

ACTION MEMORANDUM

DATE: November 22 2011

FROM: David A. Barney, BRAC Environmental Coordinator, Naval Construction Battalion Center, Davisville, Rhode Island

SUBJECT: Time Critical Removal Action
Site 7 – Calf Pasture Point
Naval Construction Battalion Center, Davisville, Rhode Island

1.0 PURPOSE

The purpose of this Action Memorandum is to document the decision by the Department of the Navy (Navy) to conduct a Time Critical Removal Action (TCRA) to remove containers of decontamination agent non-corrosive (DANC) and surrounding impacted soil from Site 7 – Calf Pasture Point (Site 7) at Naval Construction Battalion Center (NCBC), Davisville, Rhode Island.

This TCRA is being conducted to reduce potential risks to public health, welfare, and the environment posed by the containers of DANC and associated impacted soil.

The Department of Defense (DoD) has the authority to undertake Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) response actions, including removal actions, under Title 42 of the United States Code (U.S.C.) Section (§) 9604, 10 U.S.C. § 2705, and federal Executive Orders 12580 and 13016. There are no nationally significant or precedent-setting issues for Site 7.

The containers, container debris, and visually impacted surface and subsurface soil at the site have been removed during this TCRA, and the preparation of closeout documentation is underway. This action memorandum is being made available to the public within 60 days of mobilization for site activities. Mobilization for the removal action occurred on 26 September 2011. The excavation of the containers and soil was completed on 10 October 2011.

2.0 NCBC DAVISVILLE BACKGROUND

NCBC Davisville is located in the Town of North Kingstown, Rhode Island, approximately 18 miles south of the state capital, Providence. The Navy acquired the adjacent property in 1939 and built Naval Air Station (NAS) Quonset Point. By 1942, this property was developed for training activities, including the NCBC at Davisville. After World War II, the NAS remained in operation, but the NCBC was inactive until 1951 when the activity was designated Naval Construction Battalion Center Headquarters. Operations at NCBC Davisville were subsequently

reduced in 1974. NCBC Davisville was selected for closure in 1991, was decommissioned on March 25, 1994, and was officially closed on April 1, 1994.

NCBC Davisville was placed on the U.S. Environmental Protection Agency (EPA) National Priorities List (NPL) on November 21, 1989. In response to the NPL listing, a Federal Facilities Agreement (FFA) was established in 1992 between the Navy, the EPA, and the Rhode Island Department of Environmental Management (RIDEM) to coordinate investigation and remedial response activities to be conducted at the former NCBC Davisville under the Installation Restoration Program (IRP) program and CERCLA. Following issue of the Record of Decision (ROD) for Site 7 in 1999 and a Finding of Suitability for Transfer (FOST) in 2000, Calf Pasture Point was transferred to the U.S. Department of the Interior, and subsequently to the Town of North Kingstown in 2001 for use as a park.

3.0 SITE DESCRIPTION

This section presents an assessment of the environmental conditions at Site 7. The Site 7 conditions have been evaluated through several previous and ongoing investigations as discussed below.

a. BACKGROUND.

Site 7 is located on the southern portion of Calf Pasture Point, which is a peninsula in the northeastern section of NCBC Davisville. Calf Pasture Point is bounded to the southwest and south by Allen harbor and its entrance channel, respectively; to the east by Narragansett Bay; and to the west and north by Sanford Road. Site 7 comprises the area of Calf Pasture Point south of the former munitions bunkers, i.e. south of the bedrock outcrop and generally east of the dirt access road that extends south to Allen Harbor’s entrance channel shoreline. A site map and location of the removal action is included in Figure 1..

b. SITE EVALUATION.

Previous evaluations of site 7 are summarized in the table below. Additional details can be found in the Second Five-Year Review Report for Former Naval Construction Battalion Center Davisville, North Kingstown, Rhode Island, Tetra Tech NUS, Inc., March 2008.

YEAR	ACTIVITY
1984	Basewide Initial Site Assessment Study
1987	Basewide Confirmation Study
1998	Remedial Investigation / Feasibility Study / Proposed Plan

1999	Record of Decision
2000	Finding of Suitability to Transfer for Parcel 9 containing Calf Pasture Point signed and property transferred to the Town of North Kingston
2003	First Five Year Review
2008	Second Five Year Review
2011	Source Area Investigation identified the location of the containers of DANC

c. RELEASE OR THREATENED RELEASE INTO THE ENVIRONMENT OF A HAZARDOUS SUBSTANCE, OR POLLUTANT OR CONTAMINANT.

Site 7 was reported to have contained up to 2,500 three to four gallon metal pails of DANC which were buried in a trench approximately twenty by thirty feet and within three feet of the land surface. The DANC pails were presumed to be buried at Site 7 between 1968 and 1972. The containers were packaged in a two component container of 1,1,2,2-tetrachloroethane (PCA) and 1,3-dichloro-5,5-dimethyl-hydantoin (RH-195). There is a chlorinated solvent groundwater plume associated with Site 7 and the Conceptual Site Model suggests DANC containers have leaked solvents to the groundwater. PCA and trichloroethene (TCE), an abiotic degradation product of PCA, in the 100s of milligram per kilogram (mg/kg) range have impacted saturated soils down-gradient of the container disposal area. Also, corroded metal container debris and white powder, believed to be RH-195, were observed when test pitting activities positively identified the containers in May 2011.

d. NATIONAL PRIORITIES LIST (NPL) STATUS.

The former NCBC Davisville was placed on the NPL in November 1989 by EPA pursuant to CERCLA (CERCLIS ID No. RI6170022036). During its operational period, NCBC Davisville was owned by the U.S. Government, and was operated by the Department of the Navy. Therefore, the Navy is required to take response actions pursuant to CERCLA and the terms of the FFA.

4.0 OTHER ACTIONS TO DATE

a. PREVIOUS ACTIONS.

No other removal actions have been conducted to date at Site 7.

b. INVESTIGATIONS AND ASSESSMENTS.

Several investigations have been conducted at Site 7 as noted in Section 3b of this document, above. A summary of these investigations can be found in the *Second Five-Year Review Report*

for Former Naval Construction Battalion Center Davisville, North Kingstown, Rhode Island, Tetra Tech NUS, Inc., March 2008.

c. CURRENT ACTIONS.

In accordance with the Record of Decision, Site 7 is currently subject to Land Use Controls (LUCs) and Long Term Monitoring (LTM). A source area investigation was initiated in the spring of 2011 (Tetra Tech, 2011). One goal of the source investigation was to positively locate these buried containers. This TCRA to remove the DANC containers is underway as of November 2011.

5.0 STATE AND LOCAL AUTHORITIES ROLE

a. STATE AND LOCAL ACTIONS TO DATE.

The Navy is the lead federal agency at Site 7 pursuant to the Defense Environmental Restoration Act at 10 U.S.C §§ 2701 through 2710 and CERCLA, the NCP, and the delegation of Presidential authority under federal Executive Orders 12580 and 13016. Pursuant to 10 U.S.C. § 2705, the Navy is required to ensure that state and local officials be given timely opportunity to review and comment on the Navy's response actions. State and local authorities have not undertaken any removal actions at Site 7; however, they provide oversight of studies and actions conducted by the Navy. The EPA and RIDEM provides oversight of actions and review of documents for the Site.

The local community has been involved in the site investigation and remediation processes at NCBC Davisville through use of Technical Review Committees, Restoration Advisory Board (RAB) meetings, press releases, Fact Sheets, and public meetings. A detailed description of community participation can be found in the *Final Record of Decision, Site 7 – Calf Pasture Point, Naval Construction Battalion Center, Davisville, Rhode Island, EA Engineering, Science, and Technology, September 1999*. RABs are conducted twice per year, and notification of this removal action was provided during the RAB meeting held on September 22, 2011.

No enforcement orders or agreements have been issued that are relevant to this TCRA.

b. POTENTIAL FOR CONTINUED STATE AND LOCAL RESPONSE.

The EPA and RIDEM will continue to oversee the investigations and removal actions and the local community will continue to provide input on actions conducted at Site 7 through the RAB.

6.0 THREATS TO PUBLIC HEALTH OR WELFARE OR THE ENVIRONMENT, AND STATUTORY AND REGULATORY AUTHORITIES

Potential threats to public health, welfare or the environment posed by site contaminants, and statutory and regulatory authorities that apply to Site 7 are discussed in this section.

a. THREATS TO PUBLIC HEALTH OR WELFARE.

The buried DANC containers and concentrations of chlorinated solvents in the groundwater at Site 7 pose a risk to human health; however, LUCs are currently in place to minimize the potential for human exposure by restricting the use of groundwater and restricting building construction without appropriate ventilation. There is no restriction on digging or excavation by the public at Calf Pasture Point. Therefore, removal of the DANC containers will reduce the potential human health risks at Site 7 by eliminating the potential for exposure via excavation. This removal action will also eliminate the source of the solvent plume.

b. THREATS TO THE ENVIRONMENT.

Previous ecological risk assessments and ongoing studies at Site 7 have indicated that there is no threat to the ecological receptors or the environment. Removal of the DANC containers will reduce the potential for expansion and migration of the solvent plume by removing the source.

c. REGULATORY AUTHORITIES.

The EPA enforces cleanup of CERCLA sites where exposure is found to result in elevated risk to human or environmental receptors. Both the EPA and RIDEM will oversee the TCRA and any follow up action.

7.0 ENDANGERMENT DETERMINATION

Actual or threatened releases of pollutants and contaminants from Site 7, if not addressed by implementing the response action selected in this Action Memorandum, may present an imminent and substantial endangerment to public health, or welfare, or the environment. The Navy has determined that this threat can be abated, minimized, or eliminated by undertaking a TCRA.

8.0 PROPOSED ACTIONS AND ESTIMATED COSTS

This section describes the proposed TCRA to mitigate the conditions cited in Section 6 of this document, above. This section also discusses ARARs and presents the estimated costs for the TCRA.

a. PROPOSED ACTION.

The proposed TCRA consists of excavation, transportation, and off-site disposal of DANC containers, container debris, and visually impacted soil. Following excavation, confirmatory soil samples were collected from the sidewalls and floor of the excavation. The removal area was backfilled with clean fill, graded to the pre-existing base grade elevation present across the site, and the disturbed areas will be restored and reseeded. This work has already been completed as of November, 2011.

Public notification of the Site 7 TCRA was provided via legal notice published in the local newspaper on the week of November 20, 2011. The legal notice identified the availability and location of this Action Memorandum for public review. Comments received from the EPA and RIDEM on the Removal Action Work Plan were received and taken into consideration in support of the TCRA.

The major components of the proposed removal action and the basis for the proposal are provided below. Details of the actions and methods to perform the TCRA were described in a Removal Action Work Plan. This Action Memorandum will be placed in the local Information Repositories and will be available to the public and to the regulators. The following paragraphs describe the major components of this proposed action.

- Removal Action Work Plan – A Removal Action (RA) Work Plan was prepared and submitted. The RA Work Plan described the details of the removal, the schedule, sampling to be conducted, and the proposed excavation limits.
- Site Setup – Prior to the start of excavation, access haul roads, staging areas, decontamination areas and site access controls were set up and any buried utilities were located and marked accordingly. Fences were opened as necessary for bringing equipment and materials to the site, then re-secured.
- Erosion Control – Erosion control measures were set up to prevent the migration of sediment from any disturbed ground surface areas on site. This will be done before any ground disturbing activities begin.
- Clearing – Vegetation was cleared from the work area as necessary to make it accessible to personnel and equipment for the removal activities. Cleared vegetation was chipped and staged on site for later reuse during the restoration phase.
- Monitoring Well (MW) Abandonment – Existing MWs that were anticipated to be impacted during the removal action were properly abandoned prior to commencing excavation activities. The MWs will be replaced as necessary for continued groundwater monitoring after the removal action is completed.
- Removal Activities – The removal area consisted of an approximate 20 foot wide by 30 foot long footprint excavated to a maximum depth of 10 feet, or until all containers and container debris were removed. The removal included the DANC containers, container debris and visually impacted soil and it is estimated that approximately 350

tons of material were removed. The material was directly loaded into dump trucks for transportation and disposal.

- Waste Disposal – The material to be removed was sampled and analyzed prior to excavation for characterization purposes and to facilitate disposal. After profiling and manifesting, the material was transported to a licensed disposal facility (EQ Wayne Disposal, Inc.) in Michigan.
- Confirmation Sampling – Confirmation samples were collected from the bottom and sides of the excavation and were analyzed for volatile organic compounds. The RA Work Plan specified the frequency of sampling. The analytical results are being compared to Rhode Island Department of Environmental Management (RIDEM) residential direct exposure criteria to confirm the excavation removed all of the container and contaminated soil.
- Site Restoration – The excavated area was surveyed and a permeable marker liner was placed in the excavation to clearly delineate the excavation extents in the event future action is required. The excavation was backfilled with approved clean fill as described in the RA Work Plan. The excavated areas and other areas disturbed during the removal action are being restored to the original elevation, covered with the cleared vegetation chippings, and native vegetation will be re-established to prevent surface erosion. All equipment and temporary haul roads, fencing, and facilities have been removed from the site.
- A Removal Action Completion Report (RACR) will be prepared that documents this removal action. The RACR is being prepared as of November, 2011 and will be reviewed by the EPA and RIDEM. The RACR will also incorporate any input received from the public review of this AM.

b. CONTRIBUTION TO REMEDIAL PERFORMANCE.

This removal action is expected to remove the source of the chlorinated solvent plume at Site 7. If conditions are encountered after the removal action that warrant continued action at the site, those actions will be evaluated by the Navy, EPA and RIDEM and addressed as necessary. This, in conjunction with the current land use controls and long term monitoring, will provide long-term effectiveness and permanent protection for human health and the environment.

c. APPLICABLE OR RELEVANT AND APPROPRIATE REQUIREMENTS (ARARS).

A full listing of ARARs for Site 7 can be found in the Final Record of Decision, Site 7 – Calf Pasture Point, Naval Construction Battalion Center, Davisville, Rhode Island, EA Engineering, Science, and Technology, September 1999. This removal action is being conducted in accordance with CERCLA and all regulations regarding the excavation, transportation and disposal of hazardous materials/wastes.

d. PROJECT SCHEDULE.

The buried container removal was conducted during a three week period in October 2011 and the preparation of closeout documentation is underway as of November, 2011.

e. ESTIMATED COSTS.

The cost for the proposed removal action is approximately \$400,000. There are no long term operation, maintenance, or monitoring costs associated with this removal action.

***9.0 EXPECTED CHANGE IN THE SITUATION SHOULD
ACTION BE DELAYED OR NOT TAKEN***

If the removal action were not conducted, the Site 7 source waste materials would have remained in place and the public could have been inadvertently exposed to them over time.

10.0 OUTSTANDING POLICY ISSUES

None identified at this time.

11.0 ENFORCEMENT

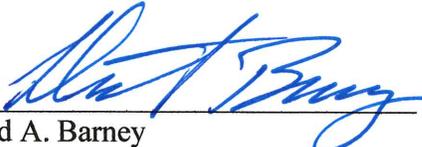
The removal action is being undertaken voluntarily by the Navy in accordance with CERCLA and the FFA for NCBC Davisville. The regulatory agencies are anticipated to remain in an oversight role for the duration of the removal action and RACR to ensure compliance with regulations under CERCLA.

***12.0* RECOMMENDATION**

This Action Memorandum was developed in accordance with current EPA and Navy guidance documents for removal actions under CERCLA (EPA, 1990; Navy, 2006). This Action Memorandum documents, for the Administrative Record, the Navy's decision to undertake a TCRA at Site 7.

The removal of the DANC containers, container debris, and associated impacted soil will reduce the potential human health and ecological risks of exposure to contaminants at Site 7. The Navy, therefore, is implementing, completing and documenting this time critical removal action.

Approvals:



David A. Barney
BRAC Environmental Coordinator
NCBC Davisville

11/18/11

Date

REFERENCES

42 U.S.C. § 7401 et seq., Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) as amended by the Superfund Amendments and Reauthorization Act of 1986.

Department of the Navy, 2006. *Navy Environmental Restoration Program Manual*.

EA Engineering, Science, and Technology, 1999. *Final Record of Decision, Site 7 – Calf Pasture Point, Naval Construction Battalion Center, Davisville, Rhode Island*. September.

U.S. Navy, 2000. *Finding of Suitability to Transfer Parcel 9 to the U.S. Department of the Interior for transfer to the Town of North Kingstown, Rhode Island*.

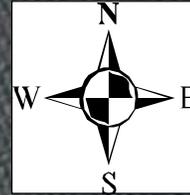
Tetra Tech NUS, 2008. *Second Five-Year Review Report for Former Naval Construction Battalion Center Davisville, North Kingstown, Rhode Island*. March.

Tetra Tech, 2011, *Draft Final Sampling and Analysis Plan Source Area Investigation Site 07, Calf Pasture Point Former Naval Construction Battalion Center Davisville, North Kingstown, Rhode Island*

U.S. Environmental Protection Agency (EPA), 1990. *Superfund Removal Procedures: Action Memorandum Guidance*. Office of Solid Waste and Emergency Response Directive 9360.3-01. September.

Legend

-  LAND-USE RESTRICTION BOUNDARY
-  PARCEL PROPERTY BOUNDARY



PARCEL NO. 9
(See Deed for Groundwater
and Land-Use Restrictions
on the Entire Parcel 9)

LOCATION OF
REMOVAL ACTION

NOTE:
See Deed for Building
Restrictions in Area
South of this Line

**ALLEN
HARBOR**

**ENTRANCE
CHANNEL**

NARRAGANSETT BAY



		Shaw Environmental & Infrastructure, Inc. 500 East Main Street, Suite 1630 Norfolk, Virginia 23510		DS	DS	07/13/2011	07/13/2011
DESIGNED BY	DS	CHECKED BY	DS	APPROVED BY	DS	07/13/2011	07/13/2011
DRAWN BY	TFR	REVISIONS					
DEPARTMENT OF NAVY FORMER NCBC DAVISVILLE  NAVFAC Naval Facilities Engineering Command NCBC SITE 7		LOCATION OF TIME CRITICAL REMOVAL ACTION					
SCALE:	AS SHOWN	SIZE:	1				
CONTRACT TASK ORDER:		WE33					
CONTRACT NO.:		N62470-08-D-1007					
NAVFAC DRAWING NO.:							
FIGURE 1							