Former Naval Construction Battalion Center (NCBC) Davisville Restoration Advisory Board (RAB) Update June 2021

Summary Overview/Purpose

Due to ongoing COVID-19 uncertainty during the RAB meeting planning process, **the scheduled RAB meeting of June 17, 2021 has been postponed until September 23, 2021** (third Thursday in September). This RAB meeting will be a hybrid in-person and virtual meeting, such that attendees can decide whether to attend in-person at the Quonset Development Corporation (QDC) Annex in North Kingstown or virtually via WebEx. Postcards will be mailed to the RAB Mailing list prior to the RAB meeting with details on when, where, and how to attend. The purpose of this summary is to provide current RAB members and the community an update commensurate with of a typical RAB that provides updates on CERCLA Operable Units (OUs) and Installation Restoration Program (IRP) Sites over the past year (June 2020 to June 2021). Figures are provided at the end of this summary.

OU 8/Site 7 - Calf Pasture Point– Monitoring Event (ME) 24 was conducted from September 26 through October 19, 2020. Out-going mid-tide synoptic water level measurements were collected at 83 groundwater monitoring wells. Groundwater samples were collected from 55 groundwater monitoring wells and 14 shoreline piezometers within the intertidal zone. ME 24 constituted the biennial list of sampling based on the five-year long-term monitoring cycle.

The Draft ME 24 Data Report was submitted on April 27, 2021 and is currently being reviewed by regulatory agencies. Responses to agency comments and a Draft Final Report are planned for August/September 2021. Generally, the results of the groundwater sampling exhibit similar overall patterns and trends in the data, consistent with previous biennial sampling events.

Figure 1 presents the sampling locations of the ME 24 sampling event. Tabular results of the ME 24 sampling event are available upon request.

OU1/Site 9 – Allen Harbor Landfill – ME 49 was conducted from September 9 through 25, 2020 and November 10, 2020. Outgoing mid-tide synoptic water level measurements were collected at 27 groundwater monitoring wells and the Allen Harbor Staff gauge. Groundwater samples were collected from 26 groundwater monitoring wells, 12 shoreline piezometers (4 within the created wetland, 5 beyond the breakwater, 1 north of the landfill, and 2 south of the landfill), and 3 seep locations. Additionally, shellfish tissue samples were collected at 10 locations (4 beyond the breakwater, 2 within the created wetland, 2 south of the landfill, and 2 north of the landfill) and 11 sediment sample were collected (collocated with the piezometer locations). Grass cutting and general maintenance was also performed. ME 49 constituted the biennial list of sampling based on the five-year long-term monitoring cycle.

The Draft ME 49 Data Report was submitted on April 27, 2021 and is currently being reviewed by regulatory agencies. Responses to agency comments and a Draft Final Report are planned for August/September 2020. Generally, the results of the groundwater sampling exhibit similar overall patterns and trends in the data, consistent with previous biennial sampling events.

Figure 2 presents the sampling locations of the ME 49 sampling event. Tabular results of the ME 49 sampling event are available upon request.

OU-9/Site 16 - Creosote Dip Tank Area, Fire Fighting Training Area (FFTA) and Former Building 41 –

The fifth OU-9/Site 16 semiannual monitoring event (i.e., ME 5) was conducted from August 4-19, 2020. Outgoing mid-tide synoptic water level measurements were collected at 51 groundwater monitoring wells and the staff gauge in Allen Harbor. Groundwater samples were collected from 32 groundwater monitoring wells. ME 5 constituted the biennial list of sampling based on the five-year long-term monitoring cycle.

The Draft OU-9/Site 16 ME 5 LTM Report was submitted on April 27, 2021 and is currently being reviewed by regulatory agencies. Responses to agency comments and a Draft Final Report are planned for August/September 2021. Although future monitoring events are needed to establish statistically significant trends and verify progress towards the attainment of cleanup goals, ME 5 sampling results are consistent with previous sampling results.

Figure 3 presents the sampling locations of the Site 16 ME 5 LTM Event:

Since the signing of the Final OU-9/Site 16 ROD, RIDEM has determined that the groundwater at OU-9/Site 16 has a Low Use and Value and the groundwater is classified as Class GB, which means the groundwater may not be suitable for drinking water without treatment due to known or presumed degradation. An Explanation of Significant Differences (ESD) is required to adjust the ROD by: 1) modifying select Remedial Action Objectives (RAOs), 2) changing groundwater cleanup standards to require cleanup meets State GB groundwater and federal risk-based non-potable groundwater standards, 3) changing the remedy Applicable or Relevant and Appropriate Requirements (ARARs) that pertain to establishing the revised groundwater cleanup standards and to incorporate changes to the State regulatory citations, and 4) changing soil cleanup levels to incorporate State GB leachability standards rather than GA leachability standards. The Draft OU-9/Site 16 ESD was submitted for regulatory agency review on April 9, 2020. The Navy has addressed the regulatory agency comments and the Final OU-9/Site 16 ESD is expected to be signed and published in June 2021.

Once the Final OU-9/Site 16 ESD is signed, the Navy will work with the QDC and Town of North Kingstown to record Environmental Land Use Restrictions (ELURs) (i.e. LUCs) for the affected OU-9/Site 16 property. In the interim, Navy has continued to enforce and monitor the ROD-specified LUCs to ensure protection of public health and welfare or the environment. The most recent OU-9/Site 16 annual LUC inspections were performed on December 9, 2020. The OU-9/Site 16 LTMP will also be updated to reflect the changes memorialized in the Final OU-9/Site 16 ESD.

OU-7/Study Areas (SAs) 01 and 04 and Sites 02 and 03 – Construction Equipment Department (CED) Solvent Disposal Area – OU-7 is located on a Navy-owned parcel of land zoned for commercial/industrial use that is currently leased to the QDC, who subleases the property to North Atlantic Distribution, Inc. (NORAD) for vehicle storage. Figure 4 shows the location of OU-7.

OU-7 is downgradient of the Nike PR-58 Formerly Used Defense Site (FUDS) which is being remediated under the direction of the United States Army Corps of Engineers (USCOE). The Navy will place a groundwater use restriction on OU-7 to support USCOE's Nike PR-58 remedy. The

primary groundwater contaminants include the chlorinated volatile organic compounds (CVOCs) 1,1,2,2-Tetrachloroethane, Trichloroethene, and 1,2-Dichloroethene.

Impacted soil is present at all OU 7 SAs and Sites from historical activities. The impacted soil consists primarily of metals (lead, antimony, beryllium, cadmium, manganese) in the subsurface soil and benzo(a)pyrene, chrysene, and lead in the surface soil above RIDEM direct exposure criteria (DEC), respectively. In addition, the PCB Aroclor-1260 is present at SA 04 at concentrations above the EPA residential risk-based standard.

The Final OU-7 Proposed Plan was published on July 1, 2020. The Navy's preferred remedy is Alternative S-2: Excavation and Off-Site Disposal or Cover with Land Use Controls. The public comment period was July 9 through August 8, 2020 and the virtual Public Meeting and Hearing was held on July 23, 2020. A Notice of Availability and Public Comment Period was published in the North Kingstown Standard Times on July 9, 2020 to notify the public of the availability of the OU-7 Proposed Plan and provide details on the how the public can access and/or obtain copies of the document. The Notice also informed the public of the dates of the Public Comment Period and the date of the virtual Public Meeting and Hearing.

The Draft OU-7 Record of Decision (ROD) was submitted to the regulatory agencies for review on October 6, 2020. The Draft OU-7 ROD memorialized the Navy's selected remedy Alternative S-2 Land Use Controls. Alternative S-2 was presented as Excavation and Off-Site Disposal or Cover with Land Use Controls in the Proposed Plan. However, a Preliminary Design Investigation (PDI) was performed at Site 02 to further delineate the extent of surface and subsurface soil lead and beryllium contamination. The results of the Site 02 PDI indicated that there are no lead or beryllium exceedances of the RIDEM Industrial/Commercial Direct Exposure criteria in the surface and subsurface soil. Therefore, Alternative S-2 does not require excavation or a soil cover to achieve the RAO, which is: Prevent exposure by future residents and other unrestricted users to soil containing site chemicals that exceed risk-based and State Applicable or Relevant and Appropriate Requirements Remedial Goals. Therefore, the Selected Remedy only includes Land Use Controls.

The regulatory agencies provided comments on the Draft OU-7 ROD and the Navy provided responses to their comments. The Final OU-7 ROD was signed on March 25, 2021. A Finding of Suitability of Transfer (FOST) was currently completed to document that OU-7 (i.e., Parcel 7a) is environmentally suitable for deed transfer subject to the notices, restrictions, and covenants set forth in the FOST. A FOST for the remaining portion of Parcel 7b will be performed at a future date.

OU-10 – QDC Outfall 001 – OU-10 is located on Parcel 7b of Former NCBC Davisville. Parcel 7 is owned by the Navy and leased to QDC under a Lease in Furtherance of Conveyance (LIFOC). OU-10 is currently undeveloped and consists of the outfall area, downgradient wetland, downgradient drainage ditch, and the drum removal area north of the wetland. The QDC reuse plan identifies the majority of OU-10 as wetlands, with a future reuse as "open space/conservation."

The Navy performed a Remedial Investigation (RI) at OU-10 between March 2014 and May 2014. The RI consisted of surface and subsurface soil sampling, surface and subsurface sediment sampling, installation of monitoring wells, low-flow sampling of new and existing monitoring wells, and surface water sampling. The results of the RI were documented in the March 2016 RI Report. The primary contaminants detected in soil and sediment during the RI consisted of metals, PAHs, TPH, and pesticides. There were not any significant detections in groundwater or surface water. The human health and ecological risk assessments completed as part of the RI determined that there is marginal risk to both human and ecological receptors from CERCLA-related contaminants

in soil, sediment, groundwater, and surface water. However, TPH impacted soil and sediment that exceed the RIDEM R DEC for soil are present at OU-10.

On October 28, 2015, the Former NCBC Davisville Base Closure Team (BCT) agreed to remove the TPH impacted soil and sediment where it exceeds the RIDEM R DEC. This action would also remove co-located CERCLA contaminants that pose marginal risk. It was also agreed that the remedial action will be conducted under the RIDEM Remediation Regulations. In September 2016, the Navy issued the OU-10 Remedial Alternatives Evaluation and Site Investigation Report to evaluate remedial alternatives. Three remedial alternatives were evaluated:

- No Action (included as a baseline for comparison),
- Excavation, Solid Waste Dewatering and Disposal, and
- Dewatering, Excavation, Solid Waste Dewatering, and Disposal

The Navy selected Alternative 2 —Excavation, Solid Waste Dewatering, and Disposal, as the recommended alternative.

During a removal action on August 29, 2017, an oil-like substance was observed to be seeping from the northern shoreline of the OU-10 wetland. Additionally, a leaking drum containing a viscous oil-like substance was also identified. Test pits were performed in the area immediately north of the OU-10 wetland to determine the nature and extent of the impacts – which was determined to be an area of buried drums (some single drums, others in groups). Drums were observed to range in conditions from mostly intact to completely degraded. The fill material around the drums included metal debris, brick and asphalt. A trench was excavated around the drum area and the drums were removed. In addition to removing the drums, approximately 900 cubic yards of petroleum hydrocarbon saturated soil were also removed. The drum contents and soils were characterized and disposed of appropriately at off-site facilities.

Site restoration activities including backfilling excavated areas, seeding and amending topsoil, planting of 286 native tree and shrub species, and extending the drainage ditch to a culvert that leads to Allen Harbor were also performed. The OU-10 removal action was completed in February 2018. Details regarding the originally planned removal action and the drum discovery and removal were documented in the August 2019 OU-10 Removal Action Construction Completion Report.

To confirm the previously defined limits of the drum removal area and determine if any residual contamination from those drums impacted site soils or groundwater, a focused sampling effort was designed. Phase 1 of the investigation (i.e. soil and groundwater sampling) was performed from May 18 to May 25, 2020. Soil exceedances of the RIDEM Residential Direct Exposure Criteria (DEC) and/or GB Leachability Criteria were observed for VOCs, PAHs, TPH, and metals. There were no groundwater exceedances of the RIDEM GB criteria.

Based on the results of the Phase 1 soil sampling, Phase 2 of the investigation was performed from November 10, 2020 to November 12, 2020 to try and delineate the exceedances observed in Phase 1. Exceedances of the RIDEM Residential DEC were observed for the metals arsenic and beryllium. A Draft Supplemental Investigation Report will be submitted in June for review by the regulatory agencies.

Figures 5 and 6 present the groundwater and soil sampling locations for the OU-10 fieldwork:

Summary Statement -

Please feel free to contact Dave Barney, BRAC Environmental Coordinator, at 781-626-0105 (or by email at david.a.barney@navy.mil), if you have any questions or concerns related to this memo or any restoration activities or would like an electronic version (PDF) of this summary update.

In closing, a comprehensive, facility wide summary of the CERCLA sites at NCBC Davisville and their current status is provided.

CERCLA Operable Units (OUs) / Installation Restoration Program (IRP) Sites

Summary of CERCLA Sites at NCBC Davisville

IRP Site	OU	Site Description	Current Status	Phase	Date Completed
01*	7	Construction Equipment Department Drum Storage Area	ROD	LUC	March 2021
02	7	Construction Equipment Department Battery Acid Disposal Area	ROD	LUC	March 2021
03	7	Construction Equipment Department Solvent Disposal Area	ROD	LUC	March 2021
04*	7	Construction Equipment Department Asphalt Disposal Area	ROD	LUC	March 2021
05[1]	3	Transformer Oil Disposal Area	NFA ROD	AR, UU	September 1995
06	4	Solvent Disposal Area	NFA ROD	AR, UU	September 1998
07	8	Calf Pasture Point	LTM	ROD Requirement	Ongoing
08	Soil: 3 Groundwater: 5	Defense Property Disposal Office Film Processing Disposal Area	NFA ROD	AR, UU	Soils: September 1995 Groundwater: June 1998
09	1	Allen Harbor Landfill	LTM	ROD Requirement	Ongoing
10	5	Camp Fogarty Disposal Area	NFA ROD	RA, AR, UU	June 1998
11	4	Former Fire Fighting Training Area	NFA ROD	AR, UU	September 1998
12	2	Building 316, DPDO Transformer Oil Spill Area	NFA ESD	Rem. Action, AR, UU	ROD: September 1993 ESD: September 1998
13	4	Disposal Area Northwest of Buildings W-3, W-4, and T-1	NFA ROD	RA, AR, UU	September 1998
14	2	Building 38, Transformer Oil Leak	NFA ESD	RA, Rem. Action, AR, UU	ROD: September 1993 ESD: September 1998
15*	00	Building 56	NFA DD	RA, AR, UU	May 1998
16[2]	9	Creosote Dip Tank and Fire Training Area	LTM	RA, ROD Requirement	Ongoing
--	10	QDC Outfall 001	Pre-RI	Under Investigation	Ongoing

Key –

* = Study Area
PP = Proposed Plan
RI = Remedial Investigation
NFA ROD = No Further Action Record of Decision

NFA ESD = No Further Action Explanation of Significant Differences
NFA DD = No Further Action Decision Document
LUC = Land Use Controls
LTM = Long-Term Monitoring
AR = Acceptable Risks (human health and ecological risks within acceptable ranges)
UU = Suitable for Unrestricted Use (Five-Year Reviews not required)
RA = Removal Action performed to achieve condition of no unacceptable risks
Rem. Action = Remedial Actions performed to achieve condition of no unacceptable risks

Notes

1 The ROD for Site 05 is for soils only, there is no ROD for groundwater at the site. There is, however, a soils and groundwater ROD at Sites 06, 11 and 13, which are in close proximity to Site 05.

2 RIDEM concurred with Site 16/OU9 ROD via a June 19, 2014 Letter of Concurrence.

Figures

Figures

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Aerial photograph provided by ESRI's ArcGIS Online World Imagery map service (© 2016 ESRI and its data suppliers).

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A

B

MW07-33D/S
MW07-17D
MW07-40D
DPT07-09-27D
DPT07-39-04D
MW07-09R
MW07-09D
MW07-27D
DPT07-39-03I
DPT07-39-03D
DPT07-30S
DPT07-30I
MW07-30D
DPT07-29-34I
DPT07-29-34S
MW07-45D
DPT07-16I
DPT07-16S
MW07-34D
MW07-16R
MW07-39S/I/D
DPT07-18I
DPT07-18S
MW07-18D
B'
MW07-12D
MW07-37S
MW07-37D
MW07-42I
MW07-19D
MW07-19S
MW07-13S
MW07-44D
MW07-13D
MW07-23S
MW07-23D
MW07-21R
MW07-BAT-02S
MW07-BAT-02D
MW07-21S
MW07-21D
MW07-11D
MW07-BAT-01S
MW07-BAT-01D
P07-07
P07-05
MW07-20DA
MW07-20SA
A
P07-08
P07-06
MW07-43S
MW07-43D
DPT07-24D
P07-21
P07-09
P07-23
P07-24
P07-10
MW07-24DUT
DPT07-24I
MW07-32D

ALLEN HARBOR

NARRAGANSET BAY

ENTRANCE CHANNEL

Legend

- Monitoring Well
- Piezometer
- Cross-Section A-A'
- Cross-Section B-B'

200 0 200 Feet

NAVFAC

SITE MAP AND LONG TERM MONITORING LOCATIONS
SITE 7 - CALF PASTURE POINT
FORMER NCBC DAVISVILLE
NORTH KINGSTOWN, RHODE ISLAND

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J. ENGLISH	06/06/19
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R. HELDMAN	02/03/21
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BIENNIAL SAMPLING LOCATIONS
SITE 9 - ALLEN HARBOR LANDFILL
FORMER NCBC DAVISVILLE
NORTH KINGSTOWN, RHODE ISLAND

NAVFAC
Naval Facilities Engineering Systems Command

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SEPTIC TANK REMOVAL AREA
WOODEN BERMED STRUCTURE
FORMER LOCATION OF UP-ENDED CREOSOTE DIP TANK
BTEX HOT SPOT AREA
EARTH RAMP STRUCTURE
EBS 29-FORMER BLDG 41
SEE INSET

MW16-01R MW16-01D MW16-01S
MW16-02R MW16-02R2 MW16-02S MW16-02D MW16-02I
MW16-03S MW16-03D MW16-03R
MW16-04I MW16-04D MW16-04S
MW16-05R MW16-05R2 MW16-05D MW16-05I MW16-05S
MW16-06S MW16-06R MW16-06D
MW16-10I MW16-10D MW16-10R
MW16-12D INJ
MW16-14D MW16-14I MW16-14R
MW16-17R MW16-17D MW16-17S MW16-17I
MW16-18D MW16-18I
MW16-19I MW16-19D
MW16-20I MW16-20D
MW16-22I MW16-22D
MW16-23D MW16-23S
MW16-24I MW16-24D
MW16-26D
MW16-27R MW16-27D MW16-27I
MW16-28I
MW16-29D
MW16-31D
MW16-35S MW16-35I MW16-35D
MW16-36D MW16-36R
MW16-37D MW16-37S MW16-37I
MW16-39D MW16-39I
MW16-42D MW16-42S MW16-42I
MW16-44I MW16-44R
MW16-44S MW16-44D
MW16-45S MW16-45I MW16-45D
MW16-47D MW16-47S
MW16-48I MW16-48D MW16-48S
MW16-49D MW16-49I
MW16-51D MW16-51R
MW16-52D MW16-52R
MW16-57D MW16-57I
MW16-58S MW16-58R MW16-58I1 MW16-58I2 MW16-58D
MW16-59I MW16-59D MW16-59S MW16-59R
MW16-60R MW16-60D
MW16-62D MW16-62I
MW16-65D MW16-65I
MW16-74D
MW16-76I
MW16-77I
MW16-78S
MW16-79I
MW16-85D
MW16-88I
MW16-89I
MW16-90D
MW16-91I MW16-91S
MW16-93S MW16-93I
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B'
C
C'
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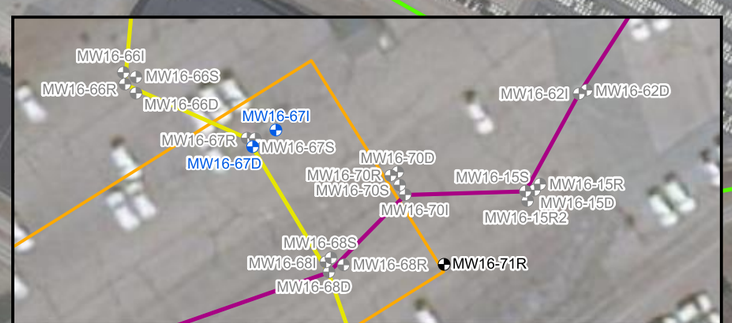

Legend

- Sampled Monitoring Well
- Gauged Monitoring Well
- Existing Monitoring Well
- Cross Section A-A'
- Cross Section B-B'
- Cross Section C-C'
- Cross Section D-D'
- Former Structure or Feature
- EBS Area
- Implemented Groundwater LUC Boundary
- Waste Management Area Boundary

300 0 300 Feet

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SITE 16 LAYOUT AND LONG TERM MONITORING WELLS
ME 05 SUMMER 2020 BIENNIAL EVENT
FORMER NCBC DAVISVILLE
NORTH KINGSTOWN, RI

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R. HELDMAN	03/30/21
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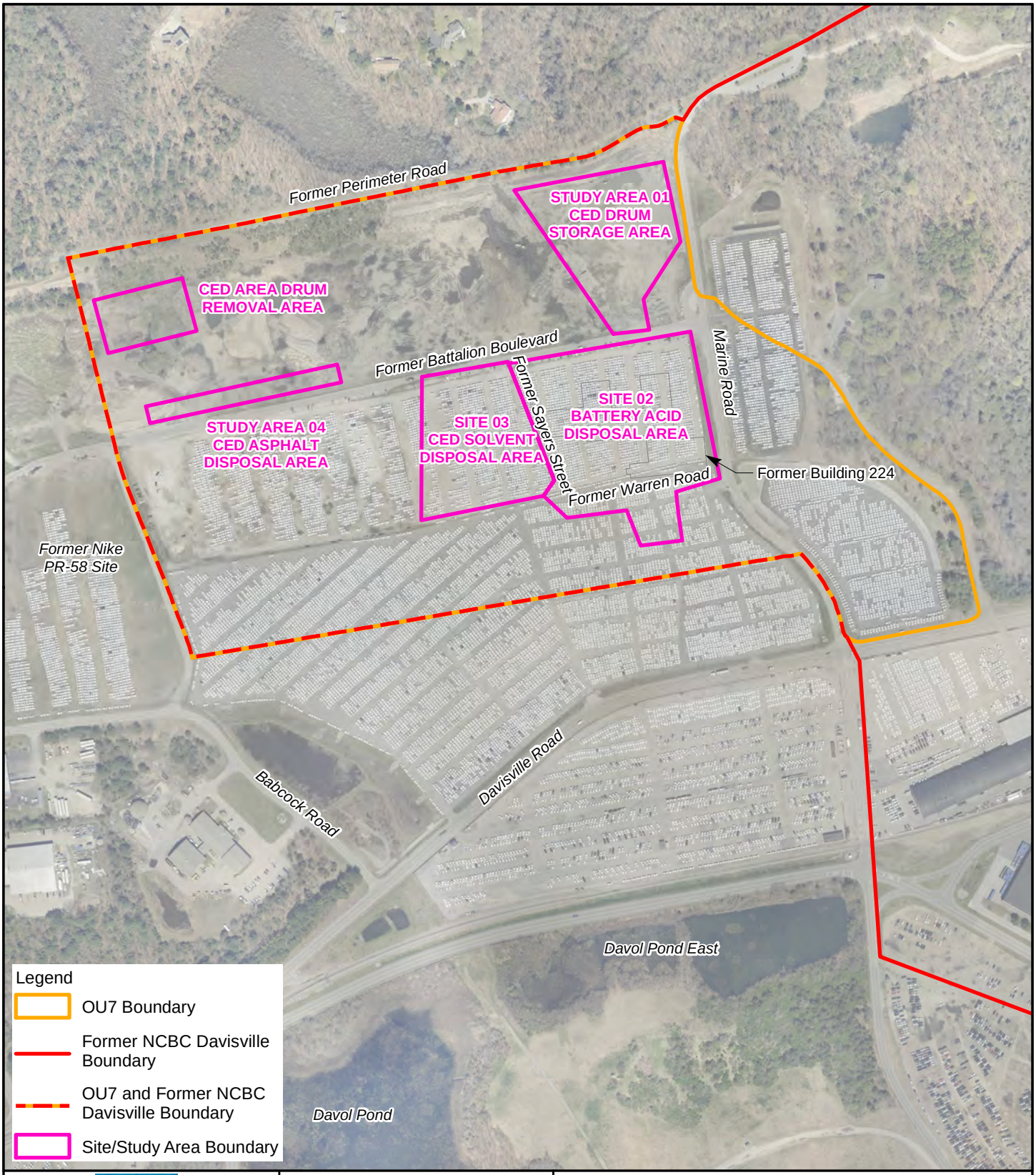

Drawn: JB 08/10/2020	N 0 450 1 inch = 450 feet	FIGURE 4 SITE LOCATION MAP OPERABLE UNIT 7 CED AREA FORMER NCBC DAVISVILLE NORTH KINGSTOWN, RI
Approved: BS 08/10/2020		
Project #: 60273164		

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PGU-Z3-03I

OIL SOLID DRUM REMOVAL AREA

WHITE SOLID DRUM REMOVAL AREA

QDC1-MW03S
QDC1-MW03I

Marine Rd

QDC1-MW01S
QDC1-MW01I

Legend

- Monitoring Well
- Drum Removal Area
- Culvert That Drains to Allen Harbor
- Former Building 224 Drainline
- QDC Outfall 001
- Dirt Access Road
- Edge of Water (Surveyed 2-16-18)
- Tree Line
- Topographic Contours (2-foot Interval)
- QDC Outfall 001 Wetland

80 0 80 Feet

SITE LAYOUT MAP AND GROUNDWATER SAMPLE LOCATIONS
OU 10 (QDC OUTFALL 001)
FORMER NCBC DAVISVILLE
NORTH KINGSTOWN, RHODE ISLAND

NAVFAC Naval Facilities Engineering Systems Command

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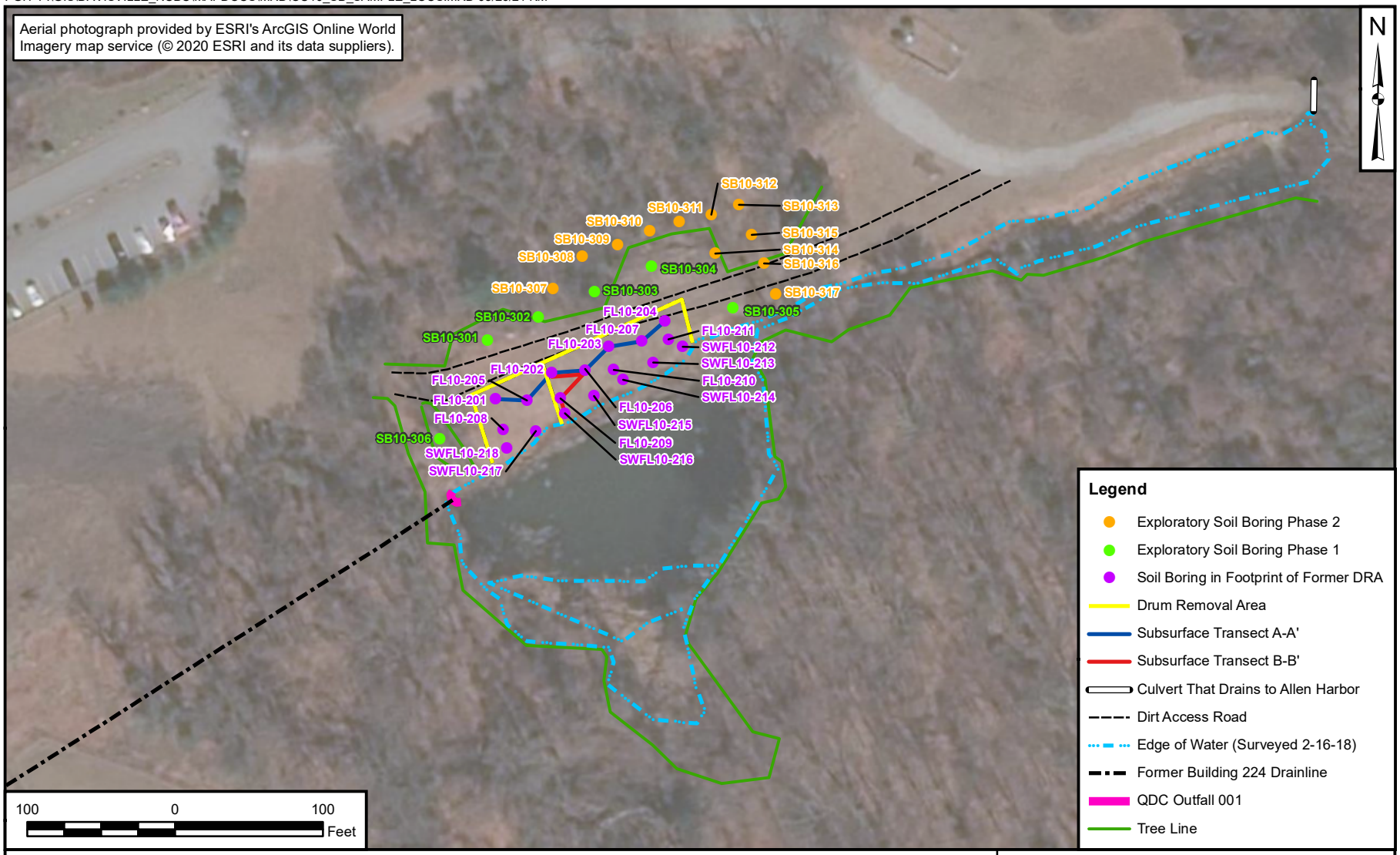

SOIL BORING SAMPLE LOCATIONS
OU 10 (QDC OUTFALL 001)
FORMER NCBC DAVISVILLE
NORTH KINGSTOWN, RHODE ISLAND

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