

ACTION MEMORANDUM

DATE: December 20, 2013

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

SUBJECT: Time Critical Removal Action
Drum Burial Area within the Construction Equipment Department Area
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 buried drums and characterize adjacent soil from the Construction Equipment Department (CED) Area 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 drums. The CED area contains Study Area 1 (former CED drum storage area), Site 2 (battery acid disposal area), Site 3 (solvent disposal area), and Study Area 4 (asphalt disposal area). These sites and study areas are collectively managed as Operable Unit-7 (OU-7).

These drums appear to represent a distinct and previously unidentified disposal event, and are not within the boundaries of these previously identified sites or study areas within the CED Area. They will be identified as the “drum burial area” until a determination is made of the status of this drum burial area in regards to site or OU status. That decision will be made in consultation with the U.S. Environmental Protection Agency (EPA) and the Rhode Island Department of Environmental Management (RIDEM) in accordance with Section XXXI “Identification of Study Areas” of the Federal Facilities Agreement (FFA) dated March 23, 1992.

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 this removal action.

The drums were removed during this TCRA, and the preparation of closeout documentation is underway. Mobilization for the removal action occurred on 21 October 2013. The excavation of

the drums was completed on 25 October 2013. Soil from beneath the drums was sampled for laboratory analysis to evaluate the potential for contamination remaining at the burial area.

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 EPA National Priorities List (NPL) on November 21, 1989. In response to the NPL listing, the FFA was established in 1992 between the Navy, the EPA and RIDEM to coordinate investigation and remedial response activities to be conducted at the former NCBC Davisville under the Navy's Installation Restoration Program (IRP) program and CERCLA.

The CED area is in the remedial investigation/ feasibility study (RI/FS) phase of CERCLA and there is no Record of Decision (ROD) for this OU. The CED area is within Parcel 7, which is retained by the Navy pending completion of all necessary remedial action to protect human health and the environment.

3.0 SITE DESCRIPTION

This section presents a summary of the environmental conditions at the drum burial site and at OU-7 in general. The OU-7 conditions have been evaluated through several previous and ongoing investigations as discussed below.

a. BACKGROUND.

The CED Area (OU-7) is located north of Davisville Road in the northern portion of Parcel 7. Calf Pasture Point is bounded to the south by Davisville Road, to the east by Marine Road, to the north by Perimeter Road and to the west by Seabee Avenue. The CED Area is in an upland portion of the former NCBC Davisville and was used for operations and storage of equipment. The former Building 224 housed the CED operations. A site map and location of the removal action and nearby study areas/sites is included in Figure 1. These sites and study areas are within Navy Parcel 7, which is currently leased to the Quonset Development Corporation (QDC) under a Lease in Furtherance of Conveyance (LIFOC, N62472-98-RP-00035). QDC discovered

several buried drums in April, 2013 while attempting to unearth a large boulder for crushing to facilitate future development of the CED Area.

One drum was punctured upon discovery, and a liquid that appeared to be oil leaked from the drum. QDC emptied the contents into a second drum and stored it in a maintenance facility. A small amount of soil was impacted by the liquid. This soil was excavated, placed on polyethylene sheeting and covered. Additional buried drums were visible in the excavation around the boulder. QDC notified the Navy and ceased activities in the area. The Navy characterized the drum contents as waste oil and various solvents, and later disposed of the drum contents as hazardous waste. To prevent exposure through contact the excavation that revealed the drums was backfilled.

In June, 2013, a geophysical survey was conducted within a 200 by 300 foot area centered on the boulder to assess the immediate extent of the buried drums for removal consideration. The survey identified 11 features that could represent additional drums buried in the vicinity of the boulder.

In October, 2013, the drums were excavated, removed and staged for disposal. Soil was sampled to characterize conditions in the drum burial area. These additional drums were determined to be empty and/or crushed; and they were staged for disposal along with other metallic debris collocated with the drums.

As of November, 2013 the analytical results of soil sampling are pending. Groundwater wells are planned to evaluate conditions in the vicinity of the excavation

***b.* SITE EVALUATION.**

Previous evaluations of the CED Area summarized in the table below did not reveal that drums were buried at this location. Additional details can be found in the Administrative Record.

YEAR	ACTIVITY
1984	Basewide Initial Assessment Study
1987	Basewide Confirmation Study
1995	Basewide Environmental Baseline Survey
1998-present	Remedial Investigation / Feasibility Study (ongoing)
1997	Finding of Suitability to Lease Parcel 7
1998	Lease to Quonset Development Corporation
2013	Identification of Buried Drums and Time Critical Removal Action

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

The buried drums were unexpectedly discovered in an area not subject to investigation or intrusive sampling. The observation of additional drums of unknown quantity or content could present a potential hazard to human contact or further deterioration and release of unknown contents to the environment.

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 the drum burial area.

b. INVESTIGATIONS AND ASSESSMENTS.

Several investigations have been conducted at the CED Area as noted in Section 3b of this document, above. The immediate vicinity of the drum burial area has not been subject to investigation.

c. CURRENT ACTIONS.

The excavated drums have been characterized for disposal, soil sampling has been conducted and results are pending. The Navy will share the results of soil and groundwater sampling and evaluate the site for future action.

5.0 *STATE AND LOCAL AUTHORITIES ROLE*

a. STATE AND LOCAL ACTIONS TO DATE.

The Navy is the lead federal agency at NCBC Davisville 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 the drum burial area; however, they provide oversight of studies and actions conducted by the Navy. The EPA and RIDEM provide oversight of actions and review of documents for NCBC Davisville. They were notified when the drum burial area was discovered and were consulted prior to mobilization for the TCRA field work.

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. RABs are currently conducted approximately twice per year. Notification of this removal action and this action memorandum will be provided to the public in the North Kingston Times.

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 OU-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 the drum burial area are discussed in this section.

a. THREATS TO PUBLIC HEALTH OR WELFARE.

The buried drums pose a risk to human health because they contained unknown contents. Therefore, removal of the buried drums will reduce the potential human health risks at the drum burial area by eliminating the potential for exposure via direct contact to their contents. This removal action will also eliminate a potential source of soil or groundwater contamination.

b. THREATS TO THE ENVIRONMENT.

The primary threats to public health (direct contact with the drum contents) could also pose a risk for ecological receptors.

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 the drum burial area, 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 ongoing and proposed TCRA actions 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 the drums and their contents. Following excavation, confirmatory soil samples were collected from beneath the drums and at other locations in the immediate vicinity. This work has already been completed as of November, 2013.

Public notification of this TCRA was provided via legal notice published in the local newspaper on the week of January 6, 2014. 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 and the other key documents relating to this TCRA are or 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.

- *Geophysical Survey – A geophysical survey was conducted on a 200 by 300 foot area around the boulder to identify other potential buried drums. Eleven features were identified for excavation and evaluation.*
- *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, and the sampling to be conducted.*
- *Site Setup – Prior to the start of excavation, staging areas, decontamination areas and site access controls were set up and any buried utilities were be located and marked accordingly.*

- *Removal Activities – The removal area consisted of three distinct excavations at the locations identified by the geophysical survey. It was determined that the geophysical anomalies were empty drums, crushed drums, and pieces of metal pipe.*
- *Waste Disposal – The excavated metallic debris was removed and will be disposed as scrap metal. The soil and crushed drum will be disposed of as hazardous waste. The contents of drum originally found have been disposed of as hazardous waste.*
- *Confirmation Sampling – Confirmation samples were collected from the beneath each drum and at other locations in the immediate area of the drums.*
- *Site Restoration – The location of each excavated drum 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 and graded with adjacent soils. The excavated areas and other areas disturbed during the removal action are being restored pending any future actions. All equipment, fencing, and facilities have been removed from the site.*
- *Monitoring Well (MW) Installation – New monitoring wells will be installed to evaluate if the drums are a source of contamination in groundwater.*
- *A Removal Action Completion Report (RACR) will be prepared that documents this removal action. The RACR will be prepared in January, 2014 and will be reviewed by the EPA and RIDEM. The RACR will also incorporate any input received from the public review of this AM and will include responses to any significant comments received.*

b. CONTRIBUTION TO REMEDIAL PERFORMANCE.

This removal action is expected to remove a source of direct exposure to contaminants and a potential source of soil or groundwater contamination at the CED Area. If conditions are encountered after the removal action, or if analytical results reveal levels that warrant additional action(s) at the site, those actions will be evaluated by the Navy, EPA and RIDEM and addressed as necessary to provide protection for human health and the environment.

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

This removal action is being conducted in accordance with CERCLA, RIDEM Remediation Regulations, and all regulations regarding the excavation, transportation and disposal of hazardous materials/wastes including Resource Conservation and Recovery Act (RCRA) and Department of Transportation requirements. ARARs have or will be attained to the extent practicable, consistent with the National Oil and Hazardous Substance Pollution Contingency Plan and USEPA removal action guidance. See Attachment A.

d. PROJECT SCHEDULE.

The buried drums were removed during a one week period in October 2013. The disposal of the excavated metallic debris and soil are underway. Analytical results are pending for consultation

with EPA and RIDEM as of November, 2013. Monitoring wells are expected to be installed in December, 2013, with sampling and analysis to follow.

e. **ESTIMATED COSTS.**

The cost for the proposed removal action is approximately \$320,000. If additional contamination is present that could pose unacceptable risk, additional remedial action may be necessary. 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 buried drums would have remained in place and the public could have been inadvertently exposed to them over time. Releases from the drums could have been a source of soil or groundwater contamination.

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.

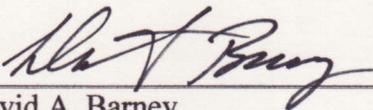
Based on the results of the soil and groundwater sampling, EPA and RIDEM will be consulted to make a decision as to whether the drum burial area should be identified as a new site, included within the current OU 7, or closed out with no further action required.

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 OU-7.

The removal of the buried drums will reduce the potential human health and ecological risks of exposure to contaminants at the drum burial area. The Navy, therefore, is implementing, completing and documenting this time critical removal action.

Approvals:

	<u>12/20/13</u>
_____ David A. Barney BRAC Environmental Coordinator NCBC Davisville	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.

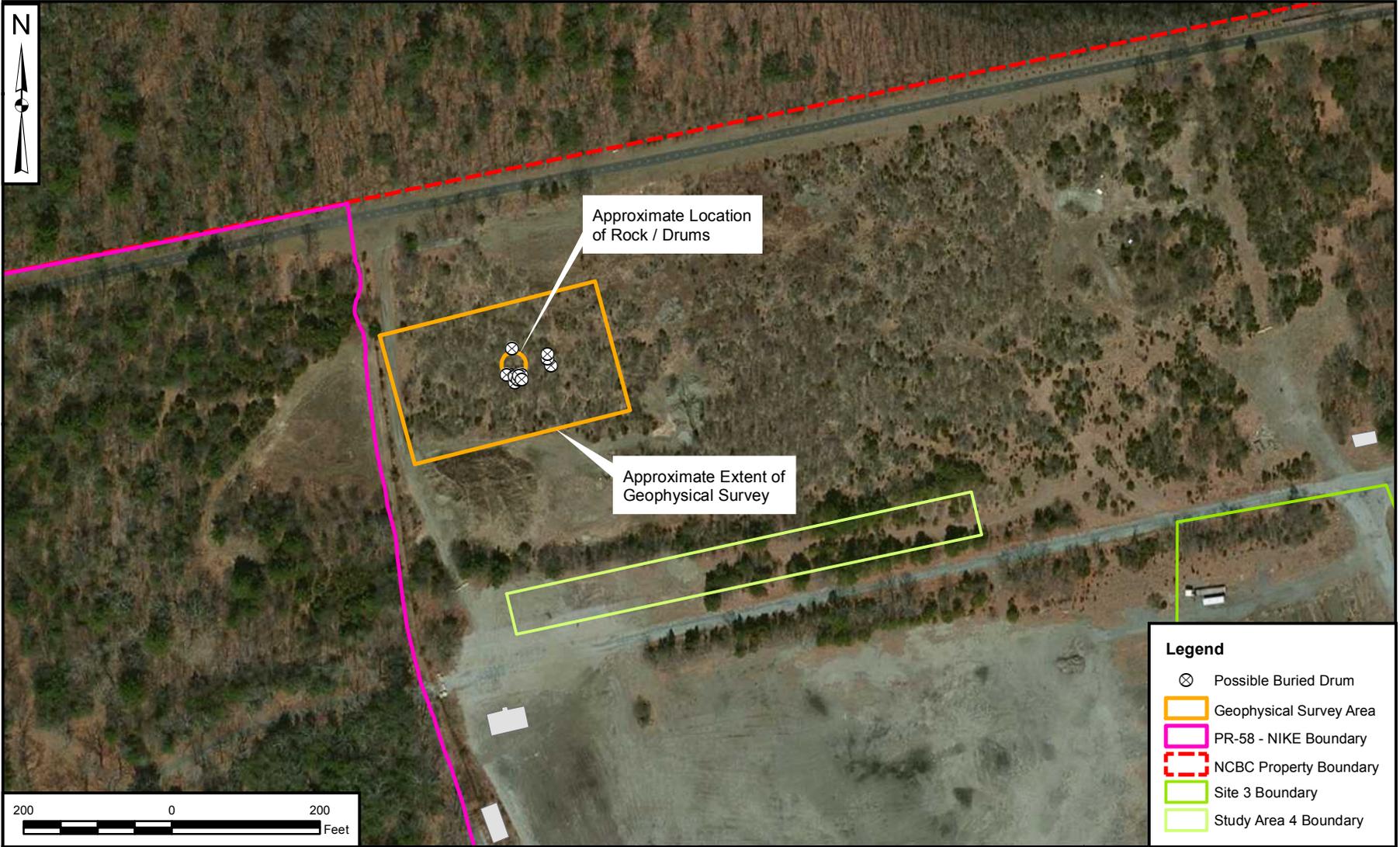
Department of the Navy, 2006. *Navy Environmental Restoration Program Manual*.

EA Engineering, Science and Technology, 1995, *Final Basewide Environmental Survey, Naval Construction Battalion Center (NCBC), Davisville, North Kingstown, Rhode Island*

U.S. Navy, 1997. *Finding of Suitability to Lease and Environmental Baseline Survey to Lease (EBSL) for 704.15 Acres of Land with Buildings at Naval Construction Battalion Center, Davisville, Rhode Island.*

Tetra Tech, EC 2013, *Draft Work Plan for Time Critical Removal Action/Sampling and Analysis Plan Site 03, Former Naval Construction Battalion Center Davisville, North Kingston, Rhode Island*

U.S. Environmental Protection Agency (EPA), 2009. *Superfund Removal Guidance For Preparing Action Memoranda*. Office of Solid Waste and Emergency Response



DRAWN BY	DATE
D. COUCH	06/03/13
CHECKED BY	DATE
S. ANDERSON	12/06/13
REVISED BY	DATE
D. COUCH	12/06/13
SCALE	
AS NOTED	



LOCATION OF TIME CRITICAL REMOVAL ACTION
FORMER CONSTRUCTION EQUIPMENT DEPARTMENT
FORMER NCBC DAVISVILLE
NORTH KINGSTOWN, RHODE ISLAND

CONTRACT NUMBER	CTO NUMBER
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APPROVED BY	DATE
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FIGURE NO.	REV
1	0

ATTACHMENT A

TABLE 1

**FEDERAL AND STATE CHEMICAL-SPECIFIC ARARs AND TBCs – DRUM REMOVAL AND OFF-SITE DISPOSAL
CED AREA DRUM REMOVAL - ACTION MEMORANDUM
NCBC DAVISVILLE
NORTH KINGSTOWN, RHODE ISLAND
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Federal				
Requirement	Citation	Status	Synopsis	Evaluation/Action to be Taken
Cancer Slope Factors (CSFs)	-	To Be Considered	Guidance values used to evaluate the potential carcinogenic hazards caused by exposure to contaminants.	Potential risks have been addressed through the removal and off-site disposal of drum contents and visually impacted soil. Analytical results from soil and groundwater will be evaluated to determine if an unacceptable risk exists at the site. If an unacceptable risk is identified, further response action to address site risks will attain (or justify waiver of) this ARAR.
Reference Doses (RfDs)	-	To Be Considered	Guidance values used to evaluate the potential non-carcinogenic hazards caused by exposure to contaminants.	
Guidelines for Carcinogen Risk Assessment	EPA/630/P-03/001F (March 2005)	To Be Considered	Guidance for assessing cancer risk.	
Supplemental Guidance for Assessing Susceptibility from Early-Life Exposure to Carcinogens	EPA/630/R-03/003F (March 2005)	To Be Considered	Guidance of assessing cancer risks to children.	

ATTACHMENT A

TABLE 1

**FEDERAL AND STATE CHEMICAL-SPECIFIC ARARs AND TBCs – DRUM REMOVAL AND OFF-SITE DISPOSAL
CED AREA DRUM REMOVAL - ACTION MEMORANDUM
NCBC DAVISVILLE
NORTH KINGSTOWN, RHODE ISLAND
PAGE 2 OF 2**

State				
Requirement	Citation	Status	Synopsis	Evaluation/Action to be Taken
State of Rhode Island Rules and Regulations for the Investigation and Remediation of Hazardous Material Releases (Short Title: Remediation Regulations)	DEM-DSR-01-93, Section 8.02	Applicable	These regulations set remediation standards for contaminated soil resulting from the unpermitted release of hazardous material in Rhode Island.	Analytical results will be evaluated to determine if an unacceptable risk exists at the site. If an unacceptable risk is identified, further response action to address site risks will attain (or justify waiver of) this ARAR.

ATTACHMENT A

TABLE 2

**FEDERAL AND STATE LOCATION-SPECIFIC ARARs AND TBCs – DRUM REMOVAL AND OFF-SITE DISPOSAL
CED AREA DRUM REMOVAL - ACTION MEMORANDUM
NCBC DAVISVILLE
NORTH KINGSTOWN, RHODE ISLAND
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Federal				
Requirement	Citation	Status	Synopsis	Evaluation/Action to be Taken
Coastal Zone Management Act	16 United States Code (U.S.C.) Parts 1451 <i>et. seq.</i>	Applicable	Requires that any actions must be conducted in a manner consistent with state-approved management programs.	Applicable coastal zone management requirements were satisfied during the removal action. The removal action had no effect on coastal uses or resources and was consistent with state coastal policies.
State				
Requirement	Citation	Status	Synopsis	Evaluation/Action to be Taken
Coastal Resources Management	Rhode Island General Laws (RIGL) 46-23-1 <i>et seq.</i> and Coastal Resources Management Program	Applicable	Sets standards for management and protection of coastal resources.	Applicable coastal resource management requirements were addressed during the removal action. The removal action had no effect on coastal uses or resources and was consistent with state coastal policies.

ATTACHMENT A

TABLE 3

**FEDERAL AND STATE ACTION-SPECIFIC ARARs AND TBCs – DRUM REMOVAL AND OFF-SITE DISPOSAL
CED AREA DRUM REMOVAL - ACTION MEMORANDUM
NCBC DAVISVILLE
NORTH KINGSTOWN, RHODE ISLAND
PAGE 1 OF 2**

Federal				
Requirement	Citation	Status	Synopsis	Evaluation/Action to be Taken
Resource Conservation and Recovery Act (RCRA)	42 U.S.C. §§ 6901 et seq.,	Relevant and Appropriate	Rhode Island has been delegated the authority to administer these RCRA standards through its state hazardous waste management regulations. These provisions have been adopted by the State.	Materials excavated during the removal action were analyzed by appropriate test methods and, if applicable, managed in accordance with the substantive requirements of the State hazardous waste regulations.
State				
Requirement	Citation	Status	Synopsis	Evaluation/Action to be Taken
Rules and Regulations for Hazardous Waste Management, Definition of Hazardous Waste	DEM OWM-HW01-07, Rule 3	Applicable	Under State regulation hazardous wastes are defined as any hazardous waste as defined in 40 CFR 261.3. The standards also apply to “Rhode Island Wastes” as defined in the regulations.	These regulations applied when determining whether or not solid waste generated during the removal action was hazardous, either by being listed exhibiting a hazardous characteristic or meeting the definition of a Rhode Island Waste.
Standards for Generators of Hazardous Waste	Rules and Regulations for Hazardous Waste Management, Section 5.00	Applicable	Establishes manifesting, pre-transport, and recordkeeping requirements for hazardous waste.	These regulations applied to the management of any waste from the soil remedy that was determined to be hazardous.

ATTACHMENT A

TABLE 3

FEDERAL AND STATE ACTION-SPECIFIC ARARs AND TBCs – DRUM REMOVAL AND OFF-SITE DISPOSAL
CED AREA DRUM REMOVAL - ACTION MEMORANDUM
NCBC DAVISVILLE
NORTH KINGSTOWN, RHODE ISLAND
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State				
Requirement	Citation	Status	Synopsis	Evaluation/Action to be Taken
Clean Air Act - Fugitive Dust Control	Air Pollution Control Regulation No. 5 – Fugitive Dust	Applicable	Requires that reasonable precaution be taken to prevent particulate matter from becoming airborne.	Control of dust during excavation and handling of soil was implemented to prevent material from becoming airborne. All contaminated soil that would pose a risk from fugitive dust was removed and disposed of off-site.