

Land Use Control Remedial Design

for

**Site 8 – Naval Undersea Systems Center
(NUSC) Disposal Area**

**Naval Station Newport
Newport, Rhode Island**



**Naval Facilities Engineering Command
Mid-Atlantic**

Contract Number N62470-08-D-1001

Contract Task Order WE19

October 2013

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1.0 INTRODUCTION

This document constitutes the Land Use Controls Remedial Design (LUC RD) for Site 8, the Naval Undersea Systems Center (NUSC) Disposal Area, located at the Naval Station (NAVSTA) Newport, Rhode Island (formerly the Naval Education and Training Center [NETC]). This document was prepared for the U.S. Department of the Navy (Navy), Naval Facilities Engineering Command (NAVFAC) Mid-Atlantic (MIDLANT), which is the lead agency conducting the environmental investigations and cleanup of Site 8. The LUC RD was developed as part of the remedial design (RD) for Site 8 to address land use control (LUC) implementation actions, in accordance with the Site 8 Record of Decision (ROD) and the NAVSTA Newport Federal Facilities Agreement (FFA). This document is considered a primary document in accordance with the FFA, and has been prepared in accordance with the Navy Principles and Procedures for Specifying, Monitoring and Enforcement of Land Use Controls and Other Post-ROD Actions (the Navy Principles), as agreed between the U.S. Environmental Protection Agency (USEPA) and the Department of Defense (DoD 2003).

2.0 BACKGROUND AND SITE DESCRIPTION

NAVSTA Newport is located approximately 25 miles south of Providence, Rhode Island, on Aquidneck Island. The facility occupies approximately 1,063 acres, with portions of the facility located in the City of Newport and the Towns of Middletown, Portsmouth, and Jamestown, Rhode Island. The facility layout follows the western shoreline of Aquidneck Island for nearly six miles, facing the east passage of Narragansett Bay, as shown on Figure 1. The major commands currently located at NAVSTA Newport include the NETC, the Surface Warfare Officers School Command, the Naval Undersea Warfare Center (NUWC), and the Naval War College. Research, development, and training are the current primary activities at NAVSTA Newport.

In 1989, USEPA placed NETC/NAVSTA Newport on the National Priorities List (NPL), indicating that the property was a federal priority for environmental investigation and cleanup. Since that time, the Navy has conducted environmental studies and activities at NAVSTA Newport in accordance with the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and the National Contingency Plan (NCP), which is consistent with the Navy's Environmental Restoration Program. NAVSTA Newport has been assigned federal USEPA ID number RI6170085470, and the NUSC Disposal Area is identified by the USEPA as Operable Unit 07 at the NETC Superfund Site at NAVSTA Newport.

Site 8 is located within the NUWC portion of the NAVSTA Newport facility, which lies within Middletown, Rhode Island, as depicted on Figure 2. Site 8 occupies approximately 12.4 acres along the northern boundary of the NUWC grounds and includes the Building 179 Area (research facilities), the Building 185 Complex (a paved storage area), as well as undeveloped open fields and wooded areas, two shallow streams bounded by steep banks, wetlands, and Deerfield Pond (also known as NUWC Pond). A low, concrete dam is present at the northern end of the 2-acre pond. A chain-link fence separates Site 8 from the Wampanoag Golf and Country Club to the northeast. A one-lane crushed-gravel roadway runs along the Navy side of the fence and is used as a security patrol road for NAVSTA Newport as well as a walking path by NUWC employees.

The Navy has identified contamination in soil, groundwater, and sediment media during historical environmental assessments at Site 8. Specific records of materials spilled or disposed since site operations began in the early 1950s are not available. However, it is known that the central, upland portion of Site 8 in the Building 185 area was used for equipment storage, temporary hazardous waste storage, and the disposal of miscellaneous materials including scrap lumber, tires, wire, cable, empty paint canisters, and 55-gallon drums containing a tar-like substance. The Navy conducted removal actions for the buried drums and paint canisters in 2005-2006 and residual contamination in those areas is being addressed under the Selected Remedy. Other past operations at NUSC also had the potential to generate hazardous materials (e.g., industrial plating, anodizing, and chemical cleaning in a former nearby building, as well as polychlorinated biphenyl [PCB] storage at an unknown location). The Building 185 Complex was also used to store torpedo fuels, including Otto Fuel, a monopropellant used to drive torpedoes and other weapons systems. In 2004, a release of Otto Fuel was discovered and the

Navy removed approximately two tons of impacted soil and concrete. The area was backfilled with clean soil, repaved, and the Rhode Island Department of Environmental Management (RIDEM) was notified. Subsequent sampling during the 2007-2008 Remedial Investigation (RI) and 2010 Supplemental Remedial Investigation (SRI) indicated that the removal action was successful and that the residual concentrations of Otto Fuel in soil do not exceed screening levels and do not warrant further action.

The cause of the groundwater quality impacts present in the North Meadow is unknown, but is likely associated with the disposal of spent liquid solvents from past facility operations.

Building 179 is a research and development facility which had a 2,000-gallon concrete underground storage tank (UST) used to collect byproducts generated from the torpedo propulsion system tests. This UST likely received wastewater mixed with engine oil, solvent-based cleaners, Otto Fuel, and combustion byproducts. In 1995, it was discovered that the UST had leaked, contaminating soil and groundwater in this area. The Navy completed a removal action in this area under the state's environmental program during 1997-1998 which included removal and disposal of the UST, contaminated soil, concrete, and groundwater recovered from dewatering efforts during UST removal efforts. The residual soil and groundwater contamination in this area is being addressed under the CERCLA program.

Contaminants from the Building 185 and Building 179 areas entered Deerfield Creek through overland storm water runoff/soil erosion and groundwater transport and resulted in sediment contamination in the creek and NUWC Pond.

The Navy completed a RI and SRI for Site 8 during 2007-2010 (Tetra Tech, 2010 and 2011). The results of the Human Health Risk Assessment (HHRA) indicated that potential unacceptable risks were associated with: (1) exposure to soil in the upland area of the site (for each of the evaluated receptor groups); (2) potable use of site groundwater by future residents (child, adult, and lifetime resident); (3) exposure to groundwater for future construction workers; and (4) exposure to lead in stream sediment. The contaminants of concern (COCs) identified for remediation in site soil include various polycyclic aromatic hydrocarbons (PAHs), other semi-volatile organic compounds (SVOCs), and metals. COCs identified for remediation in groundwater include various volatile organic compounds (VOCs), 1,4-dioxane, and metals. In stream sediment, lead was identified as the only human health-based COC.

The results of the Ecological Risk Assessment (ERA) indicated that potential unacceptable risks were associated with benthic invertebrate exposure to impacted sediment in Deerfield Creek and NUWC Pond, as well as for insectivorous mammals and bird exposure to surface soil. Ecological-based COCs in sediment include lead, PCBs, and the overall toxicity associated with concentrations of various metals, PAHs, PCBs, and pesticides. Ecological-based COCs in upland soil include cadmium and chromium.

The Navy issued a final Feasibility Study (FS) in July 2012 (Tetra Tech) and signed the ROD in September 2012 (Navy). The selected remedy in the Site 8 ROD includes the following components:

Soil

- Selective excavation and off-site disposal of soil and waste anomalies.
- Construction of a 2-foot soil cover over the remaining area of unpaved soil where COC concentrations exceed industrial cleanup goals.
- Maintenance of the existing paved area as a Waste Management Area.
- LUCs and monitoring.

Groundwater

- In-situ treatment of the most contaminated portions of groundwater using either enhanced bioremediation or chemical oxidation.
- Monitored Natural Attenuation (MNA) of the residual groundwater plume.
- LUCs.

Sediment

- Excavation and offsite disposal of sediment in Deerfield Pond and portions of Deerfield Creek.

- LUCs.

Since the Site 8 remedy will result in hazardous substances, pollutants, or contaminants remaining on site in excess of levels that allow for unlimited use and unrestricted exposure, the Navy will be conducting Five-Year Reviews of the remedial action to ensure that the remedy is, and will continue to be, protective of human health and the environment.

3.0 LAND USE CONTROLS

LUCs are used at sites where contaminants are left in place at concentrations that do not allow for unlimited use and unrestricted exposure. The LUCs ensure that any remaining COCs do not pose an unacceptable risk to human health and the environment. LUCs can consist of institutional controls and/or engineering controls (typically physical barriers, such as a fence). Institutional controls, such as restrictions, notifications, etc., are typically legal documents in the form of deed restrictions, easements, and restrictive covenants. In the case of an active military base, the institutional controls can consist of base instructions, notations on installation land use plans, or similar instruments. In the form of a legal document, the institutional controls will run with the land.

The Site 8 ROD requires that LUCs be implemented as a component of the overall remedial action in order to control or restrict the use of the Site 8 property. As specified in the Site 8 ROD, the LUCs will be implemented: (1) to ensure that future use of the property is limited to industrial activities (residential and unrestricted recreational site use will be prohibited in areas where COC concentrations in soil and sediment exceed residential cleanup goals); (2) to ensure that the soil cover and subsurface soils are not disturbed without appropriate safety precautions; and (3) to prohibit groundwater use until remedial goals are achieved.

The LUCs included in the selected remedy will be maintained in affected areas until concentrations of hazardous substances have been reduced to levels that allow for unlimited use and unrestricted exposure, as determined by the inspection and monitoring program at Site 8. The ROD established the following LUCs performance objectives for Site 8 (Navy, 2012):

- Establish a Waste Management Area for the Paved Storage Area where contaminants and debris remain in the subsurface. The Waste Management Area will be maintained and monitored by the Navy. The LUCs will include provisions for additional geophysical investigations to be conducted within the Waste Management Area, to identify and remove potential subsurface anomalies as necessary, in the following circumstances: (1) if the use of the site is changed such that the Paved Storage Area is no longer operated as a Waste Management Area; (2) if ownership of the property is transferred outside of the Navy; or (3) if groundwater restoration goals are not achieved in a reasonable timeframe and there is reason to believe that a continuing source of contamination from the Waste Management Area may be inhibiting groundwater cleanup.
- Restrict property uses to those consistent with industrial/commercial activities, such as parking, roadways, sidewalks, material stockpiles, heavy equipment storage, etc. Residential and recreational site use will be prohibited (includes areas where COC concentrations in soil and sediment exceed residential cleanup goals).
- Prevent the use of groundwater at the property for any consumptive purpose, including any household use, drinking water supply, irrigation, or industrial use.
- Prevent excavation or disturbance of the asphalt/soil cover, monitoring wells, and any other components of the remedy, and prevent access to the contaminated soil by persons who are not adequately trained and properly informed of the potential hazards associated with such activities.
- Establish LUC compliance monitoring requirements.

The Navy also will coordinate with the adjacent property owner(s) (i.e., the Wanumetonomy Golf and Country Club) and state agencies (e.g., Department of Health and RIDEM) to prevent the installation of residential drinking water supply wells or other groundwater extraction wells (e.g., irrigation wells) in areas directly adjacent to the site (i.e., in any area that could adversely impact the Site 8 remedial action, or

cause unacceptable risks to human health or the environment by affecting the Site 8 groundwater plume). Contact information is provided below:

Wanumetonomy Golf and Country Club
152 Browns Lane
Middletown, RI 02842
Tel: (401) 847-5141
Email: wanuoffice@yahoo.com
<http://www.wanumetonomy.com/>

RIDEM Office of Waste Management
235 Promenade Street
Providence, RI 02908-5767
(401) 222-2797
<http://www.dem.ri.gov/programs/benviron/waste/index.htm>

Rhode Island Department of Health
3 Capitol Hill
Providence, RI 02908
(401) 222-5960 (HEALTH Information Line)
(401) 222-3436 (Private Drinking Water Well Program)
<http://www.health.ri.gov/>

Institutional controls and engineering controls will be implemented to ensure that the LUC performance objectives, as noted above, are met. Figure 3 shows the area for which the LUCs are to be applied to prevent human exposure to contaminated environmental media at Site 8. This area will be referred to in this LUC RD as the "Site 8 LUC Area". The Site 8 LUC Area includes the set of restrictions described below. Following USEPA and RIDEM approval of this LUC RD, the Navy will impose these restrictions on the site property to ensure the LUC performance objectives are met.

The following activities and uses are inconsistent with the LUC performance objectives and are therefore prohibited within the Site 8 LUC Area:

- Installation of a groundwater supply (extraction) well for public, private, irrigation, or industrial use.
- Use of groundwater for any consumptive purpose, including household use, drinking water supply, irrigation, or industrial use.
- Excavation or disturbance of the pavement in the Waste Management Area or the constructed soil cover areas, unless authorized by NAVFAC, the USEPA, and RIDEM (includes digging, drilling, plowing, planting, cultivating, or construction of buildings or other structures).
- Any additional uses of the site that are inconsistent with industrial/commercial activities.
- Any use or activity that would interfere with the implementation, effectiveness, integrity, operation, or maintenance of the required remedy components, including, but not limited to: (1) the cover system and (2) any other system used to monitor groundwater to ensure that the remedy remains effective and protective of human health and the environment.

The following activities and uses are consistent with the LUC performance objectives and will be allowed within the Site 8 LUC Area:

- Activities relating to the continued industrial use of the property (includes parking, roadways, sidewalks, material stockpiles, heavy equipment storage, building use, etc.).
- Facility maintenance activities such as snow plowing, lawn mowing, brush clearing, pest control, paving, above-ground utility repairs, and subsurface utility repairs in areas located outside of the designated Waste Management Area and constructed soil cover areas.
- Subsurface utility work located inside of the designated Waste Management Area and constructed soil cover areas, when performed by appropriately trained personnel, and in accordance with an approved Health and Safety Plan and Soil Management Plan. The Soil Management Plan will be

approved by the Navy, USEPA, and RIDEM prior to commencing such work. In addition, disturbed portions of the soil and pavement cover system must be restored to their original condition immediately following completion of the utility work. Temporary covers (e.g., tarps) must be provided to prevent exposure to subsurface soil for such work areas that are left open and unattended for more than one day.

- Passive pedestrian uses. This includes use of the property by site workers for walking, jogging, and picnicking. Such activities by NAVSTA/NUWC employees are consistent with industrial/commercial activities and are not considered to be an unrestricted/public recreational use.
- Vehicular traffic outside of the constructed soil cover areas.
- Any remedial operation and maintenance (O&M) activities conducted in accordance with the approved Sampling and Analysis Plan (SAP) or other approved work plan to provide for the sampling, inspection, and installation of groundwater monitoring wells or other O&M actions.
- Any environmental investigations and/or remedial actions conducted in accordance with an approved work plan.
- Installation of any other systems to ensure that the remedial action remains effective and is protective of human health and the environment.
- In accordance with COMNAVREG MIDLANT INSTRUCTION 11011.11A (Navy, 2011), site approval is required for actions that affect or may affect facilities or land located on Navy-controlled land holdings. The site approval process includes determining if the proposed action is compatible with Environmental Restoration LUCs, and requires NAVFAC MIDLANT Environmental to identify all environmental compliance requirements. The NAVSTA Newport Installation Restoration (IR) Program Manager will provide notice and coordinate project review with the USEPA and the State of Rhode Island. Based on the outcome of this coordination, the IR Program Manager will provide guidance for projects to ensure consistency with the site remedy. The IR Program Manager will provide specific requirements for the project, detail waste management procedures, and establish standards for protecting remedial infrastructure and restoration of the project site.

Implementation actions to be taken to ensure that the LUC performance objectives are met are discussed in Section 4.0, which also defines the required notifications and authorizations, and the roles and responsibilities for implementing the actions.

4.0 LAND USE CONTROLS IMPLEMENTATION ACTIONS

Pursuant to the ROD, the Navy is responsible for implementing, inspecting, reporting, and enforcing the institutional controls in accordance with this LUC RD. For the purposes of the LUC RD for Site 8, the term "implementation actions" means actions to implement, operate, maintain, and enforce the LUC component of the remedy. The Navy will perform all short and long-term implementation actions at Site 8 per *The Principles and Procedures for Specifying, Monitoring and Enforcement of Land Use Controls and Other Post-ROD Actions* (U.S. DoD, 2003), the FFA, the ROD, and applicable Navy directives. The Navy may, in the future, delegate or transfer authority to conduct these actions to another entity as part of property transfer agreements (i.e., deeds).

The Navy will submit a copy of the map identified as Figure 3 in this LUC RD to the land record offices of the Town of Middletown, Rhode Island, and a listing of LUCs that have been imposed, for the limited purpose of providing public notice of the environmental conditions of, and limitations on, the use of property. Additionally, copies of this map will be provided to USEPA and the State of Rhode Island.

As set forth in this LUC RD, the following implementation actions will be performed to ensure that the LUC objectives are met in accordance with the FFA and ROD:

1. Prepare a map defining the Site 8 LUC Area boundaries. Depict on this map the location and boundaries of Site 8 and the extent of the area over which the LUCs will apply, as shown in Figure 3. Indicate where LUCs have been imposed and annotate LUCs in the Navy Geographic Information System (GIS) database and real estate summary map(s) for the installation, and follow LUC-related procedures pertaining to ground-disturbing activity and changes in land use, as per Commander, Navy Region, Mid-Atlantic Instruction 5090.2, *Installation Restoration; Land Use Controls at Navy Region, Mid-*

Atlantic Installations; Establishment and Maintenance, as amended (Appendix A). The Navy will notify USEPA and the State of Rhode Island in advance of any changes to internal procedural instructions that would impact the effectiveness of the LUCs.

2. Monitor compliance with the LUCs. LUC monitoring (i.e., inspections) will be coordinated with the Long-Term Management program. LUC monitoring will be conducted by the Navy to verify LUCs are being properly implemented and that the LUC objectives are being met. The LUC monitoring results will be provided to the USEPA Region I and the State of Rhode Island as part of the O&M annual report. The LUC implementation actions to be conducted as part of the monitoring are summarized in Table 1. LUC compliance inspections will be conducted on an annual basis, unless the frequency is reduced by agreement with the Navy, USEPA, and the State of Rhode Island. A checklist to be used during LUC inspections is provided as Appendix B.

3. Report to and notify regulatory agencies. The notification requirements are summarized in Table 1 and include the following:

- a. Notify USEPA Region I and the State of Rhode Island 45 days in advance of any proposed change in land use that would require modifications to the LUCs to remain consistent with the LUC performance objectives or the selected remedy. The notification shall describe how the LUCs will be changed and mechanisms by which the new LUCs will be implemented to maintain the protectiveness of the remedy.
- b. Notify USEPA Region I and the State of Rhode Island by telephone and by e-mail as soon as practicable, but within 10 working days, after discovery of any activity that is inconsistent with the LUC objectives or use restrictions, or any other action that may interfere with the effectiveness of the LUCs. Notify USEPA Region I and the State of Rhode Island regarding how the breach will be or has been addressed within 10 days of sending USEPA Region I and the State of Rhode Island the discovery notification of the breach activity. For more complex breach situations, a telephone call within this 10-day period among Navy, USEPA, and the State of Rhode Island to discuss options for addressing the breach will be considered sufficient to meet this notification requirement. Furthermore, any activity that is inconsistent with the LUC objectives or use restrictions, or any other action that may interfere with the effectiveness of the LUCs will be addressed as soon as practicable, but in no case will the process be initiated later than 10 days after the Navy becomes aware of the breach.
- c. Notify the USEPA Region I and the State of Rhode Island in writing at least six months prior to any anticipated transfer or sale of the property subject to LUCs out of Navy custody and control, including any federal-to-federal transfer, so that USEPA Region I and the State of Rhode Island can be involved in discussion with the Navy on the appropriate provisions to be included in the transfer terms and conveyance documents to maintain effective LUCs. If it is not possible for the Navy to notify USEPA Region I and the State of Rhode Island at least six months prior, the Navy will make this notification as soon as possible, but no later than 60 days before the transfer or sale of any property subject to LUCs. The Navy shall provide a copy of the executed deed or transfer documents to USEPA Region I and the State of Rhode Island.
- d. Submit reports of annual monitoring. LUC compliance monitoring shall be conducted annually and the results submitted to the USEPA Region I and the State of Rhode Island. The annual reports will be used in preparation of the Five Year Review to evaluate the effectiveness of the remedy. The LUCs portion of the annual report will evaluate the status of the LUCs and how any LUC deficiencies or inconsistent uses have been addressed. The LUCs portion of the annual report will also address whether Navy instructions remain current in regards to LUC enforcement, and whether use of the property has conformed with such restrictions and controls.

4. Obtain USEPA Region I concurrence, in consultation with the State of Rhode Island, prior to modifying or terminating the LUCs or implementation actions. The Navy or other entity shall seek prior concurrence from USEPA Region I, in consultation with the State of Rhode Island, before taking any anticipated action

that may disrupt the effectiveness of the LUCs or before taking any action that may alter or negate the need for LUCs.

5. Evaluate the effectiveness of the LUCs as part of each Five-Year Review. Site remedy reviews are required by CERCLA and the NCP, as specified in the Site 8 ROD. The next Five-Year Review will be completed in 2014 and will include an evaluation of the Site 8 remedy. Five-Year Review reports will be submitted to USEPA Region I and the State of Rhode Island for review, per the FFA.

Should the Navy fail to complete a required LUC implementation action, USEPA and/or RIDEM shall notify the Navy Remedial Project Manager (RPM) and seek immediate action. If the Navy fails to complete a required LUC implementation action within a reasonable time of being so notified, USEPA and/or RIDEM may notify the Deputy Assistant Secretary of the Navy (Environment), who will ensure that necessary action is taken.

Should a subsequent owner of or a third party at the Site 8 property fail to complete a required LUC implementation action, for which such owner or party is responsible, USEPA, RIDEM, and the Navy will consult on the appropriate enforcement action. If after the property has been transferred, the Navy fails to complete a required LUC implementation for which it is responsible, USEPA and/or RIDEM will notify the Navy RPM, or designated project manager per Section VIII in the NAVSTA Newport FFA. If necessary, USEPA and/or RIDEM may notify the Deputy Assistant Secretary of the Navy (Environment), who will ensure that necessary corrective action is taken.

5.0 REFERENCES

DoD (U.S. Department of Defense), 2003. "Principles and Procedures for Specifying, Monitoring and Enforcement of Land Use Controls and Other Post-ROD Actions." September.

EPA (U.S. Environmental Protection Agency), State of Rhode Island, and Navy (Department of the Navy), 1992. "Federal Facility Agreement under CERCLA §120 in the matter of the U.S. Department of the Navy, Naval Education and Training Center, Newport, Rhode Island, and Naval Undersea Warfare Center, Newport, Rhode Island." March.

Navy, 2003. Commander, Navy Region (COMNAVREG), Mid-Atlantic (MIDLANT). "Instruction 5090.2. Installation Restoration; Land Use Controls at Navy Region, Mid-Atlantic Installations; Establishment and Maintenance." May.

Navy, 2011. COMNAVREG, MIDLANT. "Instruction 11011.11A. Site Approval Process." February.

Navy, 2012. Naval Facilities Engineering Command (NAVFAC) MIDLANT. "Record of Decision, Operable Unit 7 (Site 8, the Naval Undersea Systems Center Disposal Area) of the former Naval Education and Training Center, Naval Station Newport, Rhode Island." September.

Tetra Tech, 2010. "Remedial Investigation for Site 08, Naval Undersea Systems Center (NUSC) Disposal Area, Naval Station Newport, Rhode Island." Prepared for the Naval Facilities Engineering Command, Mid-Atlantic. January.

Tetra Tech, 2011. "Technical Memorandum, Supplemental Remedial Investigation for Site 08, Naval Undersea Systems Center (NUSC) Disposal Area, Naval Station Newport, Rhode Island." Prepared for the Naval Facilities Engineering Command, Mid-Atlantic. October.

Tetra Tech, 2012. "Feasibility Study for Site 8 – Naval Undersea Systems Center (NUSC) Disposal Area, Naval Station Newport, Newport, Rhode Island." Prepared for the Naval Facilities Engineering Command, Mid-Atlantic. July.

TABLES

TABLE 1

**SUMMARY OF LAND USE CONTROL IMPLEMENTATION ACTIONS
SITE 8 – NUSC DISPOSAL AREA
NAVAL STATION NEWPORT, MIDDLETOWN, RHODE ISLAND**

LUC REQUIREMENT/DESCRIPTION	FREQUENCY
INSTITUTIONAL CONTROLS	
Issue the final LUC RD.	One Time
Incorporate the LUCs into the land records documentation with the Town of Middletown, Rhode Island.	One Time
Conduct LUC compliance inspections.	Annually
Issue LUC Inspection Reports to EPA and RIDEM.	Annually
ENGINEERING CONTROLS AND MONITORING REQUIREMENTS	
Conduct groundwater monitoring.	Per the SAP
Conduct inspections of the soil/asphalt cover system (conduct maintenance as needed).	Annually
Issue monitoring and inspection reports.	Per event, or as per the SAP
NOTIFICATION REQUIREMENTS	
Navy will notify EPA and RIDEM of activities that are inconsistent with LUC objectives, restrictions, or effectiveness, and how inconsistent activities were/will be addressed.	Per event, 10-day post-event awareness required
Navy will notify EPA and RIDEM and invite comment prior to modifying, terminating, or implementing internal LUC-related policies or procedures, if such changes are likely to negatively impact the effectiveness of LUCs.	Per event, 14 days prior to implementation of requested change
Navy will notify EPA and RIDEM of (1) proposals for changes in land use that would be inconsistent with use restrictions and exposure assumptions described in the ROD; (2) any anticipated action that may disrupt LUCs effectiveness; or (3) any action that may alter or negate the need for LUCs.	Per event, 45 days in advance
Navy will notify EPA and RIDEM prior to any anticipated transfer of real property subject to LUCs, out of Navy custody and control.	Per event, typical 6-month advance notice, but not less than 60 days

FIGURES



TETRA TECH

NAVAL STATION NEWPORT
NEWPORT, RHODE ISLAND

NAVSTA NEWPORT IR SITE MAP

SITE 8
LAND USE CONTROL REMEDIAL DESIGN

SCALE
PER SCALE BAR

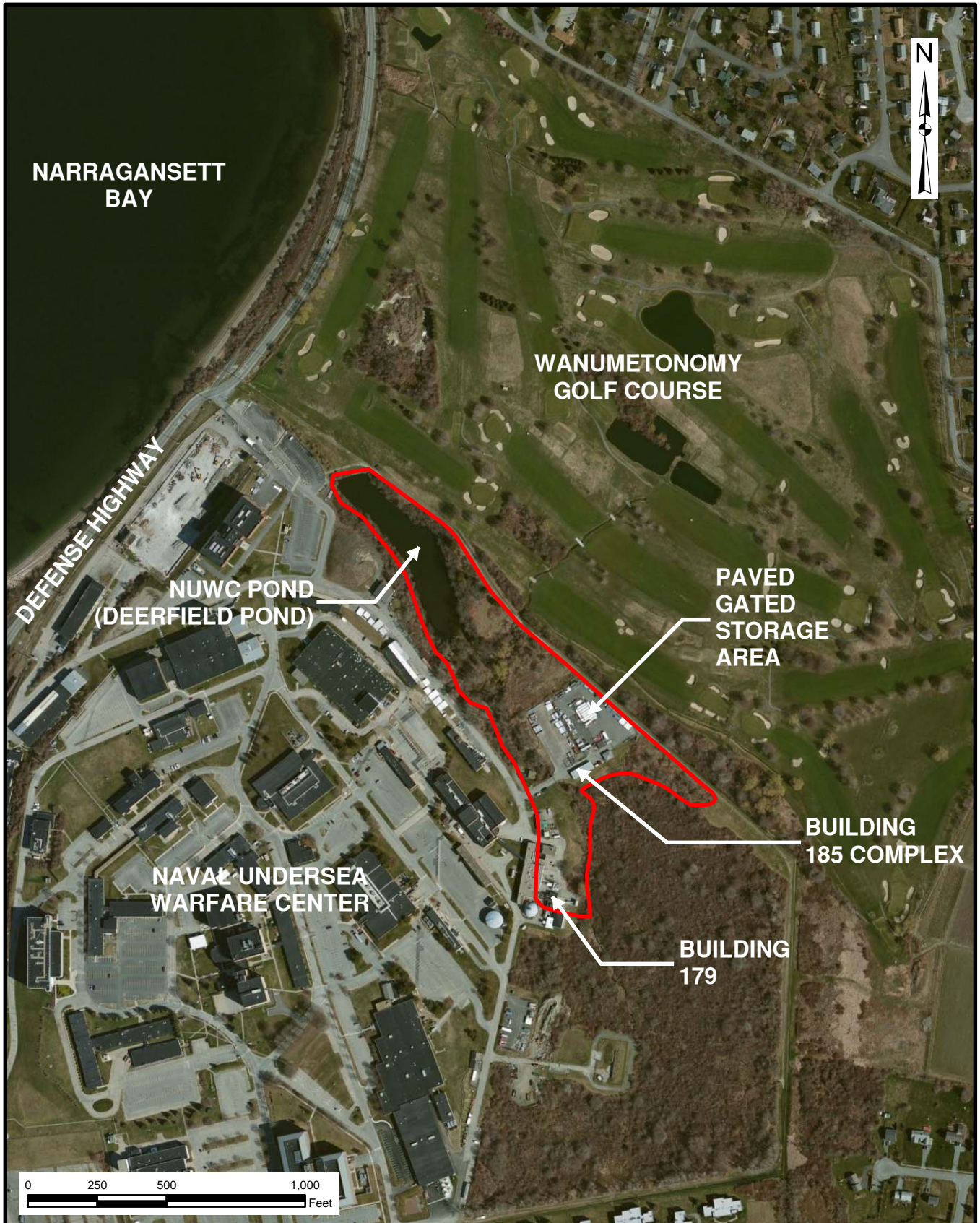
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FIGURE NUMBER

1



TETRA TECH

NAVAL STATION NEWPORT
NEWPORT, RHODE ISLAND

SITE 8 LOCATION

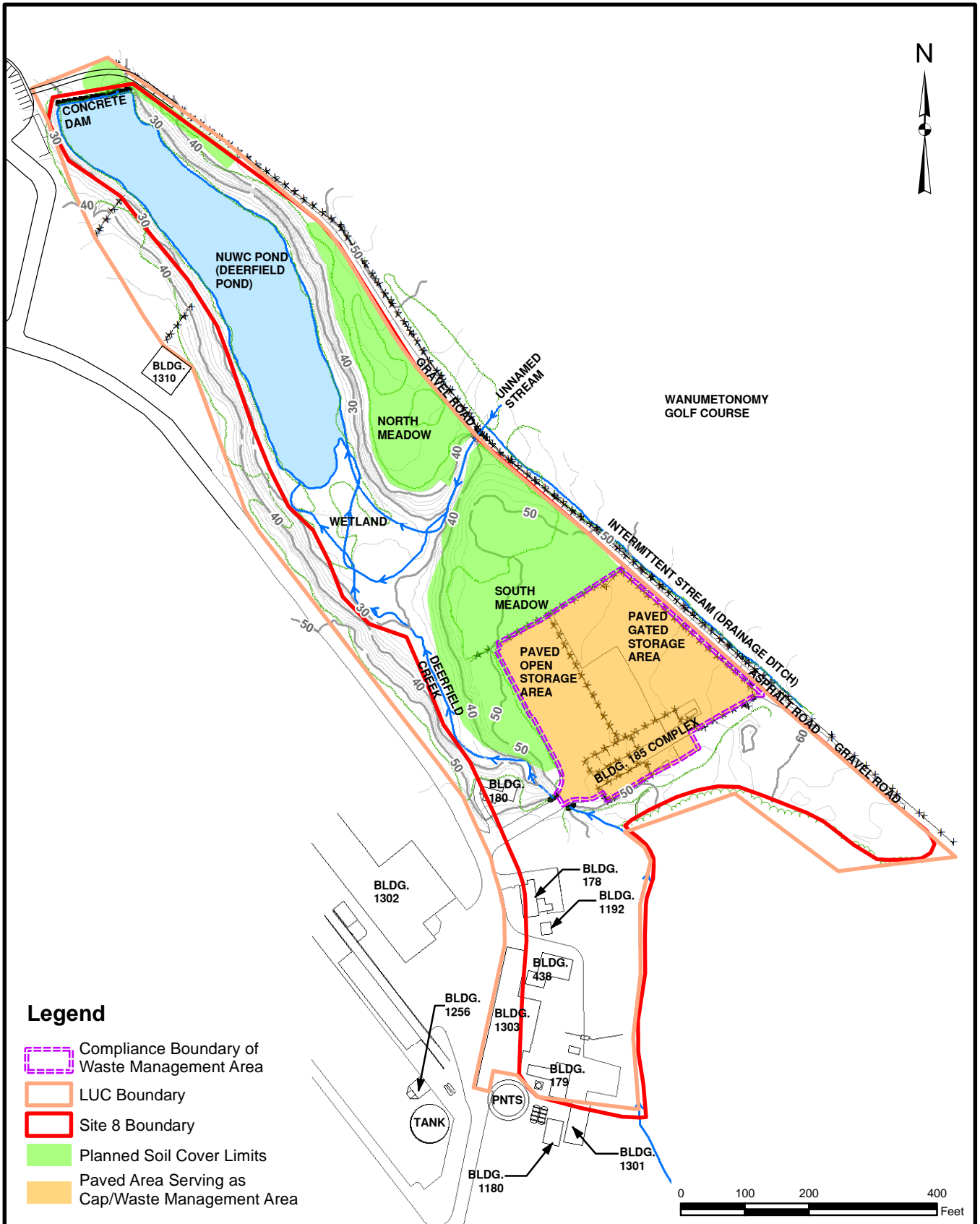
SITE 8
LAND USE CONTROL REMEDIAL DESIGN

SCALE
PER SCALE BAR

FILE
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REV	DATE
0	01/03/13

FIGURE NUMBER
2



Legend

- Compliance Boundary of Waste Management Area
- LUC Boundary
- Site 8 Boundary
- Planned Soil Cover Limits
- Paved Area Serving as Cap/Waste Management Area



TETRA TECH

NAVAL STATION NEWPORT
NEWPORT, RHODE ISLAND

SITE 8 LAND USE CONTROL BOUNDARY

SITE 8
LAND USE CONTROL REMEDIAL DESIGN

SCALE
PER SCALE BAR

FILE

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REV DATE

0 09/13/13

FIGURE NUMBER

3

APPENDIX A

LAND USE CONTROL INSTRUCTIONS

A.1 – COMNAVREG MIDLANT INSTRUCTION 5090.2

A.2 – COMNAVREG MIDLANT INSTRUCTION 11011.11A



DEPARTMENT OF THE NAVY

COMMANDER
NAVY REGION, MID-ATLANTIC
6506 HAMPTON BLVD.
NORFOLK, VA 23508-1273

IN REPLY REFER TO:

COMNAVREG MIDLANT
INST 5090.2
REG ENG/Code 90

27 MAY 2003

COMNAVREG MIDLANT INSTRUCTION 5090.2

Subj: INSTALLATION RESTORATION; LAND USE CONTROLS AT NAVY
REGION, MID-ATLANTIC INSTALLATIONS; ESTABLISHMENT AND
MAINTENANCE

Ref: (a) DUSD (ES/CL) memo of 17 Jan 01
(b) Navy Environmental Policy Memo 99-02
(c) Navy-Marine Corps Installation Restoration Manual
(COMNAVFACECOM Feb 97)
(d) OPNAVINST 5090.1 Series
(e) COMNAVREGMIDLANTINST 3120.1
(f) JAGMAN
(g) NAVREGS

1. Purpose. This instruction prescribes procedures for establishing and maintaining land use controls at sites remediated under the Navy Installation Restoration Program (IRP) and otherwise, and assigns mission, functions, and tasks necessary to successful management and maintenance of land use controls. References (a) through (d) pertain.

2. Applicability. This instruction applies to installations under the custody, control, and command of Commander, Navy Region, Mid-Atlantic (COMNAVREG MIDLANT). Reference (e) pertains.

3. Background

a. Land use controls restrict use of, and may also limit access to, real property at which contamination is allowed to remain in place. Land use controls, which are of two types, engineered controls¹ and institutional controls, are placed on IRP (and other) sites to protect human health and the environment until such time, if ever, as they are no longer needed. Engineered controls include fences, signs, and other physical means of regulating access to and use of real property. Institutional controls are legal and administrative restrictions on land use, such as notations on installation land use plans,

¹"Engineering controls" is also used in some texts to refer to engineered controls. For purposes of this instruction these terms are synonymous.

27 MAY 2003

notices recorded in public land records, and periodic site inspections.

b. Land use controls, which may be of indefinite duration, must be reviewed at least every 5 years for effectiveness. They are, or are part of, a clean-up remedy accepted by or approved for COMNAVREG MIDLANT by the Regional Engineer, as set forth, for example, in the Record of Decision² for an IRP site. After a Record of Decision or other decision document is finalized, terms and conditions for establishing and maintaining land use controls will be developed and memorialized in a Remedial Design (or other document), in the manner Atlantic Division, Naval Facilities Engineering Command (LANTNAVFACENGCOM) (or other Navy authority) shall recommend. Land use controls may be modified as site conditions change.

c. To be effective, land use controls must be timely imposed, and thereafter maintained for as long as necessary. Long-term maintenance of land use controls requires vigilance, diligence, cooperation, and funding. COMNAVREG MIDLANT, recognizing its role in protecting human health and the environment, has determined that a comprehensive, coordinated approach to land use controls is required for its installations. This approach requires close cooperation between the Regional Engineer, the Regional Program Manager for Facilities and Environmental programs, and LANTNAVFACENGCOM, the IRP program manager.

4. Action. The following action is directed:

a. Regional Engineer

(1) Execute Records of Decision, decision documents, and other land use control related documents on behalf of COMNAVREG MIDLANT.

(a) In so doing, coordinate closely with LANTNAVFACENGCOM, to ensure that operational flexibility, accomplishment of core mission requirements, combat readiness, security, force protection, and cost are taken into consideration in remedy selection.

² Records of Decision are issued under authority of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). Land use controls are also imposed in clean-ups carried out under the Resource Conservation and Recovery Act (RCRA).

(2) Implement institutional controls in the manner and within the time prescribed in Records of Decision and other decision documents.

(a) In so doing, program and budget for the cost of maintaining land use controls the responsibility for which has transferred from LANTNAVFACENGCOM to COMNAVREG MIDLANT.

(3) Integrate land use controls into site approval processes, dig permits, infrastructure plans, installation maps, and geographic information systems, and, in the name of COMNAVREG MIDLANT, deny permission to conduct ground-disturbing activity at, make use of, or develop sites in a manner inconsistent with approved land use controls.

(a) In so doing, implement procedures and safeguards to withhold or deny site approval until it has been verified that no land use controls exist, or that the proposed use or development is consistent with existing land use controls, references (c) and (d), and other legal authorities. The site approval process is a key element of the regional program to protect human health and the environment through maintenance of land use controls.

(4) Establish procedures to conduct and budget for site inspections, other monitoring of land use controls, and 5-year reviews, and to notify and interact with regulators.

(5) Retain Records of Decision and other land use control documents for all sites to which this instruction applies.

(6) Inform Installation Commanders, Program Managers, and tenant activities at least annually, of land use controls at their installations and installations at which they conduct operations. This may be accomplished by inviting these parties' attention to a list of land use controls published on the Regional Engineer's website.

(7) Include information on land use controls and compliance obligations in statements of work prepared for facility support contracts and other contracts involving use of or ground-disturbing activity at IRP sites and other locations where land use controls have been imposed.

27 MAY 2003

(8) Take appropriate steps to preclude ground-disturbing activity by Navy public works personnel (or contractors) that is inconsistent with approved land use controls.

b. Installation Commanders and Regional Program Managers

(1) Observe, adhere to, and publicize to their organizations (and, in the case of installation commanders, tenant activities), land use controls imposed on their installations and installations at which they conduct operations. This is especially important for Navy Family Housing and Morale, Welfare, and Recreation³ facilities and activities.

(2) Take appropriate steps to preclude land use, site development, and ground-disturbing activity inconsistent with approved land use controls. This includes, but is not limited to, following site approval procedures, adhering to dig permit requirements, and incorporating land use controls into infrastructure plans and host/tenant support agreements.

(a) Commanders of installations not served by Environmental Compliance Departments of the Regional Environmental Group perform the functions assigned to the Regional Engineer in subparagraphs a (1)-(8) of this paragraph.

(3) Include information on land use controls and compliance obligations in statements of work prepared for contracts involving use of or ground-disturbing activity at IRP sites and other locations subject to land use controls.

(4) Report to the Regional Engineer all activity inconsistent with known land use controls and conditions, e.g., failure of an engineered control, which may affect human health or the environment. The Regional Engineer, in turn, will inform the cognizant LANTNAVFACENGCOM Remedial Program Manager.

c. Tenant Activities of COMNAVREG MIDLANT Installations

(1) Observe, adhere to, and publicize to their organizations, land use controls imposed on installations at which they conduct operations.

³The Support Services Program Manager will develop a standard clause for Non-Appropriated Fund Instrumentality contracts that requires contractors to comply with land use controls.

27 MAY 2003

(2) Take appropriate steps to preclude land use, site development, and ground-disturbing activity inconsistent with approved land use controls. This includes, but is not limited to, consulting the Regional Engineer organization during the site approval process and when applying for dig permits.

(3) Include information on land use controls and compliance obligations in statements of work prepared for contracts involving use of or ground disturbing activity at IRP sites and other locations subject to land use controls.

(4) Report to the Regional Engineer all activity inconsistent with known land use controls and conditions, e.g., failure of an engineered control, which may affect human health or the environment. The Regional Engineer, in turn, will inform the cognizant LANTNAVFACENGCOM Remedial Program Manager.

5. Coordination with LANTNAVFACENGCOM

a. Per reference (d), COMNAVFACENGCOM is responsible for the IRP. LANTNAVFACENGCOM is the NAVFAC component that serves the installations to which this instruction applies. In carrying out its program responsibilities LANTNAVFACENGCOM works with Regional Engineer staff to:

(1) Consider operational flexibility, security, force protection, combat readiness, and maintenance costs in selecting land use controls;

(2) Develop land use controls, including but not limited to:

(a) Engineered and institutional controls;

(b) Remedial Designs and other similar land use control documents; and

(c) 5-year reviews and other long-term management;

(3) Report to the Regional Engineer activity, including performance of contracts supervised by Resident Officers in Charge of Construction, inconsistent with known land use controls, or conditions, e.g., failure of an engineered control, that may affect human health or the environment; and

27 MAY 2003

(4) Include appropriate clauses in contracts for work to be performed on or affecting sites to which land use controls apply.

6. Oversight. Land use, site development, and ground-disturbing activity inconsistent with applicable land use controls may result in risk to human health and the environment, and may give rise to civil and criminal liability under Federal law. Thus, incidents of this nature should be reported per reference (d), investigated per reference (f), and when warranted, appropriate action should be taken to address personal accountability. Regional Program Managers, Installation Commanders, Commanding Officers, and Officers in Charge should work closely with the Regional Engineer to cooperate with regulatory agencies per reference (g). The Regional Engineer and the Regional Environmental Coordinator staff should be notified promptly of the commencement of any enforcement action related to breach or neglect of land use controls.



G. E. EICHERT
Chief of Staff

Distribution: www.cnrma.navy.mil



DEPARTMENT OF THE NAVY

COMMANDER
NAVY REGION, MID-ATLANTIC
1510 GILBERT ST.
NORFOLK, VA 23511-2737

IN REPLY REFER TO:

COMNAVREGMIDLANTINST 11011.11A

N4/ARE

14 FEB 2011

COMNAVREG MIDLANT INSTRUCTION 11011.11A

From: Commander, Navy Region, Mid-Atlantic

Subj: SITE APPROVAL REQUIREMENTS AND PROCESS

Ref: (a) OPNAVINST 11000.16A w/CH-1
(b) NAVFACINST 11010.45
(c) COMNAVREGMIDLANTINST 5090.2
(d) NOSSA INST 8020.22
(e) NAVFAC BMS B-2.1.7-B-2.1.10 Site Approval Processes

Encl: (1) Sample Site Approval Request Letter
(2) NAVFAC Site Approval Request Form (NAVFAC 11010/31)

1. Purpose. Provide guidance for process and preparation of site approvals in the Navy Region, Mid-Atlantic, Area of Responsibility (AOR).

2. Cancellation. COMNAVREGMIDLANTINST 11011.11.

3. Background. Per reference (a), Regional Commanders are responsible for management of land and facilities in their Regions. Reference (a) stipulates planning documentation will be prepared and submitted, per reference (b). The site approval process is the review of proposed actions that affect or may affect facilities or land located on Navy-controlled land holdings. The site approval review process includes determining if the proposed action is compatible with Mission requirements, natural and man-made constraints, land use, Installation architecture and appearance, Installation master plan or Shore Infrastructure Plan (SIP), sustainable development principles, Environmental Restoration Land Use Controls per reference (c), and all applicable laws and regulations.

4. Policy. Site approval is not required for routine maintenance and routine repair of facilities. Per reference (b), site approval is required for all actions sited on Navy-controlled land holdings, regardless of funding source, for the following situations:

a. Any project or real estate action that will have explosives safety criteria implications associated with ammunitions and explosives, per reference (d).

b. Any project or real estate action that affects, or is affected by, airfield safety criteria.

c. Any project or real estate action that creates or is proposed to be in an area of electromagnetic illumination, or involves electromagnetic transmission.

d. Any project, real estate action, or proposed use of property that proposes changing the functional use of a facility or the land use or physical layout of an area.

e. Any proposed use of property, permanent or temporary, that involves placing or removing a facility or structure.

5. Implementation. The Installation Commanding Officer (ICO) will be responsible for implementation of the site approval process under references (b) and (c). The Installation Public Works Department (PWD) will manage this process on behalf of the ICO. The ICO will be the Approving Official but may choose to delegate this authority to the Public Works Officer.

a. Activities initiating a proposed action will submit a request for site approval cover letter, enclosure (1), signed by the unit commander, or their designated representative, to the responsible ICO (Attn: Public Works Officer). Note: Request Cover Letters are not required if the PWD is self-generating the site approval. The Activity and the PWD Planner will work together to prepare Section A of the Naval Facilities Engineering Command (NAVFAC) Site Approval Request Form, enclosure (2). The PWD will follow the process identified in references (d) and (e). In situations where the Activity does not specify a particular Installation for the site, the request for site approval shall be submitted to the Assistant Regional Engineer (ARE), COMNAVREG MIDLANT. At the discretion of the ARE, site approvals may require review and endorsement by the ARE.

b. Naval Facilities Engineering Command, Mid-Atlantic (NAVFAC MIDLANT) Environmental will identify all of the environmental and National Environmental Protection Act (NEPA) compliance requirements as described in reference (e). In some situations, permits may be required, or an Environmental Assessment (EA) may be required. Final site approval will not be granted until all required NEPA and Clean Air Act (CAA) documentation is completed.

c. In some cases, NEPA documentation is still required when site approval is not (e.g., repair of historic facilities).

d. The PWD will process, track, and maintain a record of all Activity site approvals except as otherwise described in reference (d) for explosive safety site approvals.

e. Relocatable facilities (trailers) require separate endorsement via ARE (OPNAVINST 11010.33C) in addition to the site approval process.

f. Actions involving explosive safety, electromagnetic radiation, waivers to airfield safety criteria, or small arms range surface danger zones require additional action and approval through the applicable authority: Naval Ordnance Safety and Security Activity (NOSSA); Department of Defense Explosive Safety Board (DDESB); Space and Naval Warfare Systems Command (SPAWAR); Naval Air Systems Command (NAVAIR); Commander, Navy Installations Command (CNIC); or Chief of Naval Operations (CNO). These reviews will be coordinated by the PWD Planner. Because of the approval chain, allow additional time (1 to 8 months) for processing.

6. Site approvals are granted based upon the information in the request. The site approval becomes invalid if any of the conditions in the original request materially change.

7. Forms. NAVFAC Site Approval Request Form 11010/31 is supplied by N4, Regional Engineer, as enclosure (2) of this instruction. More detail on the site approval process and Site Approval checklists can be found in references (d) and (e). Environmental Checklists vary by State and can be provided by the Public Works Department at the Installation.


G. S. WOMACK
Chief of Staff

Distribution: Electronic only, via CNIC Web site/COMNAVREG
MIDLANT: <https://g2.cnlic.navy.mil/cnichome/pages/cnichome.aspx>

COMNAVREGMIDLANTINST 11011.11A
1 4 FEB 2011

SAMPLE SITE APPROVAL REQUEST LETTER

11011
Code

From: (Activity Head)
To: Commanding Officer, -----
(Attn: Public Works Officer)

Subj: REQUEST FOR SITE APPROVAL FOR _____

Ref: (a) NAVFACINST 11010.45

Encl: (1) NAVFAC Site Approval Request Form (NAVFAC 11010/31)

1. Per reference (a), enclosure (1) is forwarded for your review/approval. Requesting site approval to (briefly explain).
2. In addition to completing site approval, request the required National Environmental Policy Act (NEPA) documentation be initiated and completed to allow this project to be executed.
3. My point of contact for this project is (name) at (commercial and DSN phone number), or (E-Mail-----).

SIGNATURE
BLOCK

SAMPLE

Enclosure (1)

REQUEST FOR PROJECT SITE APPROVAL/EXPLOSIVES SAFETY CERTIFICATION NAVFAC 11010/31 (NAVFAC MIDLANT REV. 8-2009)

PART I

DIRECTIONS IN NAVFACINST 11010.45

SECTION A – INSTALLATION SUBMISSION

1. To:			2. From:		
3. Program Year:	4. Cost (\$000):	5. Type Funding	6. Activity UIC	7. Date:	
8. Category Code and Project Title:				9. Project Number	
10. Type of Project: <input type="checkbox"/> New Construction <input type="checkbox"/> Relocation of Structure <input type="checkbox"/> Other <input type="checkbox"/> Change Use <input type="checkbox"/> Maintenance and/or Repairs <input type="checkbox"/> Addition to Existing Facility <input type="checkbox"/> Repair by Replacement <input type="checkbox"/> Major Modification to Existing Facility <input type="checkbox"/> Demolition			11. Type of Request: <input type="checkbox"/> Airfield Safety Site Approval <input type="checkbox"/> Explosives Site/Safety Certification <input type="checkbox"/> EMR Site Approval <input type="checkbox"/> Re-submittal or Standard Site Approval (No Safety Criteria Involved)		
12. Project Description					
13. _____ Sets of Project Maps Attached			14. _____ Sets Part II Division(s) _____ Attached		

SECTION B –NAVFAC REVIEW

1. Name/Code/Phone No. of Reviewer/E-Mail Address:			2. Date Received:		
3. Evaluation:					
4. Safety Review Requested: (check appropriate box(es)) <input type="checkbox"/> NOSSA <input type="checkbox"/> DDESB <input type="checkbox"/> SPAWAR <input type="checkbox"/> NAVAIR <input type="checkbox"/> CNO <input type="checkbox"/> OTHER					5. Date Forwarded:
6. Date of Safety Certification: _____ NOSSA _____ DDESB _____ SPAWAR _____ NAVAIR _____ CNO _____ OTHER					

SECTION C – FINAL SITE APPROVAL ACTION

1. Approvals: <input type="checkbox"/> Site Approved <input type="checkbox"/> Site Disapproved <input type="checkbox"/> Deferred/Returned <input type="checkbox"/> Explosives Safety Certification Approved <input type="checkbox"/> Explosives Safety Certification DISAPPROVED <input type="checkbox"/> Interim Construction Waiver Approved		2. Certification Identification: 3. Remarks	
4. Other Approvals <input type="checkbox"/> Airfield Safety Waiver Required <input type="checkbox"/> Final Explosives Safety Review Required		5. Approving Official: 6. Date:	

APPENDIX B

LAND USE CONTROL ANNUAL COMPLIANCE INSPECTION CHECKLIST

Land Use Control (LUC) Inspection Checklist

Site 8 - Naval Undersea Systems Center (NUSC) Disposal Area

Naval Station (NAVSTA) Newport, Rhode Island

Site Description:

Site 8 is located within the NUWC portion of the NAVSTA Newport facility. There are exceedences of contaminants of concern (COCs) in surface soil, subsurface soil, groundwater, and sediment. The LUC boundary is shown on Figure 3 of the Land Use Control Remedial Design (LUC RD).

Documentation Questionnaire:

- 1 Is the complete, updated LUC RD (latest version) available on file with the Navy (NAVFAC and NAVSTA)? (If no, describe below.)
2. Is it correct that there are no EPA or RIDEM notifications on file regarding the following items? (if notifications were issued, then mark "no" and describe below):
 - 2a. Activities inconsistent with LUCs
 - 2b. Corrective actions regarding activities inconsistent with LUCs
 - 2c. Changes in procedures affecting LUCs
 - 2d. Proposed land use changes
 - 2e. Proposed transfer or sale of the site property
3. Is the LUC RD documentation provided to the EPA, the RIDEM, the Rhode Island Department of Health, the Town of Middletown (e.g., Board of Health), and the adjacent property owner (Wanumetonomy Golf and Country Club) up to date? (i.e., if the LUC RD has been revised recently, has the updated version been provided to the stakeholders?)

Yes	No

Inspection Questionnaire:

4. Is the area free of any indication of a recently installed groundwater extraction well? (includes drinking water and irrigation wells, but not wells associated with the Site 8 remedial action) If no, mark the location of the well on a site map and describe below.
5. Has the adjacent property owner (Wanumetonomy Golf and Country Club) been contacted in the past 12 months, and responded in writing, to confirm that no residential drinking water supply wells or other groundwater extraction wells (e.g., irrigation wells) have been installed near the site (i.e., in any area that could adversely impact the Site 8 remedial action, or cause unacceptable risks to human health or the environment by affecting the Site 8 groundwater plume)?
6. Is the area free of any indication of residential development or residential use? If no, describe below.
7. Is the area free of any indication of unlimited (e.g., public) recreational use? If no, describe below.
8. Is the area free of any indication of land use that is not consistent with the Site 8 Record of Decision and LUC RD? If no, describe below.

Yes	No

9 Is the Paved Storage Area being properly operated as a Waste Management Area? If no, describe below.

9a. Is the pavement of the Waste Management Area undisturbed and/or being maintained properly to prevent exposure to the underlying soil?

9b. Is the Navy continuing to use the Waste Management Area as an equipment/material storage area?

9c. Are groundwater monitoring wells available and accessible around the perimeter of the Waste Management Area?

10. Regarding the Waste Management Area (Paved Storage Area), is the Navy in compliance with the performance objective to conduct additional geophysical investigations to identify and remove subsurface anomalies in the following circumstances (select 'no' and describe below, if the Waste Management Area is not in compliance):

10a. If the use of the site is changed such that the Paved Storage Area is no longer operated as a Waste Management Area (select 'yes' if the site use has not changed, or if additional geophysical investigations/removals have been completed).

10b. If ownership of the property is transferred outside of the Navy (select 'yes' if the ownership has not changed, or if additional geophysical investigations/removals have been completed).

10c. If groundwater restoration goals are not achieved in a reasonable timeframe and there is reason to believe that a continuing source of contamination from the Waste Management Area may be inhibiting groundwater cleanup (select 'yes' if an additional investigation for a continuing source is not warranted at this time, or if additional geophysical investigations/removals have been completed).

11. Are the constructed soil covers undisturbed and in good condition (e.g., no digging, no significant erosion, etc.)? If no, describe below.

12. Is the site free of any use or activity that would interfere with the effectiveness or operation of the remedy components (e.g., improper use of soil cover areas, disturbance of groundwater remediation system equipment, etc.)? If no, describe below.

13. Are the Navy's monitoring wells, extraction wells, and injection wells in good condition (e.g., undamaged casing/road box, properly closed/locked)? If no, describe below.

14. Are Site 8 warning signs in good condition (e.g., undamaged, legible)? If no, describe below.

Yes	No

Comments: (Provide related question number for each comment. Attach more pages, if needed.)

Recommendations: (Also enter any suggested improvements to this form.)

Navy Annual Certification:

I hereby certify that a complete and thorough inspection and an evaluation of compliance with land use controls established for the site in accordance with the 2012 Record of Decision have been performed and that the items noted on this inspection form have been assessed with respect to the intent of the implemented remedial action objectives for the site.

Navy Representative Title

Signature Date

Onsite Inspection Team Roster:

Lead Inspector Title/Affiliation

Signature Date of Inspection

Others Present:

Name Affiliation

Name Affiliation

Name Affiliation

Name Affiliation