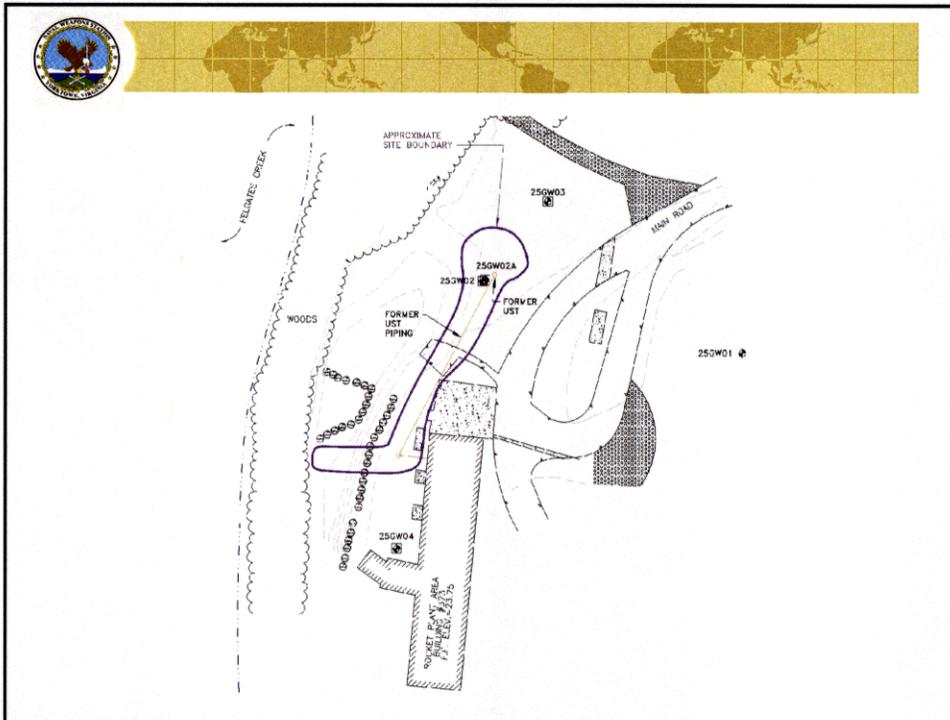
- ◆ Conduct Round I sampling September 2004
- ◆ Submit Draft Round I Report in FY 2005
- ◆ Conduct Round II RI FY 2006



Questions?





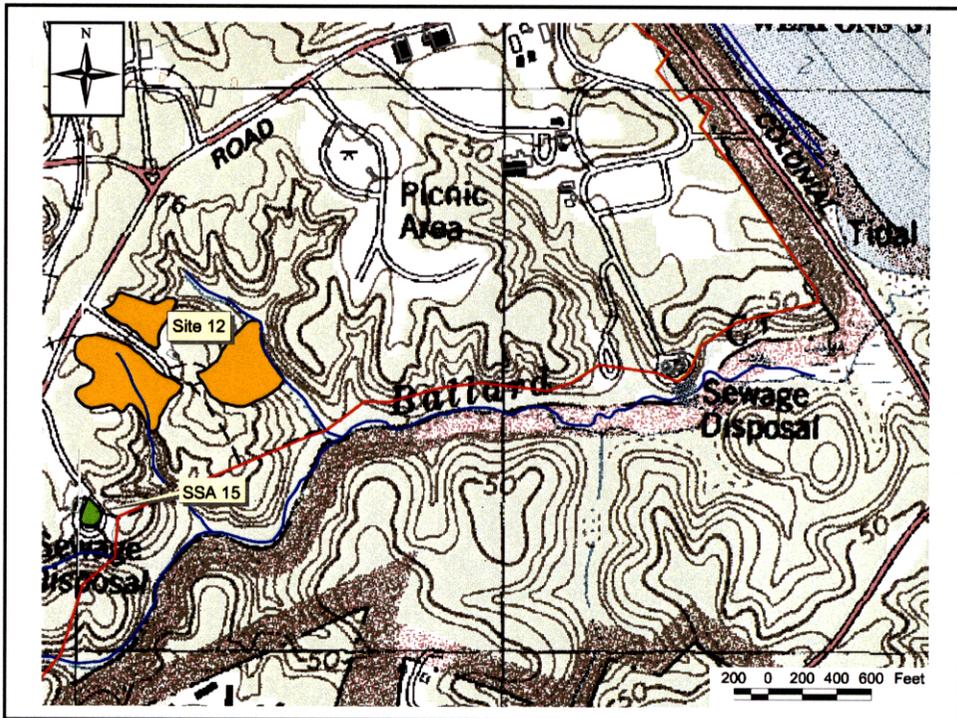




Naval Weapons Station Yorktown Ballard Creek Mercury Investigation

Restoration Advisory Board Meeting
18 August 2004

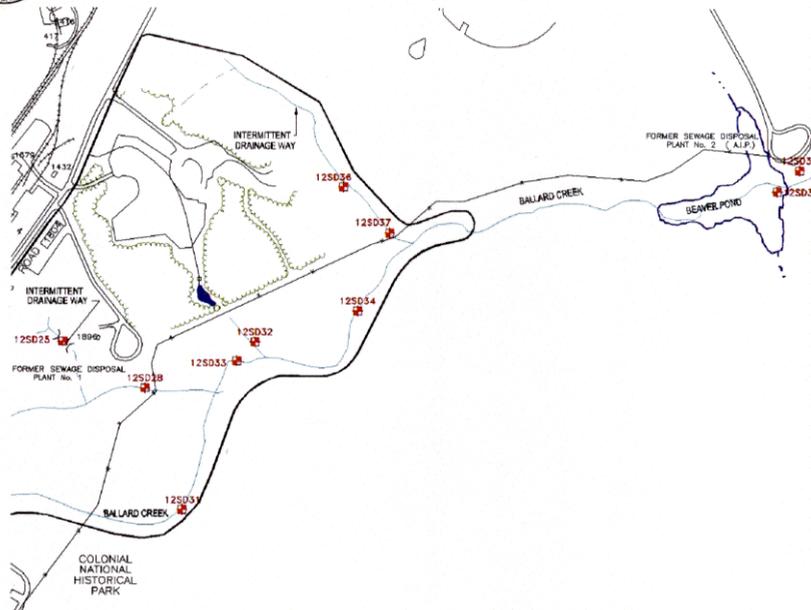
Presented by Mary Smith
Baker Environmental





Background

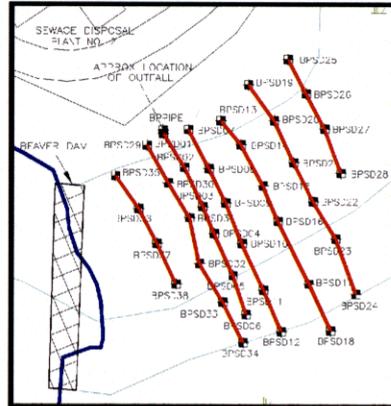
- Sediment sampling conducted in Ballard Creek from 1998 to 2003 as part of the Site 12 Long Term Monitoring Program
- Mercury detections in sediment prompted further investigation





August 2003 Investigation

- Objective was to determine nature and extent of mercury in Ballard Creek downstream of Beaver Pond
- 50+ sediment samples collected
- Total mercury concentrations exceed USEPA benchmarks protective of ecological receptors in the majority of samples
- Lateral and vertical extent not captured



Path Forward

- In FY 2005 conduct additional field studies when funding becomes available
- Additional sampling will include sediment and tissue samples of small fish and amphibians
- Goal is to further assess nature and extent of mercury in Ballard Creek from the Beaver Dam to the next downstream impoundment structure



Naval Weapons Station Yorktown Program Goals

Restoration Advisory Board Meeting
18 August 2004

Presented by Linda L. Cole, P.E.
NAVFAC Mid-Atlantic
Remedial Project Manager



Background

- ◆ DoD's Mission: To protect and defend the USA and the American people
- ◆ DoD depends on the use of national lands and water to conduct training and other military OPS – maintain military readiness
- ◆ Through the Defense Environmental Restoration Program (DERP), DoD restores property that has been environmentally impacted by past defense activities

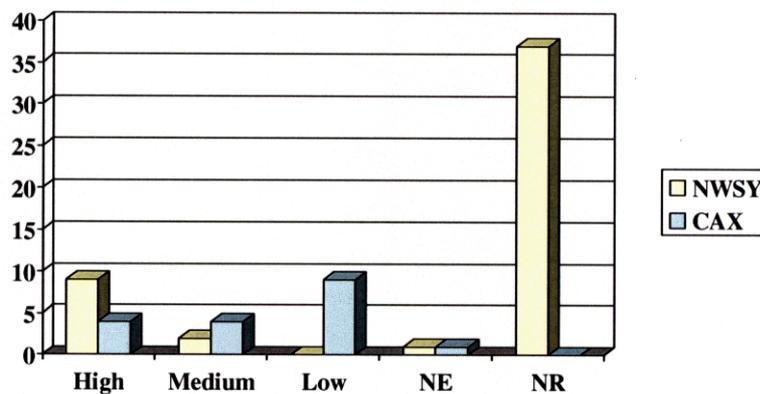


Prioritizing Cleanup

- DoD developed a methodology called the Relative Risk Site Evaluation (RRSE) framework
- DoD evaluates sites and groups them into **high**, **medium**, and **low** relative-risk categories based on
 - The amount and type of contamination present,
 - The potential for the contamination to move from the source, and
 - The potential impact to humans or the environment
- DoD also factors in stakeholder concerns, other risk assessments, program goals, and cleanup strategy



Relative Risk





Program Goals

- ◆ To keep the DERP on track and measure its progress, DoD developed program goals and performance metrics for its IRP sites
- ◆ These goals focus on getting remedies in place or response complete (RIP/RC)
 - 100% **high** relative-risk sites by end of FY07
 - 100% **medium** relative-risk sites by end of FY11
 - 100% of **low** relative-risk sites by the end of FY14



Funding

Activity	To Date	FY04	To Complete
NWSY	\$37,389,000	\$1,822,391	\$22,426,759
CAX	\$3,293,000	\$1,065,032	\$17,110,623

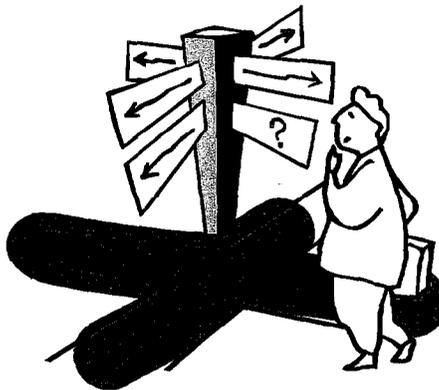


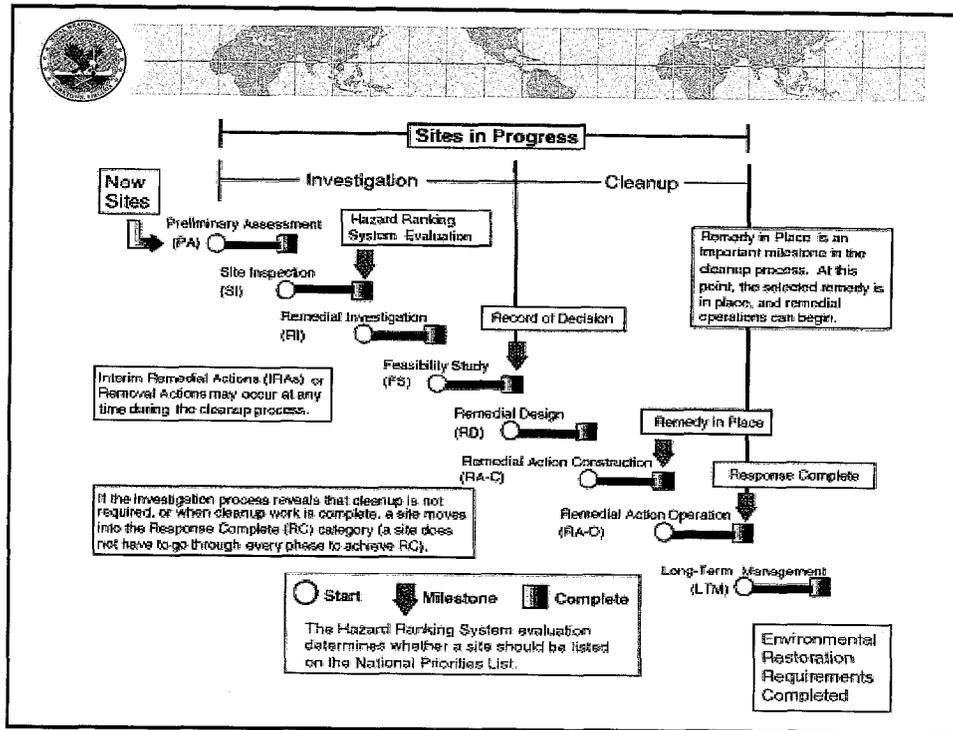
Current and Proposed Budgets

ACTIVITY	FY05	FY06	FY07
NWSY	\$1,981,805	\$1,618,782	\$4,553,129
CAX	\$668,780	\$2,876,527	\$1,820,713



Questions?





**SITES AND SITE SCREENING AREAS
NAVAL WEAPONS STATION YORKTOWN, YORKTOWN, VIRGINIA**

Site No.	Site Name	Navy OU No. ⁽¹⁾	CERCLIS OU No. ⁽²⁾	Former SSA Designation	Current Site Designation	ROD Signed	Institutional Controls	GW OU No.
1	Dudley Road Landfill	VIII	6	-	-	6/9/1999	Yes	I
2	Turkey Road Landfill	-	9	-	-	NA	NA	VI
3	Group 16 Magazine Landfill	IX	6	-	-	6/9/1999	Yes	I
4	Burning Pad Residue Landfill	XVI	7	-	-	NA	NA	IV
5	Surplus Transformer Storage Area	I	1	-	-	9/29/1994	No	II
6	Explosives-Contaminated Wastewater Impoundment	XIII, XIV, XV	2	-	-	10/13/1998	NA	I
7	Plant 3 Explosives-Contaminated Wastewater Discharge Area	XII	2	-	-	10/13/1998	Yes	I
8	NEDED Explosives-Contaminated Wastewater Discharge Area	-	9	-	-	NA	NA	IV
9	Plant 1 Explosives-Contaminated Wastewater Discharge Area	VI	3	-	-	3/23/1998	NA	VII
10	-	-	-	-	-	-	-	-
11	Abandoned Explosives Burning Pits	X	8	-	-	10/2/2000	No	I
12	Barracks Road Landfill	III, IV, V	4	-	-	4/16/1997	Yes	III
13	-	-	-	-	-	-	-	-
14	-	-	-	-	-	-	-	-
15	-	-	-	-	-	-	-	-
16	West Road Landfill	II	5	-	-	9/29/1995	Yes	IV
17	Holm Road Landfill	XI	8	-	-	10/2/2000	No	I
18	Building 476 Discharge Area	-	9	-	-	NA	NA	VII
19	Conveyor Belt Soils at Building 10	VII	3	-	-	3/23/1998	Yes	VII
20	-	-	-	-	-	-	-	-
21	Battery and Drum Disposal Area	XVIII	7	-	-	9/30/2003	No	IV
22	Burn Pad	XVII	7	-	-	9/30/2003	No	IV
23	Building 428 Teague Road Disposal Area	-	10	SSA 1	-	NA	NA	II
24	Aviation Field	-	10	SSA 6	-	NA	NA	I
25	Building 373 Rocket Plant	-	10	SSA 7	-	NA	NA	I
26	Building 1816 Mark 48 Waste Otto Tank	-	10	SSA 18	-	NA	NA	V
27	Building 1751 Chemistry Laboratory Neutralization Unit and Drainage Area	-	11	SSA 9	-	NA	NA	IV
28	Building 28 X-Ray Facility Drain Field	-	11	SSA 10	-	NA	NA	VI
29	Lee Pond	-	11	SSA 20	-	NA	NA	VII
30	Bracken Road Incinerator and Environs	-	11	SSA 24	-	NA	NA	II

**SITES AND SITE SCREENING AREAS
NAVAL WEAPONS STATION YORKTOWN, YORKTOWN, VIRGINIA**

SSA No.	Site Name	Navy OU No. ⁽¹⁾	CERCLIS OU No. ⁽²⁾	Former SSA Designation	Current Site Designation	ROD/DD Signed	Institutional Controls	GW OU No.
1	Now Site 23	-	-	-	23	-	-	-
2	Former Explosives Ordnance Disposal Burning/Disposal Area	-	-	-	-	NA	NA	X
3	Fire Training Pit and Vicinity	-	-	-	-	5/20/2004	No	I
4	Weapons Casing/Drum Disposal Area	-	-	-	-	5/20/2004	No	II
5	Bypass Road Landfill	-	-	-	-	5/20/2004	No	II
6	Now Site 24	-	-	-	24	-	-	-
7	Now Site 25	-	-	-	25	-	-	-
8	Building 350 Rail Roundhouse Maintenance Area Trench Outfall	-	-	-	-	NA	No	VII
9	Now Site 27	-	-	-	27	-	-	-
10	Now Site 28	-	-	-	28	-	-	-
11	Building 3 Neutralization Unit	-	-	-	-	NA	No	III
12	Public Works Storage Yard/Building 683 Vicinity	-	-	-	-	NA	No	VII
13	Building 529 Battery Drainage Area	-	-	-	-	NA	No	III
14	Building 537 Drainage to Felgates Creek	-	9	-	-	NA	NA	IV
15	Sewage Treatment Plant #1 Sludge Drying Beds and Discharge Area	-	-	-	-	NA	No	III
16	Building 402 Metal Disposal Area and Environs	II	5	-	-	9/29/1995	Yes	IV
17	Building 1456 Mark 46 Waste Otto Tank	-	-	-	-	NA	No	V
18	Now Site 26	-	-	-	26	-	-	-
19	Beaver Road/Ponds 11 and 12 Drainage Area and Environs	-	-	-	-	NA	No	X
20	Now Site 29	-	-	-	29	-	-	-
21	Roosevelt Pond	-	-	-	-	5/20/2004	No	II
22	Sand Blasting Grit Pile (formerly AOC 4)	-	-	-	-	5/20/2004	No	VII
23	Coal Storage	-	-	-	-	NA	No	VIII
24	Now Site 30	-	-	-	30	-	-	-

Notes:

(1) An Operable Unit (OU) is a discrete action that comprises an incremental step toward comprehensively remediating the site. The Navy and USEPA have assigned different numbering systems for the OUs at WPNSTA Yorktown and CAX.

(2) CERCLIS is the USEPA's Comprehensive Environmental Response, Compensation and Liability Information System. CERCLIS contains information on hazardous waste sites, potential hazardous waste sites, and remedial activities across the nation, including sites that are on the National Priorities List (NPL) or being considered for the NPL.

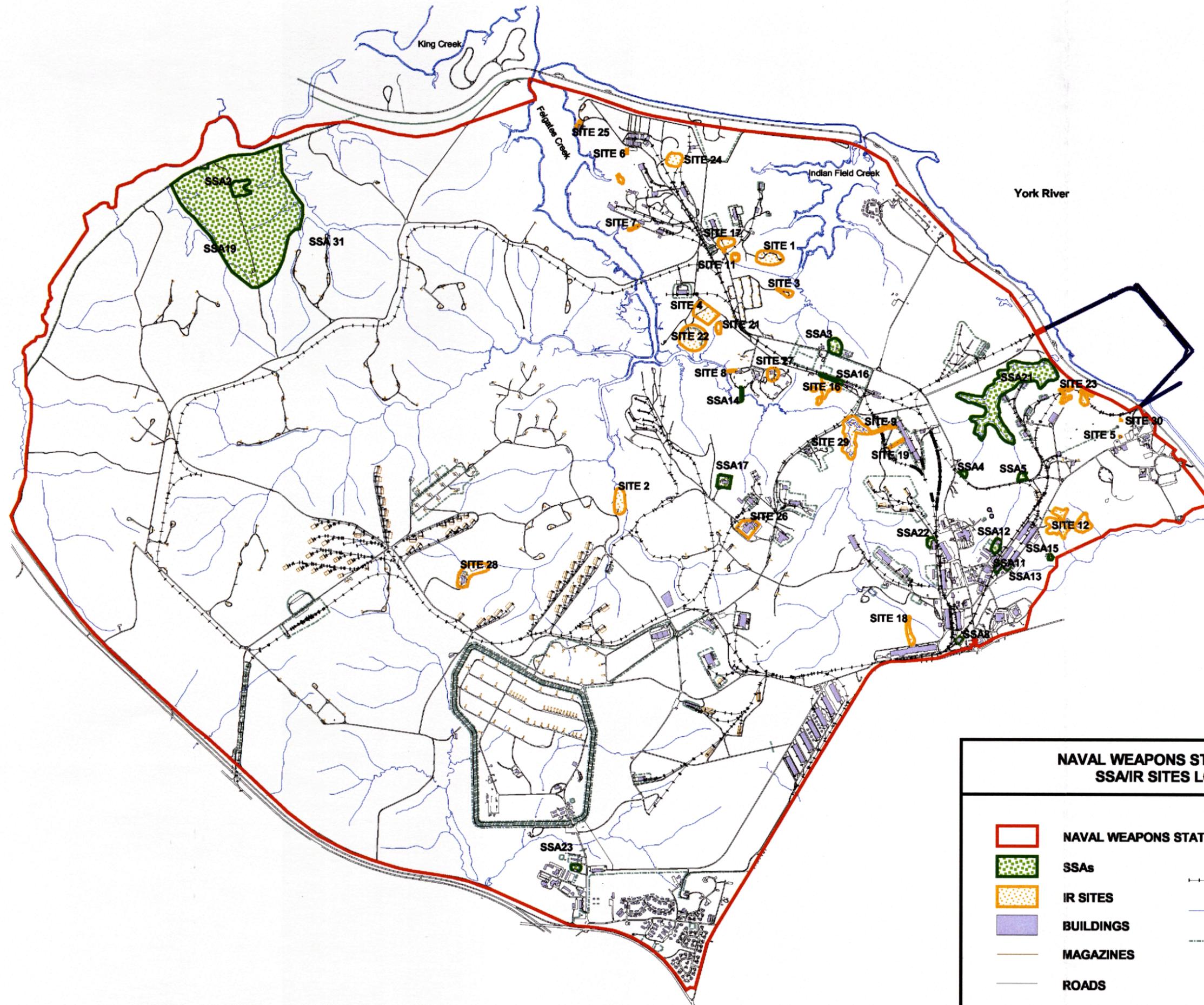
**SITES AND AREAS OF CONCERN
NAVAL WEAPONS STATION YORKTOWN, YORKTOWN, VIRGINIA
CHEATHAM ANNEX SITE**

Site No.	Site Name	Navy OU No. ⁽¹⁾	CERCLIS OU No. ⁽²⁾	Former AOC Designation	Current Site Designation	ROD Signed	Institutional Controls	GW OU No.
1	Landfill Near Incinerator	-	1	5	-	NA	NA	NA
2	Contaminated Food Disposal Area	-	8	-	-	NFRAP 8/14/03	No	NA
3	Submarine Dye Disposal Area	-	8	-	-	NFRAP 8/14/03	No	NA
4	Outdated Medical Supply Disposal Area	-	4	4	-	NA	NA	NA
5	Photographic Chemicals Disposal Area	-	8	-	-	NFRAP 8/14/03	No	NA
6	Spoiled Food Disposal Area	-	8	-	-	NFRAP 8/14/03	No	NA
7	Old DuPont Disposal Area	-	3	-	-	NA	NA	NA
8	Landfill Near Building CAD 14	-	8	-	-	NFRAP 8/14/03	No	NA
9	Transformer Storage Area	-	6	-	-	NA	No	NA
10	Decontaminated Agent Disposal Area Near First Street	-	8	-	-	NFRAP 8/14/03	No	NA
11	Bone Yard	-	5	-	-	NA	NA	NA
12	Disposal Near Water Tower	-	7	-	-	NFRAP 4/22/04	NA	NA
AOC No.								
1	Scrap Metal Dump	-	-	-	-	NA	NA	NA
2	Dextrose Dump	-	3	-	-	NA	NA	NA
3	CAD 11/12 Pond Bank	-	-	-	-	NA	NA	NA
4	Now Site 4	-	-	-	4	NA	-	-
5	Now Site 1	-	-	-	1	NA	-	-
NA	Penniman AOC	-	2	-	-	NA	NA	NA

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**NAVAL WEAPONS STATION YORKTOWN
SSA/IR SITES LOCATION MAP**

- | | | | |
|---|--|---|-------------------------------|
|  | NAVAL WEAPONS STATION YORKTOWN BOUNDARY |  | RAILROADS |
|  | SSAs |  | SHORELINES AND STREAMS |
|  | IR SITES |  | FENCES |
|  | BUILDINGS | | |
|  | MAGAZINES | | |
|  | ROADS | | |

0.5 0 0.5 1 Miles

01520EB7Y



CAMP PEARY

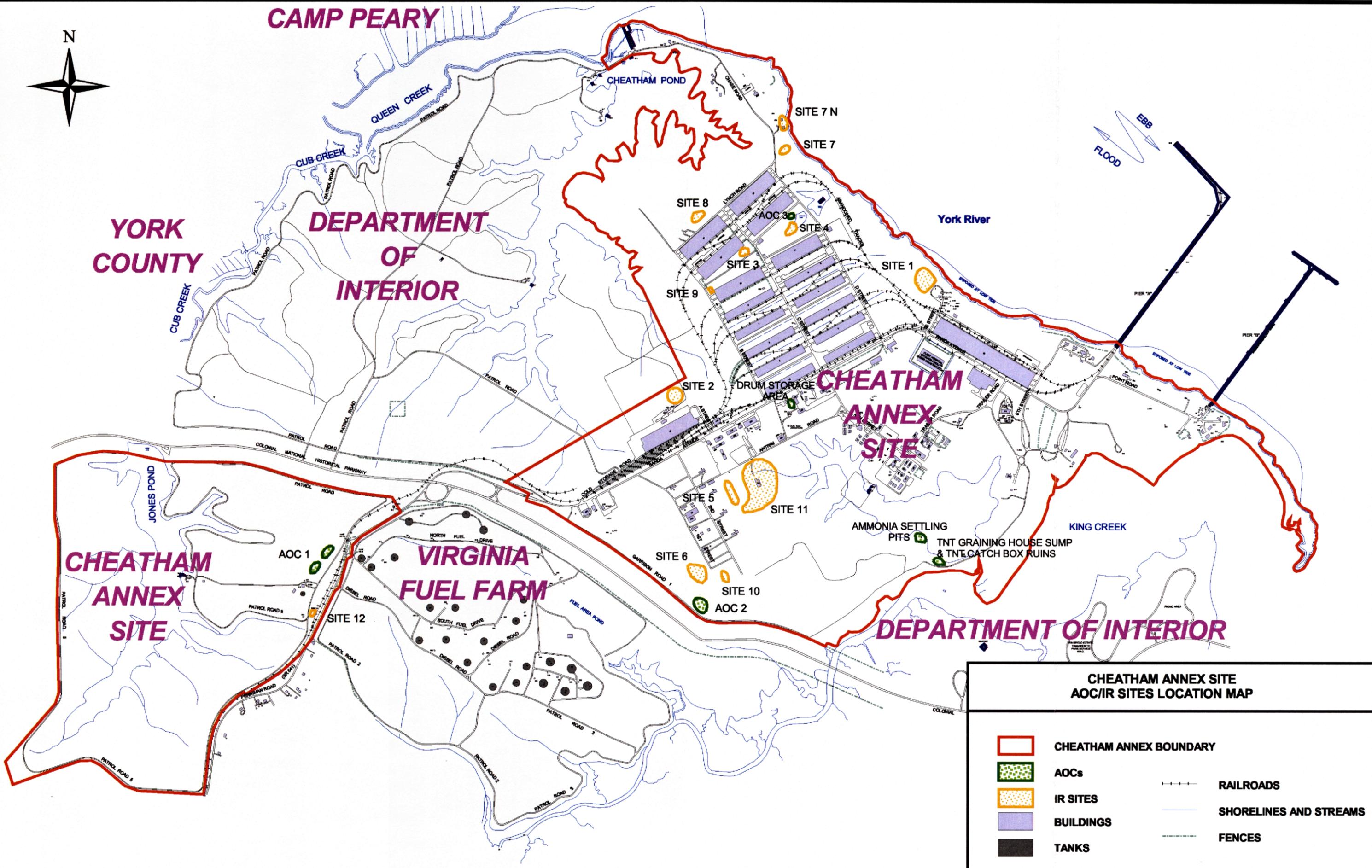
YORK COUNTY

DEPARTMENT OF INTERIOR

CHEATHAM ANNEX SITE

VIRGINIA FUEL FARM

DEPARTMENT OF INTERIOR



CHEATHAM ANNEX SITE AOC/IR SITES LOCATION MAP

-  CHEATHAM ANNEX BOUNDARY
-  AOCs
-  IR SITES
-  BUILDINGS
-  TANKS
-  ROADS
-  RAILROADS
-  SHORELINES AND STREAMS
-  FENCES

0.25 0 0.25 0.5 Miles