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SITE MANAGEMENT PLAN FOR 2011 NSB NEW LONDON CT

06/01/2011

TETRA TECH NUS

Site Management Plan

for

Naval Submarine Base New London

Groton, Connecticut

Naval Facilities Engineering Command Mid-Atlantic

Contract Number N62470-08-D-1001

Contract Task Order WE33

June 2011

REVISION 0
JUNE 2011

SITE MANAGEMENT PLAN
FOR
NAVAL SUBMARINE BASE - NEW LONDON
GROTON, CONNECTICUT

COMPREHENSIVE LONG-TERM
ENVIRONMENTAL ACTION NAVY (CLEAN) CONTRACT

Submitted to:
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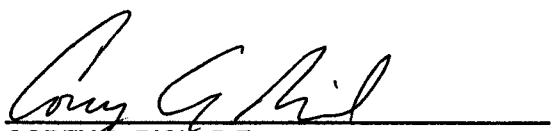

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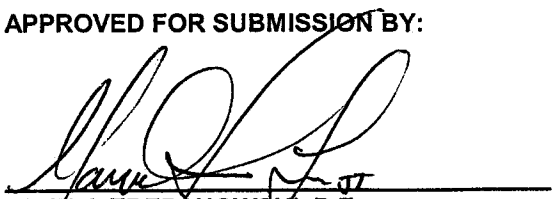

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ACRONYM LIST

µg/kg	Microgram per kilogram
µg/L	Microgram per liter
AOC	Area of Concern
ARAR	Applicable or Relevant and Appropriate Requirement
AS	Air sparging
Atlantic	Atlantic Environmental Services, Inc.
AVS	Acid volatile sulfide
AWQC	Ambient Water Quality Criterion
B&RE	Brown & Root Environmental
BERA	Baseline Ecological Risk Assessment
BGOURI	Basewide Groundwater Operable Unit RI
BTEX	Benzene, toluene, ethylbenzene, and xylenes
CBU	Construction Battalion Unit
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CIF	Controlled Industrial Facility
CIP	Community Involvement Plan
CLEAN	Comprehensive Long-Term Environmental Action Navy
COC	Chemical of concern
COPC	Contaminant of potential concern
CTDEP	Connecticut Department of Environmental Protection
CTO	Contract Task Order
DDD	1,1-Dichloro-2,2-bis(4-chlorophenyl)ethane
DDE	1,1-Dichloro-2,2-bis(4-chlorophenyl)ethene
DDT	1,1,1-Trichloro-2,2-bis(4-chlorophenyl)ethane
DDTR	Total DDT isomers (DDT, DDD, and DDE)
DGI	Data gap investigation
DoD	Department of Defense
DRMO	Defense Reutilization and Marketing Office
ECC	Environmental Chemical Corporation
EE/CA	Engineering Evaluation/Cost Analysis
Envirodyne	Envirodyne Engineers, Inc.
ER	Environmental Restoration
ESD	Explanation of Significant Difference
ESQD	Explosive Safety Quantity Distance
FFA	Federal Facility Agreement

FFS	Focused FS
FS	Feasibility Study
FWEC	Foster Wheeler Environmental Corporation
GMR	Groundwater Monitoring Report
GZA	Goldberg-Zoino & Associates
H&S	H&S Environmental, Inc.
HI	Hazard Index
HNUS	Halliburton NUS
HQ	Hazard Quotient
IAG	Interagency Agreement
IAS	Initial Assessment Study
ICR	Incremental Cancer Risk
IR	Installation Restoration
LIR	Landfill Inspection Report
LNAPL	Light non-aqueous phase liquid
LTMgt	Long-Term Management
LUC	Land Use Control
MCL	Maximum Concentration Level
mg/kg	Milligram per kilogram
mg/L	Milligram per liter
MWR	Morale, Welfare, and Recreation
NACIP	Naval Assessment and Control of Installation Pollutants
NAVFAC	Naval Facilities Engineering Command
NEESA	Naval Energy and Environmental Support Activity
NESO	Naval Environmental Support Office
NEX	Naval Exchange
NFA	No Further Action
NFESC	Naval Facilities Engineering Service Center
NPDES	National Pollutant Discharge Elimination System
NPL	National Priorities List
NSA	New Source Area
NSB-NLON	Naval Submarine Base - New London
NTCRA	Non-time-critical removal action
O&M	Operations and maintenance
OBDA	Overbank Disposal Area
OBDANE	Overbank Disposal Area Northeast
OHM	OHM Remediation Services Corp.

OU	Operable Unit
OVA	Organic vapor analyzer
PA	Preliminary Assessment
PAH	Polynuclear aromatic hydrocarbon
PCB	Polychlorinated biphenyl
PCE	Tetrachloroethene
PDI	Pre-Design Investigation
PRG	Preliminary remediation goal
QA/QC	Quality Assurance/Quality Control
QAPP	Quality Assurance Project Plan
RA	Remedial Action
RA-C	Remedial Action - Construction
RAB	Restoration Advisory Board
RAC	Remedial Action Contractor
RACR	Remedial Action Completion Report
RAO	Remedial Action Objective
RC	Response Complete
RCRA	Resource Conservation and Recovery Act
RD	Remedial Design
RG	Remedial goal
RI	Remedial Investigation
RIP	Remedy in Place
RME	Reasonable maximum exposure
RSR	Remediation Standard Regulations (Connecticut)
ROD	Record of Decision
SAIC	Science Application International Corporation
SAP	Sampling and Analysis Plan
SARA	Superfund Amendments and Reauthorization Act
SASDA	Spent Acid Storage and Disposal Area
SC	Site Closeout
SDI	Specialty Devices, Inc
SEM	Simultaneously extracted metals
SI	Site Inspection
SIAS	Supplement to the Initial Assessment Study
SMP	Site Management Plan
SOPA	Standard Operating Procedure - Administrative
SVE	Soil vapor extraction

SVOC	Semivolatile organic compound
TAL	Target Analyte List
TCE	Trichloroethene
TCL	Target Compound List
TCLP	Toxicity Characteristic Leaching Procedure
TCRA	Time-critical removal action
TIE	Toxicity Identification Evaluation
TPH	Total petroleum hydrocarbons
Tetra Tech EC	Tetra Tech EC, Inc.
Tetra Tech	Tetra Tech NUS, Inc.
USEPA	United States Environmental Protection Agency
UST	Underground storage tank
VOC	Volatile organic compound
Wehran	Wehran Engineering, Inc.

1.0 INTRODUCTION

This Site Management Plan (SMP) for the Naval Submarine Base - New London (NSB-NLON), Groton, Connecticut, was prepared for the United States Department of the Navy by Tetra Tech NUS, Inc. (Tetra Tech) under the Comprehensive Long-Term Environmental Action Navy (CLEAN) Contract, Contract Number N62470-08-D-1001, Contract Task Order (CTO) WE33. The SMP serves as a management tool for planning, reviewing, and setting priorities for environmental investigative and remedial response activities to be conducted at NSB-NLON under the Navy's Installation Restoration (IR) Program, now part of the Environmental Restoration Program (ER) (Navy, 2006a). Ultimately, the SMP serves as the schedule for implementation of the IR Program at NSB-NLON. The SMP is updated regularly to revise priorities and schedules of activities as additional information (including funding availability) becomes available.

This version of the SMP presents the rationale for the sequence of future investigation and remediation activities and the estimated schedule for completion of these activities, with detailed schedules presented through Fiscal Year 2015. The use of an SMP allows for adjustment of scheduled activities for reasons such as federal budgetary constraints, changes in scope of investigation/remediation activities, or other unanticipated events. A Federal Facility Agreement (FFA) has been developed for NSB-NLON that establishes the roles and responsibilities of the Navy, United States Environmental Protection Agency (USEPA), and State of Connecticut Department of Environmental Protection (CTDEP) and serves as an Interagency Agreement (IAG) for the completion of all necessary investigation and remedial actions at NSB-NLON (USEPA, 1995).

1.1 NAVAL SUBMARINE BASE - NEW LONDON BACKGROUND

As detailed in the FFA and subsequent documents, NSB-NLON includes approximately 687 acres of property located on the eastern bank of the Thames River in the Towns of Groton and Ledyard, Connecticut, approximately 6 miles north of Long Island Sound, as depicted on Figure 1-1. Previously, NSB-NLON also included the Nautilus Memorial and Navy family housing plans commonly known as Polaris Park, Nautilus Park, Trident Park, Conning Towers, and Dolphin Gardens, but these have been privatized and are no longer operated by the Navy.

1.1.1 Base Description

NSB-NLON is bounded on the east by Connecticut Route 12, on the south by Crystal Lake Road, and on the west by the Thames River. The northern border is a low ridge that trends approximately east-southeast from the Thames River to Baldwin Hill.

NSB-NLON currently provides a base command for submarine activities in the Atlantic Ocean. It also provides housing for Navy personnel and their families, support submarine training facilities, military offices, medical facilities, and facilities for submarine maintenance, repair, and overhaul.

Currently, NSB-NLON consists of over 207 buildings on 687 acres. The density of buildings is high along the central bedrock high, in the southern valley, and along the Thames River. In the northern valley are streams, a wetland, and a golf course. The northern bedrock high is not heavily developed except along the southern face at the Area A Weapons Center and Torpedo Shops. The areas on top of the northern ridges are wooded and undeveloped.

Land use adjacent to the base is residential and commercial. Residential development along Military Highway, Sleepy Hollow, Long Cove Road, and Pinelock Drive borders the site to the north and extends northward into the Gales Ferry section of Ledyard. Property along Route 12, east of NSB-NLON, consists of widely spaced private homes and open, wooded land. Development is mixed commercial and residential farther south on Route 12. This area includes a church, automobile sales and repair facilities, convenience stores, restaurants, and a gas station. Private residences, an automobile service station, and a former dry cleaner are located along the southern side of Crystal Lake Road. Housing for Navy personnel exists farther south of Crystal Lake Road.

1.1.2 Base History

In 1867, the State of Connecticut donated a 112-acre parcel of land on the eastern bank of the Thames River to the Navy. The Navy did not use the property until 1868 when it officially designated the property a Navy Yard. The site was then used to moor small craft and obsolete warships, and served as a coaling station for the Atlantic fleet. The Department of the Navy designated the site a Submarine Base in 1916. During World War I, facilities were expanded extensively; six piers and 81 buildings were added. In 1917, a submarine school was established, and in 1918 the Submarine Medical Center was founded.

NSB-NLON underwent another period of growth during World War II. Between 1935 and 1945, the Navy built more than 180 buildings and acquired adjacent land to expand NSB-NLON from 112 to 497 acres. The growth of NSB-NLON continued after World War II. A Medical Research Laboratory was established at the base in 1946.

In 1968, the status of the Submarine School was changed from an activity to a command and became the largest tenant on the base. The Naval Submarine Support Facility was established in 1974, and the Naval Undersea Medical Institute was established the following year.

1.1.3 Environmental History

The Navy initiated the Naval Assessment and Control of Installation Pollutants (NACIP) Program on September 11, 1980, to identify and control environmental contaminants from past use and disposal of hazardous substances. Subsequently, the Initial Assessment Study (IAS), [Envirodyne Engineers, Inc. (Envirodyne), 1983], completed in March 1983, identified several potential disposal areas. The results of the IAS lead to the inclusion of NSB-NLON on the Federal Agency Hazardous Waste Compliance Docket on February 12, 1988, the formation of a Technical Review Committee, USEPA's proposal for inclusion of NSB-NLON on the National Priorities List (NPL) on October 25, 1989, and the placement of NSB-NLON on the NPL on August 30, 1990.

Previous investigations and enforcement histories for NSB-NLON are summarized as follows:

- Final IAS (Envirodyne, 1983). The purpose of the IAS was to identify and evaluate past waste disposal practices at NSB-NLON and to assess the potential for environmental impacts.

- IR Program, 1986. In response to the growing awareness of the potential effects of hazardous materials on human health and the environment, the United States Department of Defense (DoD) developed the IR Program to investigate and clean up potential problem areas created by past events at federal facilities. The IR Program was the catalyst for environmental investigations at the NSB-NLON. The IR Program was renamed the ER Program in August 2006.

- Verification Study, [Wehran Engineering, Inc. (Wehran), 1988]. The purpose of the Verification Study was to determine whether toxic and hazardous materials identified during the IAS were present on site and to recommend whether additional study was warranted.

- Placement of NSB-NLON on the NPL by the USEPA, 1990.

- Phase I Remedial Investigation (RI) NSB-NLON [Atlantic Environmental Services, Inc. (Atlantic), 1992]. In May 1990, Atlantic initiated an IR study of NSB-NLON for the Navy. The scope of work for this IR study included a Phase I RI of the following 11 sites located at NSB-NLON:

  Site 1 - Construction Battalion Unit (CBU) Drum Storage Area
  Site 2 - Area A (Area Landfill, Area A Wetland, and Area A Downstream Watercourses)
  Site 3 - Overbank Disposal Area (OBDA)
  Site 4 - Rubble Fill at Bunker A-86
  Site 6 – Former Defense Reutilization and Marketing Office (DRMO)
  Site 7 - Torpedo Shops

Site 8 - Goss Cove Landfill
Site 13 - Lower Subase
Site 14 - Overbank Disposal Area Northeast (OBDANE)
Site 15 - Spent Acid Storage and Disposal Area (SASDA)
Site 18 - Former Gasoline Station

The sites were initially identified and assigned site numbers in the IAS (Envirodyne, 1983).

Elements of this RI report included a review of the physical characteristics, characterization of the nature and extent of contamination, characterization of contaminant fate and transport, and human health and ecological risk assessments of contaminants contained within each of the 11 sites.

- Supplement to IAS (SIAS) (Draft Final) [Naval Facilities Engineering Service Center (NFESC), 1995]. The IAS, prepared for the Naval Energy and Environmental Support Activity (NEESA) by Envirodyne, investigated potential hazardous substance release sites at NSB-NLON (Envirodyne, 1983). An SIAS was prepared in April 1995 by the NFESC following completion of the Phase I and Phase II RIs and a Verification Study (NFESC, 1995). The purpose of the SIAS was to update the IAS for the period between 1983 and 1995. The scope of the SIAS included identification of all hazardous waste storage areas and all releases of hazardous substances within NSB-NLON.

  The field team for the SIAS used on-base record searches, site visits, and employee interviews to develop information for the report. The following sites were included in the evaluation:

  DRMO, Building 355
  Building 450, Otto Fuel Wastewater Tank
  Building 450, Drum Storage Area
  Pesticide Use: Golf Course
  Pesticide Use: Public Works
  Transformer at Building 157, Vault 31
  Paint Residue from Repainting Potable Water Tank 99
  Paint Residue from Repainting Potable Water Tank 326
  Paint Residue from Repainting Potable Water Tank 444
  Paint Residue from Repainting Potable Water Tank 452
  Paint Residue from Repainting Potable Water Tank 480
  DRMO Scrap Metal Storage Area
  Hazardous Waste Accumulation Areas

- FFA for NSB-NLON (USEPA, 1995). The Navy entered into an FFA with the USEPA and CTDEP regarding the cleanup of environmental contamination at NSB-NLON. The document was signed by all three parties and became effective on January 11, 1995. The FFA established the roles and responsibilities of each agency, set deadlines for the investigation and cleanup of hazardous waste sites, and established a mechanism for the resolution of disputes among the agencies.

- Phase II RI [B&R Environmental (B&RE), 1997b]. A Phase II RI for 13 sites at NSB-NLON was completed by B&RE for the Navy. The 13 sites included 10 of the 11 sites investigated during the Phase I RI, the Thames River, and the Area A Weapons Center (Site 20). Site 18, the Former Gasoline Station, was not investigated in the Phase II RI, but it was generally discussed for informational purposes. According to the Navy, the designation for Site 18 was changed to refer to the Solvent Storage Area (Building 33), as presented in the Phase II RI Report, and not to the Former Gasoline Station, as presented in the Phase I RI Report (Atlantic, 1992).

  The Phase II RI was conducted to further develop the elements of the Phase I RI, including the physical characteristics, nature and extent of contamination, contaminant fate and transport, and risk assessments (human health and ecological) for each of the sites. Remedial Action Objectives (RAOs) were identified for each of the sites in the Phase II RI Report. These objectives were used to support No Further Action (NFA), further characterization, or Feasibility Study (FS) recommendations for sites.

- Lower Subase RI (Tetra Tech, 1999b). The Lower Subase RI was completed by Tetra Tech for the Navy on seven distinct zones of the Lower Subase at NSB-NLON. Each zone included various IR Program sites. The zones and sites included in the investigation are as follows:

  - Zone 1: Site 10 - Fuel Storage Tanks and Tank 54-H; Site 11 - Power Plant Oil Tanks; Building 89 UST; and the Fuel Pipeline and Steam and Condensate Lines

  - Zone 2: Fuel Pipeline and Steam and Condensate Lines

  - Zone 3: Site 17 - Hazardous Materials/Solvent Storage Area (Building 31) and the Fuel Pipeline and Steam and Condensate Lines

  - Zone 4: Site 13 - Building 79 Waste Oil Pit; Site 19 - Solvent Storage Area (Building 316); the Quay Wall Study Area; and the Fuel Pipeline and Steam and Condensate Lines

- Zone 5: Site 22 - Pier 33, Building 175 (Battery Acid Aboveground Storage Tanks) and adjacent property

- Zone 6: Site 24 - Central Paint Accumulation Area (Building 174)

- Zone 7: Site 21 - Berth 16; Site 25 - Classified Materials Incinerator; Transformers at Building 157, Vault 31.

The objectives of the investigation, performed in October and November 1997, were to characterize the subsurface conditions at the Lower Subase, to further characterize the quality of the sediment in the Thames River adjacent to the Lower Subase, and to provide data pertinent to identifying site-specific remedial alternatives.

The data collected during this RI, in conjunction with data collected from previous investigations, were used to: identify sources of soil and groundwater contamination; define major contaminant migration pathways; define the nature and extent of contamination within groundwater and soils at seven zones of investigation within the Lower Subase; to define the nature and extent of contamination in sediments of the adjacent Thames River; to provide supplemental data to develop a revised human health risk assessment; to provide supplemental data to develop a revised screening-level ecological risk assessment for the Thames River; and to provide sufficient information to identify proper recommendations for future action at each zone under the IR Program.

- Basewide Groundwater Operable Unit RI (BGOURI) (Tetra Tech, 2002a). The BGOURI was conducted by Tetra Tech for the Navy. Ten IR Program sites (Sites 2, 3, 7, 8, 14, 15, 16, 18, 20, and 23) were included in the BGOURI, and the fieldwork for the BGOURI was conducted from June to August 2000. The objectives of the investigation were: to further characterize the nature and extent of contamination and hydrogeologic conditions within the groundwater aquifers at each site; to further characterize the nature and extent of soil contamination at Site 7; to perform preliminary investigations at two sites (Sites 16 and 18); to determine background groundwater conditions; to determine human health risks associated with each site; to identify and evaluate the factors affecting organic and inorganic contaminant migration; and to provide data pertinent to identifying potential site-specific remedial alternatives (e.g., natural attenuation).

The following recommendations were made in the BGOURI Report:

- NFA is required for Site 7 soil and for Sites 16 and 18.
- An FS should be completed for groundwater at Sites 3, 7, 14, 15, and 20.
- The existing groundwater monitoring programs for Sites 2, 8, and 23 should continue until sufficient data are collected to characterize the sites.

- BGOURI Update/FS (Tetra Tech, 2004). The BGOURI Update/FS included a data gap investigation (DGI), an update of the RI based on the results of the DGI, and FSs for Site 3 soil, Sites 3 and 7 groundwater, and Site 7 soil and groundwater. Although Site 7 soil was not recommended for an FS in the BGOURI, subsequent discussions between the Navy and regulators resulted in the decision to evaluate both soil and groundwater as part of the Site 7 FS to verify that migration from soil to groundwater was not occurring. The DGI was conducted by Tetra Tech for the Navy in October 2002 at Sites 3, 15, and 20, prior to proceeding with FSs for these and other sites. One objective of the DGI was to collect additional data to further define the nature and extent of contamination. Another objective was to characterize Site 3 - New Source Area (NSA), a new site identified during the remediation of contaminated sediment in Stream 5 of the Area A Downstream Watercourses. The results of the updated BGOURI indicated that there was no need to modify the existing Records of Decisions (RODs) for soil at Sites 15 and 20. In addition, the report recommended NFA for groundwater at Sites 14, 15, and 20, preparation of FSs for soil at Site 3 - NSA and Site 7, and preparation of an FS for groundwater associated with Sites 3 and 7. The FSs for Site 3 soil, Sites 3 and 7 groundwater, and Site 7 soil and groundwater were subsequently completed as part of the BGOURI Update/FS.

- Investigation of the Thames River. Battelle conducted an investigation of Thames River sediment that included sampling and ecological risk evaluations for Zones 4 and 7 and a new site at Pier 1. The Pier 1 site was identified based on the results of sampling conducted in the area by SAIC in 1999 and by the Navy in association with the siting of the Controlled Industrial Facility Building. Battelle completed a Rapid Sediment Characterization Pilot Study in 2003 to supplement existing data in the area, and a Validation Study was completed in 2008 to evaluate potential ecological impacts due to contaminant migration from onshore source areas or activities associated with the berthing of submarines and ships in the pier areas (Battelle 2003; 2008a). The results of the Validation Study were used to develop a Baseline Ecological Risk Assessment (BERA). The results of the BERA were used to develop cleanup goals for remedial alternatives being developed as part of the Lower Subase FS. The Pier 1 site will be incorporated into Zone 4 of the Lower Subase, the zone in closest proximity, for future evaluations.

- Lower Subase FS (Tetra Tech, 2010g) and Soil and Groundwater Pre-Design Investigation (PDI) Completion Report and FS Addendum (Tetra Tech, 2011a). The FS was developed to evaluate remedial alternatives for addressing impacted media (soil, groundwater, and sediment) in the IRP sites and the Thames River adjacent to the Lower Subase (see Lower Subase RI) based on information obtained during previous and ongoing investigations. The final Lower Subase FS was issued in December 2010 with the understanding that additional data collected as part of Soil and Groundwater PDIs that might impact the findings of the FS would be incorporated in the FS Addendum. The goal of the FS Addendum was to provide sufficient supplemental documentation for the PDIs and to perform additional evaluation and refinement of the remedial alternatives included in the final Lower Subase FS. Sections of the FS were updated as necessary to complete the FS Addendum so that appropriate remedial alternatives were developed for Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) contaminants. Total petroleum hydrocarbons (TPH) were included in the FS Addendum evaluations and alternatives only where TPH was commingled with CERCLA contaminants. The draft Soil and Groundwater PDI Completion Report and FS Addendum was completed in March 2011 (Tetra Tech, 2011a).

In addition to these investigation documents, numerous other documents have been generated for the IR Program at NSB-NLON. Because of the large number of documents, they are not discussed in detail in this section. Appropriate references to these additional documents are provided in Section 2.0.

The Community Involvement Plan (CIP) for NSB-NLON was updated in 2011. The CIP describes the IR Program process, history of the IR Program at the Subase, and each of the NSB-NLON sites. The Navy will use the activities outlined in the CIP to keep residents informed and provide opportunities to be involved in the Subase IR Program (Tetra Tech, 2011c).

1.2 SITE MANAGEMENT PLAN SITES

Although various site designation numbers have been used in the past, an updated site designation list has been established for NSB-NLON. These designations were originally defined during the Phase II RI and have been used during subsequent activities, including this SMP. The site number does not imply that the site is an Area of Concern (AOC). The following sites are addressed in this SMP (see Figure 1-2):

Site 1 - Former CBU Drum Storage Area
Site 2 - Area A Landfill and Area A Wetland
Site 3 - Area A Downstream Water Courses/OBDA Pond and Former OBDA
Site 4 - Former Rubble Fill Area at Bunker A-86
Site 6 - Former DRMO

Site 7 - Torpedo Shops
Site 8 - Goss Cove Landfill
Site 9 - Former Oily Wastewater Tank (OT-5)
Site 10 - Lower Subase - Fuel Storage Tanks and Former Tank 54-H
Site 11 - Lower Subase - Power Plant Oil Tanks
Site 13 - Lower Subase - Building 79 Former Waste Oil Pit
Site 14 - OBDANE
Site 15 - Former SASDA
Site 16 - Former Hospital Incinerators
Site 17 - Lower Subase - Former Hazardous Materials/Solvent Storage Area (Former Building 31)
Site 18 - Solvent Storage Area (Building 33)
Site 19 - Lower Subase - Former Solvent Storage Area (Former Building 316)
Site 20 - Area A Weapons Center
Site 21 - Lower Subase - Berth 16
Site 22 - Lower Subase - Pier 33
Site 23 - Former Fuel Farm
Site 24 - Lower Subase - Central Paint Accumulation Area (Building 174)
Site 25 - Lower Subase - Former Classified Materials Incinerator

Site 5 (Hazardous Waste Storage Facility at Bunker A-85) is not addressed in this SMP because activities at the site were conducted under the Resource Conservation and Recovery Act (RCRA) Part A Permit for NSB-NLON. Site 12 (Building 428 Gas Tanks) is also not addressed in this SMP because it is not a CERCLA site and was evaluated under the CTDEP's RCRA Underground Storage Tank (UST) Program.

Soil and groundwater at Site 23 (Former Fuel Farm) are addressed in Section 2.0 of this SMP. However, the soil was investigated and remediated under CTDEP's RCRA UST Program and is not discussed in subsequent sections of this SMP. Groundwater at Site 23 was investigated under CERCLA as part of the BGOURI and is included in this SMP. The groundwater at Site 9, which is located within Site 23, is being collectively investigated with the Site 23 groundwater.

Medium-specific Operable Units (OUs) have been defined for IR Program sites, as listed in Table 1-1.

Because of the investigations and remedial actions completed at NSB-NLON under the IR Program, the sites are in various phases of the Site Closeout process [e.g., NFA, Remedy in Place (RIP), Response Complete (RC), or Site Closeout (SC)]. An RIP determination requires that remedial action construction (RA-C) be complete for a site and that the remedy is functioning as designed. An RC designation signifies that cleanup goals have been met. Sites classified as RC are those for which a DoD component

deems that NFA is required, with the possible exception of long-term management (LTMgt). An RC determination requires that one of the following apply: (1) there is no evidence that contaminants were released at the site, (2) no contaminants were detected at the site other than at background concentrations, (3) contaminants attributable to the site are less than action levels used for risk screening, (4) the results of a baseline risk assessment demonstrate that cumulative risks posed by the site are less than established thresholds, or (5) removal and/or RAOs at a site have been implemented, completed, and are the final action for the site. Activities for LTMgt include operations, maintenance, and monitoring. An SC determination signifies that the remedy is protective of human health and the environment, no restrictions on future land use are needed, and no additional funds are expected to be expended. The Site Closeout phase for each IR Program site is provided in Table 1-1.

1.3 REPORT ORGANIZATION

The SMP is organized as follows:

- Section 1.0 consists of this introduction.
- Section 2.0 describes the history and status of each site at NSB-NLON.
- Section 3.0 presents the sequence of activities and target dates for primary and secondary documents along with a discussion of their development.
- Section 4.0 provides the names and responsibilities of cleanup team members.

References for in-text citations are provided in the Reference Section.

Appendix A presents Summary and Detailed Schedules.

TABLE 1-1

SITE CLOSEOUT STATUS OF IR PROGRAM SITES
2011 SITE MANAGEMENT PLAN
NSB-NLON, GROTON, CONNECTICUT

Site/Zone	Medium	Operable Unit	Latest Core Document Completed	Milestones Completed	Core Documents Needed	Current Phase	Comments
Site 1 – Former CBU Drum Storage Area [1]	Soil	OU1	NFA DD	RC	None	NA	
Site 2A – Area A Landfill	Soil	OU1	CCR	RC	LUC RD, RACR[2]	LTMgt	Will not achieve SC.
	Groundwater	OU1, OU9	RACR, LUC RD	RC	None	LTMgt	Might not achieve SC.
Site 2B - Area A Wetland	Wetland Sediment	OU12	ROD	ROD	LUC RD, RACR	PDI, RD	Might not achieve SC.
Site 3 – Area A Downstream Watercourses and Former OBDA	ROD Soil and Sediment	OU3	CCR	RC	RACR[2]	NA	Will not achieve SC.
	ESD Soil and Sediment	OU3	CCR	RC	LUC RD, RACR[2]	LTMgt	Will not achieve SC.
	Former OBDA	OU3	CCR	RC	RACR[2]	NA	Will be SC after RACR.
	NSA Soil	OU3	NFA ROD[3]	ROD	None under CERCLA	NA	Completed under CTDEP RSRs.
	Groundwater	OU9	RACR, LUC RD	RIP	RACR	RA-O	Might not achieve SC.
Site 4 – Former Rubble Fill at Bunker A-86	Soil	OU10	NFA ROD	RC, SC	None	NA	
Site 6 – Former DRMO	Soil	OU2	RACR[4]	RC	LUC RD, RACR	LTMgt	Will not achieve SC.
	Groundwater	OU2	RACR[4]	RC	LUC RD, RACR	LTMgt	Might not achieve SC.
Site 7 – Torpedo Shops	Soil	OU8	CCR	RC	RACR[2]	NA	Will be SC after RACR.
	Groundwater	OU9	RACR	RC, SC	None	NA	
Site 8 – Goss Cove Landfill	Soil	OU5	CCR	RC	LUC RD, RACR[2]	LTMgt	Will not achieve SC.
	Sediment	OU5	NFA ROD	SC	None	SC	
	Surface Water	OU5	NFA PRAP[5]	SC	None	SC	
	Groundwater	OU5	CCR	RC	LUC RD, RACR[2]	LTMgt	Might not achieve SC.
Site 9 – Former Oily Wastewater Tank OT-5 [6]	Soil	NA	NA	NA	None under CERCLA	NA	Completed under CTDEP RSRs.
	Groundwater	OU9	RACR, LUC RD	RC	None	NA	Might not achieve SC.
Site 10/Zone 1 – Lower Subase – Fuel Storage Tanks and Former Tank 54-H	Soil	OU4	None	None	ROD, LUC RD, GMP, RACR	RI/FS	Additional work under CTDEP RSRs.
	Groundwater	OU4	None	None	ROD	RI/FS	Additional work under CTDEP RSRs.
	Thames River Sediment	OU4	None	None	ROD	RI/FS	ROD might be NFA.
	LNAPL	OU4	None	None	ROD	RI/FS	Additional work under CTDEP RSRs. ROD will be NFA.

TABLE 1-1

SITE CLOSEOUT STATUS OF IR PROGRAM SITES
2011 SITE MANAGEMENT PLAN
NSB-NLON, GROTON, CONNECTICUT

Site/Zone	Medium	Operable Unit	Latest Core Document Completed	Milestones Completed	Core Documents Needed	Current Phase	Comments
Site 11/Zone 1 – Lower Subase – Power Plant Oil Tanks	Soil	OU4	None	None	ROD, LUC RD, GMP, RACR	RI/FS	Additional work under CTDEP RSRs.
	Groundwater	OU4	None	None	ROD	RI/FS	Additional work under CTDEP RSRs.
	Surface Water	OU4	None	None	ROD	RI/FS	ROD might be NFA.
	Thames River Sediment	OU4	None	None	ROD	RI/FS	ROD might be NFA.
	LNAPL	OU4	None	None	ROD	RI/FS	Additional work under CTDEP RSRs. ROD will be NFA.
Site 13/Zone 4 – Lower Subase – Building 79 Former Waste Oil Pit	Soil	OU4	None	None	ROD, Removal Action, RD, LUC RD, GMP, RACR	RI/FS	Additional work under CTDEP RSRs.
	Groundwater	OU4	None	None	ROD	RI/FS	Additional work under CTDEP RSRs. ROD might be NFA.
	Surface Water	OU4	None	None	ROD	RI/FS	ROD might be NFA.
	Thames River Sediment (Zone 4, IP1, and OP1)	OU4	IP1 Phase I CCR	None	ROD, Removal Action, RD, LUC RD, LTM, RACR	RI/FS	Phase II Removal Action for IP1 in 2012.
Site 14 – Former Overbank Disposal Area Northeast	Soil	OU8	NFA ROD	SC	None	NA	
	Groundwater	OU9	NFA ROD	SC	None	NA	
Site 15 – Former Spent Acid Storage and Disposal Area	Soil	OU6	NFA ROD	SC	None	NA	
	Groundwater	OU9	NFA ROD	SC	None	NA	
Site 16 – Former Hospital Incinerators	Soil	OU11	NFA ROD	SC	None	NA	
Site 17/Zone 3 – Lower Subase – Former Hazardous Materials /Solvent Storage Area (Former Building 31)	Soil	OU4	None	None	ROD, RD, LUC RD, GMP, RACR	RI/FS	Additional work under CTDEP RSRs.
	Groundwater	OU4	None	None	ROD	RI/FS	ROD might be NFA.
	Surface Water	OU4	None	None	ROD	RI/FS	ROD might be NFA.
	Thames River Sediment	OU4	None	None	ROD	RI/FS	ROD might be NFA.
Site 18 – Solvent Storage Area (Building 33)	Soil	OU11	NFA ROD	SC	None	NA	
	Groundwater	OU9	NFA ROD	SC	None	NA	

TABLE 1-1

SITE CLOSEOUT STATUS OF IR PROGRAM SITES
2011 SITE MANAGEMENT PLAN
NSB-NLON, GROTON, CONNECTICUT

Site/Zone	Medium	Operable Unit	Latest Core Document Completed	Milestones Completed	Core Documents Needed	Current Phase	Comments
Site 19/Zone 4 – Lower Subase – Former Solvent Storage Area (Former Building 316)	Soil	OU4	None	None	ROD	RI/FS	Outside of residential LUC boundary. ROD might be NFA.
	Surface Water	OU4	None	None	ROD	RI/FS	ROD might be NFA.
	Groundwater	OU4	None	None	ROD	RI/FS	Outside of residential LUC boundary. ROD might be NFA.
Site 20 – Area A Weapons Center	Soil and Sediment	OU7	CCR	RC, SC	RACR[(2)]	NA	
	Groundwater	OU9	NFA ROD	SC	None	NA	
Site 21/Zone 7 – Lower Subase – Berth 16	Soil	OU4	None	None	ROD, RD, LUC RD, GMP, RACR	RI/FS	Additional work under CTDEP RSRs.
	Groundwater	OU4	None	None	ROD, LUC RD, RACR	RI/FS	
	Surface Water	OU4	None	None	ROD	RI/FS	ROD might be NFA.
	Thames River Sediment	OU4	None	None	ROD	RI/FS	
Site 22/Zone 5 – Lower Subase – Pier 33	Soil	OU4	None	None	ROD	RI/FS	Additional work under CTDEP RSRs. ROD might be NFA.
	Groundwater	OU4	None	None	ROD	RI/FS	ROD might be NFA.
	Surface Water	OU4	None	None	ROD	RI/FS	ROD might be NFA.
	Thames River Sediment	OU4	None	None	ROD	RI/FS	ROD might be NFA.
Site 23 – Former Fuel Farm	Soil	NA	NA	NA	None under CERCLA	NA	Under CTDEP RSRs.
	Free Product	NA	NA	NA	None under CERCLA	NA	Under CTDEP RSRs.
	Groundwater	OU9	RACR, LUC RD	RIP	None	LTMgt	Might not achieve SC.
Site 24/Zone 6 – Lower Subase – Central Paint Accumulation Area (Building 174)	Soil	OU4	None	None	ROD	RI/FS	Additional work under CTDEP RSRs. ROD might be NFA.
	Groundwater	OU4	None	None	ROD	RI/FS	ROD might be NFA.
	Surface Water	OU4	None	None	ROD	RI/FS	ROD might be NFA.
	Thames River Sediment	OU4	None	None	ROD	RI/FS	ROD might be NFA.
Site 25/Zone 7 – Lower Subase – Former Classified Materials Incinerator	Soil	OU4	None	None	ROD, RD, LUC RD, GMP, RACR	RI/FS	Additional work under CTDEP RSRs.
	Groundwater	OU4	None	None	ROD, LUC RD, RACR	RI/FS	
	Surface Water	OU4	None	None	ROD	RI/FS	ROD might be NFA.
	Thames River Sediment	OU4	None	None	ROD	RI/FS	ROD might be NFA.
NSB-NLON Installation	All Media for IR Sites after Completed	OU4	NA	NA	Final RACR	NA	

(1) Site 1 formerly located within Site 2 boundary.
(2) RACR is needed only if Construction Completion Report is deemed unacceptable as a RACR.
(3) NFA under CERCLA. Petroleum-contaminated soil being addressed under applicable CTDEP RSRs.
(4) Draft RACR.
(5) Site 8 PRAP proposed NFA for surface water. ROD does not state NFA for surface water, but states monitoring may be expanded to include surface water.
(6) Site 9 is within Site 23.

CBU	Construction Battalion Unit
CCR	Construction Completion Report.
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CTDEP	Connecticut Department of Environmental Protection
DD	Decision Document
DRMO	Defense Reutilization and Marketing Office
GMP	Groundwater Monitoring Plan
LTM	Long-Term Monitoring
LTMgt	Long-Term Management
NA	Not Applicable
NFA	No Further Action
IP1	Inner Pier 1
OBDA	Overbank Disposal Area
OP1	Outer Pier 1
OT	Oil Tank
OU	Operable Unit
PRAP	Proposed Remedial Action Plan
RACR	Remedial Action Completion Report
RA-O	Remedial Action Operation
RC	Response Complete
RI/FS	Remedial Investigation/Feasibility Study
RIP	Remedy in Place
ROD	Record of Decision
RSRs	Remediation Standard Regulations
SC	Site Closeout
UST	Underground Storage Tanks

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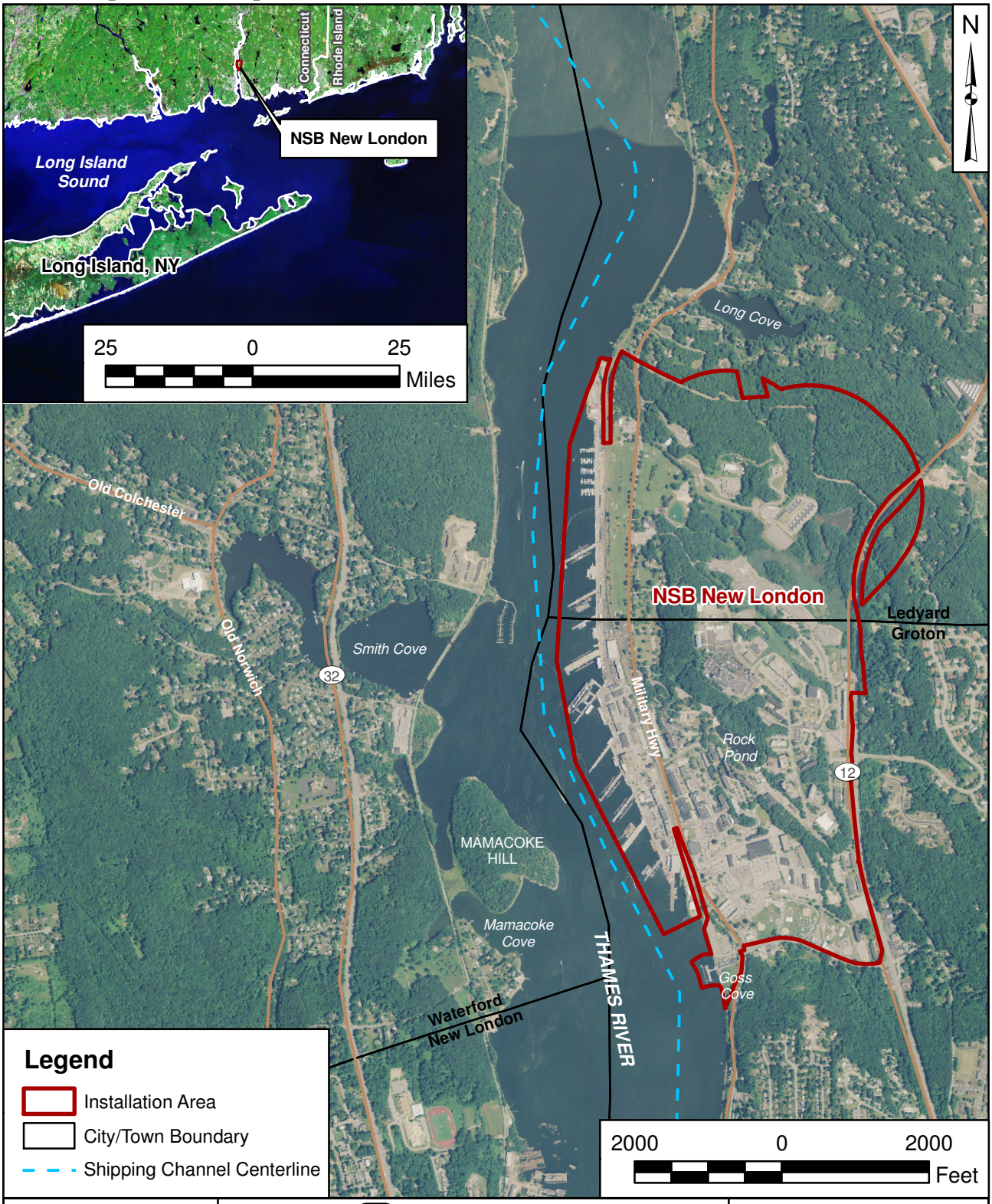


DRAWN BY T. WHEATON	DATE 04/07/10	Tetra Tech NUS, Inc.	CONTRACT NUMBER CTO WE54
CHECKED BY N. BALSAMO	DATE 04/12/10	FACILITY LOCATION MAP NAVAL SUBMARINE BASE - NEW LONDON GROTON, CONNECTICUT	APPROVED BY C. RICH DATE 05/03/10
COST/SCHEDULE AREA			APPROVED BY ___ DATE ___
SCALE AS NOTED			FIGURE NO. FIGURE 1-1 REV 0

LEGEND:

——— SITE BOUNDARY

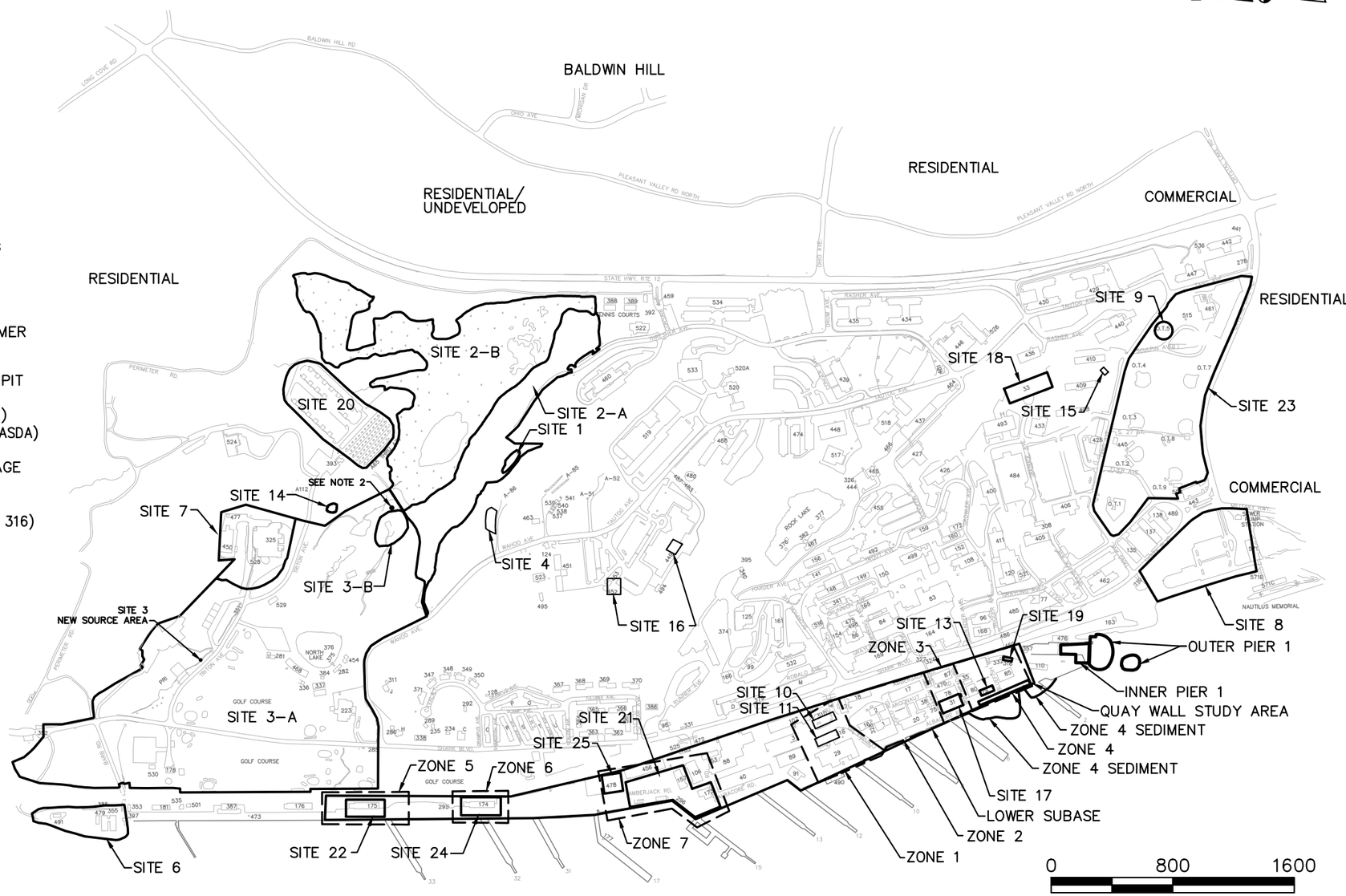
— — — LOWER SUBASE REMEDIAL INVESTIGATION ZONE BOUNDARY

SITE IDENTIFICATION:

SITE 1 – FORMER CONSTRUCTION BATTALION UNIT (CBU) DRUM STORAGE AREA
SITE 2 – (A) AREA A LANDFILL AND (B) AREA A WETLAND
SITE 3 – (A) AREA A DOWNSTREAM WATER COURSES AND (B) FORMER OVERBANK DISPOSAL AREA (OBDA)
SITE 4 – FORMER RUBBLE FILL AREA AT BUNKER A–86
SITE 6 – FORMER DEFENSE REUTILIZATION AND MARKETING OFFICE (DRMO)
SITE 7 – TORPEDO SHOPS
SITE 8 – GOSS COVE LANDFILL
SITE 9 – FORMER OILY WASTEWATER TANK (OT–5)
SITE 10 – LOWER SUBASE–FUEL STORAGE TANKS AND FORMER TANK 54–H
SITE 11 – LOWER SUBASE–POWER PLANT OIL TANKS
SITE 13 – LOWER SUBASE–BUILDING 79 FORMER WASTE OIL PIT AND INNER AND OUTER PIER 1
SITE 14 – OVERBANK DISPOSAL AREA NORTHEAST (OBDANE)
SITE 15 – FORMER SPENT ACID STORAGE AND DISPOSAL AREA (SASDA)
SITE 16 – FORMER HOSPITAL INCINERATORS
SITE 17 – FORMER HAZARDOUS MATERIALS/SOLVENT STORAGE AREA (FORMER BUILDING 31)
SITE 18 – SOLVENT STORAGE AREA (BUILDING 33)
SITE 19 – FORMER SOLVENT STORAGE AREA (FORMER BUILDING 316)
SITE 20 – AREA A WEAPONS CENTER
SITE 21 – BERTH 16
SITE 22 – PIER 33
SITE 23 – FORMER FUEL FARM
SITE 24 – CENTRAL PAINT ACCUMULATION
SITE 25 – LOWER SUBASE–FORMER CLASSIFIED MATERIALS INCINERATOR

NOTES:

1. SITE BOUNDARIES ARE APPROXIMATE.
2. LOCATION OF CONCRETE–CAPPED SOIL.



DRAWN BY BH DATE 5/6/10	Tetra Tech NUS, Inc.	SITE LOCATION MAP NSB–NLON GROTON, CONNECTICUT	CONTRACT NO. WE33
CHECKED BY NJB DATE 5/6/10			OWNER NO. 3386
REVISED BY DATE			APPROVED BY CAR DATE 5/10/10
SCALE 1" = 800'			DRAWING NO. FIGURE 1–2 REV.

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2.0 SITE DESCRIPTIONS AND GROUPINGS

This section presents a brief history and status for each site addressed in this SMP. Site-specific information is provided in text form, and site maps are provided as Figures 2-1 through 2-21.

2.1 SITE DESCRIPTIONS

2.1.1 Site 1 - Construction Battalion Unit Drum Storage Area

The CBU Drum Storage Area was an unpaved area located in the northern section of NSB-NLON, adjacent to the deployed personnel parking lot and within the boundary of the Area A Landfill. Figure 2-1 provides the general arrangement of the previous site location. The previous site location with respect to other IR sites at NSB-NLON is shown on Figure 1-2. The site was situated on a flat, open area at the base of a wooded hillside that sloped to the northeast toward the site at a 25 percent grade. The site was approximately 15 feet in width by 30 feet in length.

Twenty-six 55-gallon drums of waste oil, lubricating oil, and paint materials were observed at the site during the 1982 IAS (Envirodyne Engineers, Inc. [Envirodyne], 1983). Some of the drums were reportedly leaking at that time. The IAS report concluded that the site had not been used for several years. The site was inspected October 20, 1988, and two 55-gallon drums labeled as engine oil were observed. No surface soil staining or stressed vegetation was evident. The drums noted in the IAS report were reportedly removed and properly disposed by the Navy; the two drums observed in 1988 were also subsequently removed.

Phase I and Phase II RIs were conducted at Site 1. During the Phase II RI (B&RE, 1997b), it was determined that soil and groundwater samples collected in the vicinity of the site had relatively low concentrations of contaminants. Volatile organic compounds (VOCs) were detected in soil samples at concentrations less than or equal to 380 micrograms per kilograms (µg/kg). Only two VOCs (chlorobenzene and total xylenes) were detected in groundwater at concentrations of 12 and 24 micrograms per liter (µg/L), respectively. All semivolatile organics compounds (SVOCs) in groundwater were detected at concentrations less than or equal to 31 µg/L.

The human health risk assessment (B&RE, 1997b) concluded that the Incremental Cancer Risks (ICRs) for the stated exposure scenario did not exceed the USEPA acceptable risk range ($1x10^{-4}$ to $1x10^{-6}$). The evaluation of noncarcinogenic risk potential revealed that adverse effects were unlikely for the stated exposure scenarios.

It was also determined during the Phase II RI that the potential for this site to impact ecological receptors was low. Although the ecological risk assessment (B&RE, 1997b) concluded that contaminants associated with this site could adversely impact terrestrial vegetation, soil invertebrates, and terrestrial vertebrates, the calculations were performed using highly conservative estimates. Furthermore, the site was relatively small in areal extent and was characterized by compacted soil that supports limited vegetation and terrestrial species. Therefore, Site 1 did not provide a significant habitat for ecological receptors.

Historically, surface drainage from the CBU Drum Storage Area flowed northeast across the unpaved deployed personnel parking lot [which covered a portion of the Area A Landfill (Site 2A)] and into the Area A Wetland (Site 2B) via a catch basin and storm sewer located approximately 40 feet northeast of the CBU Drum Storage Area. Groundwater in this area flows in a northeasterly direction toward Area A Wetland (B&RE, 1997b). Because of the relatively low concentrations of detected contaminants, immobile nature of these contaminants within the soil matrix, and lack of contamination detected in groundwater, NFA was recommended for this site. The groundwater at this site was investigated as part of the Area A Landfill Groundwater Monitoring Program and the BGOURI (Tetra Tech, 2002a).

An NFA Decision Document for this site was signed by the Navy and regulators in September 1996 (USEPA, 1996). This document removed the CBU Drum Storage Area from further consideration under the IR Program process and changed the status of this site to RC. Although no Remedial Actions (RAs) were implemented specifically for Site 1, the site was covered by a low-permeable cap that was constructed over the Area A Landfill (Site 2A), which encompasses Site 1. Construction of this cap system was completed in September 1997.

A well inventory was conducted at NSB-NLON in 2007. This inventory included one Site 1 well (Tetra Tech, 2007b). The Site 1 well was not part of an active monitoring program and was abandoned in December 2007 (ECC, 2007b).

In 2009, a table and map were filed in the land record offices of the Towns of Groton and Ledyard, Connecticut to show the location of monitoring wells, note the remedy in place, and list contaminants of concern and LUCs that have been imposed at Site 2A, which encompassed former Site 1 (Navy, 2009c; Navy 2009d).

2.1.2 Site 2 - Area A Landfill and Area A Wetland

Site 2A - Area A Landfill

The Area A Landfill is a relatively flat area bordered by a steep, wooded hillside that rises to the south, a steep wooded ravine to the west, and the Area A Wetland to the north. Figure 2-2 shows the location of the Area A Landfill. The location of Site 2A relative to other IR sites is shown on Figure 1-2.

According to the IAS Report (Envirodyne, 1983), the landfill opened sometime before 1957. However, a 1957 aerial photograph shows no apparent landfilling, which may indicate a somewhat later start-up date. All combustible materials generated by base operations that were not salvageable were incinerated, and the residues were disposed in the Site 6 (former DRMO), Site 8 (Goss Cove), and Site 2A (Area A) Landfills. The base incinerator, which was located in the Lower Subase along the waterfront at the present location of Building 478, ceased operation in 1963. From 1963 to 1973, refuse and debris were disposed in the Area A Landfill. Landfilling operations ceased in 1973. The thickness of the landfill materials is estimated to range from 10 to 20 feet, based on test boring data.

The area fill method was reportedly used in landfill operations. New refuse was dumped along the face of previously deposited refuse and covered with earth. The cover material used on the landfill was sand and gravel obtained from the Groton water supply reservoir. After closure, a concrete pad was constructed in the southwestern portion of the landfill, adjacent and to the northeast of Building 373, for above-ground storage of industrial wastes. Up to the time of the RA-C at the Area A Landfill, the pad was still in existence. In the early 1980s, 42 steel drums, 87 transformers [mineral oil and polychlorinated biphenyl (PCB)], and 60 to 80 electrical switches were found to be stored on the pad. Two transformers and several electrical switches were reported to be leaking in the IAS, and past leakage of oil was also evident. Most drums were stacked on wooden pallets, and those having PCB labels were covered and bound with plastic sheeting. All these materials were subsequently properly disposed off site.

The IAS report indicated that refuse, including steel drums, oxygen candles, wood and metal scrap, concrete, and tires, was exposed at the edge of the landfill adjacent to the wetland. The IAS report also stated that petroleum compounds had recently been poured from containers at two locations in the northwestern portions of the landfill and had flowed into the Area A Wetland. According to the report, when batteries were overhauled, spent sulfuric acid solution was transferred to barrels and transported to the Area A Landfill for disposal. The acid was poured into trenches dug with a bulldozer and subsequently covered with soil. Based on records, established policy, and interviews, the potential for radioactive material having been disposed on site is considered to be effectively zero.

During a 1988 inspection of the site, iron floc was observed along the toe of the slope of the landfill, extending from the dike to the eastern end of the deployed personnel parking lot. Iron floc occurs when groundwater with high concentrations of iron discharges to an oxygen-rich environment. Bacteria use the iron and oxygen to form the orange iron floc. The slope of the landfill had been covered with fill, and waste material in the landfill was not visible. Sand bags, salt, supplies, and equipment were stored on top of the landfill. Several transformers, USTs, crane weights, and other equipment were previously stored on the concrete pad in the southwestern portion of the landfill.

A two-phase RI was conducted to determine the nature and extent of contamination at the Area A Landfill. The Phase I RI field investigation was conducted from 1990 to 1992 (Atlantic Environmental Services, Inc. [Atlantic], 1992) and consisted of test borings, monitoring well installation, and soil and groundwater sampling. Landfill materials encountered included glass, brick, wood, plastic, and ash intermixed with sand and gravel material used as cover. The Phase I RI concluded that several risk exposure scenarios exceeded acceptable regulatory levels and that an FS should be performed for the Area A Landfill site.

The Phase II RI field investigation was conducted from 1993 to 1995 (B&RE, 1997b) and consisted of test borings, monitoring well installation, and soil and groundwater sampling. The Phase II RI concluded that shallow groundwater contamination (i.e., VOCs, PCBs, and inorganics) exists at the site, landfill soil may pose a threat to human receptors due to concentrations of PCBs, and chemicals in soil could adversely impact ecological receptors. The Phase II RI recommended that, in addition to the installation of the landfill cover system, institutional controls, including access/use restrictions and groundwater monitoring, should be implemented at the site.

A Focused FS (FFS) for the Area A Landfill (Atlantic, 1995c) was completed in response to the recommendations of the Phase I and Phase II RIs. The FFS evaluated several remedial alternatives and concluded that the off-site disposal and off-site incineration alternatives would provide superior protection of the environment but that the capping alternative would be more cost effective than the incineration alternative. The capping alternative was selected as the preferred remedial alternative for the Area A Landfill soil OU. The alternative was presented in the Proposed Plan for the Area A Landfill soil OU in June 1995 (Atlantic, 1995d) and was formally selected in the ROD signed in September 1995 (Atlantic, 1995e).

An RA-C, which involved the construction of a low-permeability cover system over the landfill area, was performed at the Area A Landfill. The final cover system was constructed from March 3, 1997, through September 5, 1997 (B&RE, 1996b and 1998b). The CBU Drum Storage Area (Site 1) and the Rubble Fill Area at Bunker A-86 (Site 4) were also addressed during the RA-C at the Area A Landfill. Site 1, formerly

located within the boundary of the Area A Landfill, was capped at the same time as the landfill. Site 4 was located along the southern boundary of the Area A Landfill. Construction debris and contaminated soil and sediment from the site were removed as part of a time-critical removal action (TCRA) and incorporated into the Area A Landfill subgrade.

The analytical results from Year 1, Round 4 of the post-RA-C monitoring program were evaluated in the BGOURI Report (Tetra Tech, 2002a). The report recommended that the monitoring program be continued to gather data to evaluate long-term trends in contaminant concentrations and that the decision to proceed to an FS should be made after sufficient data have been collected and evaluated. The Area A Landfill human health risk assessment performed during the BGOURI evaluated potential risks from exposures to groundwater by construction workers. The risk assessment determined that risks for construction workers were within acceptable levels. The risk assessment was updated in a 2008 memorandum to account for current risk assessment guidance and Year 7 sampling results. The assessment confirmed that risks to construction workers exposed to groundwater would be acceptable; however, the assessment showed that there are potential risks to hypothetical residents that would exceed USEPA and CTDEP acceptable levels if groundwater is used as a drinking water supply. These risks are mitigated by the existing institutional controls that prohibit residential development of Site 2A. Potential risks resulting from volatilization of chemicals from groundwater and the migration through building foundations into indoor air were also evaluated. Using the USEPA and CTDEP screening criteria, concentrations of chloroform, tetrachloroethene (PCE), and trichloroethene (TCE) exceeded the USEPA screening criteria and were further evaluated using USEPA's Johnson and Ettinger Vapor Intrusion Model. Modeling results showed that cancer risks and hazard indices (HIs) for residential and industrial scenarios were within USEPA and CTDEP acceptable levels; therefore, vapor intrusion is not an issue at Site 2A (Navy, 2008b).

Groundwater at the Area A Landfill has been monitored for 11 years (Tetra Tech, 2001b; 2002d; 2003a; ECC, 2004e; 2005c; 2006c; 2008b; 2008n; 2009e; H&S, 2010; 2011b). Over time, VOCs, pesticides, and PCBs have been eliminated from the groundwater and surface water monitoring program, due to lack of detection of these compounds.

In the Year 9 Groundwater Monitoring Report (GMR), temporal plots showed a surprising and anomalous increase in arsenic and lead concentrations. One potential cause for the anomalous metals results is that a different Navy-certified analytical laboratory was used in 2008 than in past years. Previously, the chemical analysis method specified in the Quality Assurance Project Plan (QAPP) was modified in an attempt to avoid the possible matrix interference effects of salinity. When changing laboratories this modification did not get implemented (ECC, 2009e).

In 2010, it was determined that dredge spoil wells no longer require monitoring because they do not appear to be hydraulically connected to the landfill (USEPA, 2010a), but surface water monitoring in the wetland will be continued as an indicator of water quality impacts from the landfill (USEPA, 2010b).

Groundwater sampling results for Year 11 indicated that no SVOC concentrations exceeded criteria and no total metals concentrations exceeded background concentrations or criteria in monitored wells. Surface water sampling results for Year 11 indicated that no SVOC concentrations exceeded criteria, but comparison of dissolved metals concentrations to criteria indicated that the staff gauge SG-1 duplicate sample dissolved lead concentration exceeded the lead criterion (H&S, 2011b). Overall, the results of 11 years of monitoring indicate that the cap system is working properly and that significant contaminant migration from the site to surrounding areas is not occurring.

The ROD for OU9, Basewide Groundwater (groundwater at Sites 2A, 2B, 3, 7, 9, 14, 15, 18, 20, and 23), was signed in September 2008 (Navy, 2008b). The OU9 ROD determined that groundwater monitoring at Sites 2A and 2B will continue, as required by the OU1 ROD and the Operations and Maintenance (O&M) Manual. Volume II (Groundwater Monitoring Plan) of the O&M Manual was revised in 2008 (REV 2 Draft) and 2010 (REV 2 Draft Final) to address USEPA comments on the 2006 O&M Manual and updated site information for Site 2A (Tetra Tech, 2008g; 2010f). The Final O&M Manual (REV 2) is expected to be completed in 2011.

Based on the Final ROD for OU9, a Remedial Design (RD) for Land Use Controls (LUCs) on Basewide Groundwater OU9 was prepared to provide the details of the LUCs for groundwater. The RD includes LUC objectives and implementation procedures for Site 2A (Tetra Tech, 2009e). The Remedial Action Completion Report (RACR) for OU9 was prepared to document completion of site remedies and ongoing activities at OU9, including Site 2A (Tetra Tech, 2010d).

Cover system O&M and groundwater monitoring at the Area A Landfill have been performed in accordance with the O&M Manual for IR Program sites (Tetra Tech, 2006a). The O&M process includes annual inspections, reporting of results, and correcting any identified problems. The findings of the inspections are documented in the field on inspection checklists and summarized in Annual Landfill Inspection Reports (LIRs) for 2003 through 2010 (ECC, 2004a; 2005e; 2005h; 2008d; 2008k; 2009b; 2009i; H&S, 2011a). Volume III (Site 2A O&M) of the O&M Manual was revised in 2008 (Tetra Tech, 2008g) and 2010 (Tetra Tech, 2010f) to address USEPA comments on the 2006 O&M Manual and update site information for Site 2A.

A well inventory was conducted at NSB-NLON in 2007. This inventory included 47 Site 2A wells (Tetra Tech, 2007b). As a result of the inventory, 41 Site 2A wells that were not part of an active monitoring program were abandoned in 2007 (ECC, 2007b; Tetra Tech, 2008a).

The site use restrictions document [Standard Operating Procedure - Administrative (SOPA) (ADMIN) New London Instruction 5090.18C] was updated in 2006 (Navy, 2006c) to address allowable loading pressures for the Area A Landfill asphalt and again in 2008 to include maps of existing and abandoned wells and an updated map of soil and groundwater LUCs (Navy, 2008c). To meet the LUC requirements in the ROD, the Navy implemented an updated instruction [SOPA (ADMIN) New London Instruction 5090.25] (Navy, 2009b). The instruction implements the Area A Landfill OU1 and OU9 ROD and the RD for LUCs and established management policies for sites still being investigated under the Navy IR Program. The instruction prohibits excavation in, and groundwater extraction from Site 2A, as well as alteration of or damage to monitoring wells and the landfill cap. In 2009, a table and map were filed in the land record offices of the Towns of Groton and Ledyard, Connecticut to show the location of monitoring wells, note the remedy in place, and list contaminants of concern and LUCs imposed at Site 2A (Navy, 2009c; Navy 2009d).

As presented in Table 1-1, the status of Area A Landfill soil and groundwater are RC and the current phase is long-term management (LTMgt). A majority of the Area A Landfill is paved and is currently used for storage of equipment and vehicles. Groundwater and surface water are currently monitored annually, and Year 12 (Round 24) of groundwater and surface water monitoring were performed in April 2011. Monitored COCs for groundwater and surface water include selected SVOCs, polynuclear aromatic hydrocarbons (PAHs), and metals. The annual site inspection was performed in spring 2011 and routine maintenance will be performed as needed.

Site 2B - Area A Wetland

The Area A Wetland is located north of the Area A Landfill (see Figure 2-3). The location of the Area A Wetland was undeveloped, wooded land and was possibly a wetland until the late 1950s. In the late 1950s, dredge spoils from the Thames River were pumped to this area and contained within an earthen dike that extends from the Area A Landfill to the southern side of the Area A Weapons Center.

The Area A Wetland is underlain by dredge spoils that consist of silt and clay with traces of fine sand and shell fragments. The thickness of dredge spoils ranges from 25 to 35 feet on the southern side of the wetland, adjacent to the landfill, and from 10 to 15 feet on the northeastern side of the wetland. The total volume of dredged material in the wetland is approximately 1.2 million cubic yards.

A small pond is located at the southern portion of the wetland, within which 1 to 3 feet of standing water is present during all seasons. *Phragmites* is the predominant type of vegetation. It was reported that pesticide "bricks" were placed on the wetland ice during winter and allowed to dissolve as a mosquito control measure. These "bricks" consisted of formulated (water-soluble) 1,1,1-trichloro-2,2-bis(4-chlorphenyl)ethane (DDT) and were used in the 1960s prior to the 1972 ban on DDT.

A two-phase RI was conducted to determine the nature and extent of contamination at the Area A Wetland. The Phase I RI field investigation was conducted from 1990 to 1992 (Atlantic, 1992) and consisted of test borings, monitoring well installation, and soil, sediment, and groundwater sampling. The Phase I RI concluded that several risk exposure scenarios exceeded acceptable regulatory levels and that an FS should be performed for the Area A Wetland site.

The Phase II RI field investigation conducted from 1993 to 1995 (B&RE, 1997b) consisted of test borings, monitoring well installation, and sediment, surface water, and groundwater sampling. The Phase II RI concluded that little evidence of surface water or groundwater contamination exists at the site, that the site may pose a risk to construction workers due to potential exposure to manganese in the groundwater, and that significant pesticide, PCB, and polynuclear aromatic hydrocarbon (PAH) concentrations exist in site soil and sediment. The recommendations in the Phase II RI indicated that an FS should be conducted for this site that evaluates a limited action alternative, it was also indicated that the alternative should include groundwater monitoring and access/use restrictions. Based on a recommendation in the Second Five-Year Review, the Navy is currently pursuing further investigation of the site and preparation of an FS.

The Phase II RI human health risk assessment was updated in a 2008 memorandum to account for current risk assessment guidance and Year 7 sampling results. The assessment confirmed that risks to construction workers exposed to groundwater would be acceptable; however, the assessment showed that there are potential risks to hypothetical residents that would exceed USEPA and CTDEP acceptable levels if groundwater is used as a drinking water supply. These risks are mitigated by the existing institutional controls that prohibit residential development of Site 2B. Potential risks resulting from exposure to chemical volatilization from groundwater and the migration to indoor air through building foundations were also evaluated in a separate memorandum. TCE and PCE exceeded USEPA and CTDEP screening criteria and were further evaluated in the USEPA Johnson and Ettinger Vapor Intrusion Model. Modeling results showed that cancer risks and HIs for residential and industrial scenarios were within USEPA and CTDEP acceptable levels and vapor intrusion is not an issue at Site 2 (Navy, 2008b).

An RI update and FS for sediments in OU 12 were completed in 2010 (Tetra Tech, 2010b). A Phase III investigation of the sediments at the Area A Wetland was conducted in October 2007 (Tetra Tech,

2008b). The major objectives of the investigation were to further refine the nature and extent of contamination in sediments and to provide sufficient data to determine potential risks to ecological receptors from contaminated sediments. A secondary objective of the investigation was to determine the thickness of the overlying organic layer that has formed above the dredge spoils. A Phase IV Investigation of the sediments at the Area A Wetland was planned in 2008 (Tetra Tech, 2008e) and conducted in October 2009. The objective of that investigation was to collect sediment samples for chemical analysis and toxicity testing to determine whether the samples were toxic to sediment invertebrates. The data were used to develop site-specific Preliminary Remediation Goals (PRGs). The PRGs were used in the FS to establish areas that will be remediated and restored with wetland vegetation. A Proposed Plan for sediment at Site 2B (Navy, 2010a) was completed and a ROD for OU12 was signed in August 2010 (Navy, 2010b).

The Navy, in cooperation with the CTDEP Wetlands habitat and Mosquito Management Program's Phragmites Control Team, initiated a program in 2010 to control *phragmites* in the Area A Wetland through mechanical and chemical methods. The extent of the program includes mowing the *phragmites* twice (spring 2010 and winter 2010/2011) and applying herbicide after each mowing event (summer 2010 and summer 2011). The biomass created during the mowing will be left in place as mulch to naturally degrade. The initial mowing and herbicide treatment were completed in 2010. The second mowing was completed in February 2011 and the second herbicide treatment is scheduled for August 2011. After the *phragmites* has been removed and the area shows signs of recovery, the Navy will work with the regulatory agencies to assess natural recruitment and coordinate potential future mitigation measures.

The groundwater and surface water at the Area A Wetland (dredge spoil) were monitored under the Site 2A long-term groundwater monitoring program; however, future monitoring at Site 2B will include only surface water. A summary of the groundwater and surface water monitoring results is presented in the Site 2A discussion.

The ROD for OU9, Basewide Groundwater (groundwater at Sites 2A, 2B, 3, 7, 9, 14, 15, 18, 20, and 23), was signed in September 2008 (Navy, 2008b). The OU9 ROD determined that groundwater and surface water monitoring at Sites 2A and 2B will continue, as required by the OU1 ROD (Atlantic, 1995e) and the O&M Manual. Volume II (Groundwater Monitoring Plan) of the O&M Manual was revised in 2008 and 2010 to address USEPA comments on the 2006 O&M Manual and update site information for Site 2A (Tetra Tech, 2008g; 2010f). The status of Site 2B groundwater and surface water is RIP.

A well inventory was conducted at NSB-NLON in 2007. This inventory included 24 Site 2B wells (Tetra Tech, 2007b). As a result of the inventory, three Site 2B wells that were not part of an active monitoring program were abandoned (ECC, 2007b; Tetra Tech, 2008a). The remaining wells at Site 2B are idle. The

majority of the wells are near Site 2A and are shown on Figure 2-2, but the two wells in the middle of the wetland and the two wells west of Site 2B are shown on Figure 2-3.

Based on the Final ROD for OU9, a RD for LUCs on Basewide Groundwater OU9 was prepared to provide the details of the LUCs for groundwater. The RD includes LUCs for Site 2B (Tetra Tech, 2009e). The RACR for OU9 was prepared to document the completion of site remedies and ongoing activities at OU9, including Site 2B (Tetra Tech, 2010d). In 2009, a table and map were filed in the land record offices of the Towns of Groton and Ledyard, Connecticut to show the location of monitoring wells, note the remedy in place, and list contaminants of concern and LUCs imposed at Site 2B (Navy, 2009c; Navy 2009d).

As shown in Table 1-1, the most recent Site 2B milestone is the ROD. A pre-design investigation sampling and analysis plan (SAP) was prepared to address data gaps in the RI Update/FS Report for the Area A Wetland (Tetra Tech, 2010b) and to better define the extent of contaminated sediment that requires excavation. The samples were collected during one event (April 2011) and were analyzed in two phases. Analysis of the second phase samples was determined to be necessary based on the results of the first phase. A third and final phase of sediment sampling and analysis may be necessary to fully define the extent of contaminated sediment. The results will be used in conjunction with the existing data to refine the extent of contamination and volume of contaminated sediment that requires excavation (Tetra Tech, 2011d).

2.1.3 Site 3 - Area A Downstream Watercourses and Overbank Disposal Area

Site 3A - Area A Downstream Watercourses/OBDA Pond

Site 3 covers approximately 75 acres and receives surface water and groundwater recharge from the Area A Landfill (Site 2A), Area A Wetland (Site 2B), Site 7, Site 14, and surrounding areas and conveys them to the Thames River. Site 3 includes Upper Pond, Lower Pond, OBDA Pond, and Streams 1 through 6. The major sources of contamination to Site 3 included historical application of pesticides, abandoned disposal areas, and the septic system leach fields at Site 7. The general configuration of the Area A Downstream Watercourses and adjacent areas is shown on Figure 2-4. The location of this site relative to other IR sites at NSB-NLON is shown on Figure 1-2.

The primary water discharge point from the Area A Wetland to the Area A Downstream Watercourses is through four 24-inch-diameter metal culvert pipes located within the dike that separates the Area A Wetland from the Area A Downstream Watercourses. The discharge from these culverts forms a small stream (Stream 4) that flows westward approximately 200 feet into Upper Pond. Upper Pond discharges to Stream 3, which flows northward then westward toward Triton Avenue (past the OBDANE site) to the entrance of the Torpedo Shops. At this location, it meets the drainage channel from the Torpedo Shops

and forms Stream 5. Stream 5 flows westward along Triton Avenue through the Small Arms Range and under Shark Boulevard, eventually discharging to the Thames River at the DRMO outfall. A second pond (Lower Pond), northwest of Upper Pond, is a natural depression recharged by groundwater inflow. The outlet of the pond forms Stream 2, which enters a storm sewer and flows west, around North Lake.

Groundwater passing beneath the Area A Landfill/Wetland dike discharges to a small pond (the OBDA Pond) located at the base of the dike and the OBDA. Stream 1 flows from this pond westward toward North Lake, a recreational swimming area for Navy personnel. Under normal flow conditions, the stream enters a culvert that by-passes North Lake and discharges to a stream (Stream 6) below the outfall of the lake. Stream 6, which is formed by Stream 1, Stream 2, and the outflow of North Lake, flows westward under Shark Boulevard and through the golf course to the Thames River. North Lake is filled with potable water every year and drained at the end of the season. Surface water levels in North Lake do not appear to coincide with groundwater levels in adjacent monitoring wells, indicating little hydraulic connection between the surface water of North Lake and shallow groundwater.

Most of the area is within designated Explosive Safety Quantity Distance (ESQD) arcs of the Area A Weapons Center; therefore, further development is not planned for this area. Navy regulations prohibit construction of inhabited buildings or structures within these arcs and, although existing buildings operate under a waiver of these regulations, no further construction is planned.

The main cause of contamination at the Area A Downstream Watercourses was the application of pesticides. These pesticides were reportedly applied on the surface of water bodies to control mosquito proliferation adjacent to nearby base recreational facilities (North Lake and golf course). Additional contaminants are inorganic constituents of the river dredge spoil and Area A Landfill material that have been carried over from adjacent sites. Samples of surface soil and sediment contained mainly DDT, 1,1-dichloro-2,2-bis(4-chlorphenyl)ethane (DDD), and 1,1-dichloro-2,2-bis(4-chlorphenyl)ethene (DDE), collectively referred to as total DDT isomers (DDTR), and small amounts of other pesticides such as dieldrin. Samples of sediment also contained relatively high levels of several metals such as arsenic, beryllium, cadmium, lead, and zinc, compared to less contaminated reference areas outside the site.

A two-phase RI/FS was conducted to investigate and determine appropriate remedial alternatives for Site 3. The Phase I RI field investigation was conducted from 1990 to 1992 (Atlantic, 1992) and consisted of test borings, monitoring well installation, and soil, surface water, sediment, and groundwater sampling. The RI concluded that several risk exposure scenarios exceeded acceptable regulatory levels and that an FS should be performed for the site. A draft FFS (Atlantic, 1994c) was completed for soil and sediment at the site. Additional soil and sediment samples were collected and analyzed during the FFS to further define the extent of contamination. The FFS concluded that off-site landfilling and on-site

thermal desorption provide superior protection of the environment and that the landfilling alternative would be more cost effective than the on-site thermal desorption alternative.

The Phase II RI field investigation conducted from 1993 to 1995 (B&RE, 1997b) included test borings, monitoring well installation, and soil, surface water, sediment, and groundwater sampling. A soil gas survey and an extensive ecological investigation were also completed during the Phase II RI. The Phase II RI concluded that VOCs were present in groundwater at Site 3, the site poses noncarcinogenic risks to the site worker and older child trespasser, and notable concentrations of pesticides exist in site soil and sediments. The Phase II RI recommended that the FS for this site should be revisited to focus on pesticides in soil and sediment, more sampling should be conducted to delineate pesticide contamination and determine the origin of VOCs in groundwater, and debris associated with the OBDA should be removed.

Following the Phase II RI, an FS was completed in 1997 for soil and sediment at Site 3 (B&RE, 1997j). An alternative that included dredging, on-site dewatering, off-site disposal of sediment and soil, restoration of wetlands and waterways, and monitoring was selected for the site, and the selected remedy was documented in the ROD signed in March 1998 (B&RE, 1998c). An RD was completed for soil and sediment at Site 3 in 1998 and 1999 [Foster Wheeler Environmental Corporation (FWEC), 2000], and the RA-C for Site 3 soil and sediment was completed in 1999 and 2000 (FWEC, 2001). During the RA-C excavation activities, contaminated soil and sediment were discovered in and around two abandoned pipes at the headwaters of Stream 4. Because this contaminated material could not be removed without seriously compromising the integrity of the Area A Dike, the ends of the pipes were isolated and encapsulated with concrete.

A post-construction restoration and monitoring program was conducted for 3 years to verify the success of site restoration activities. Wetlands functions and values and survival rates of vegetation were two of the key elements monitored. Some replanting of vegetation has been conducted based on the recommendations of the monitoring program. The status of the Site 3A soil and sediment remediated under the OU3 ROD is RC.

A previously unknown source of petroleum contamination was detected during the RA-C at Site 3. The source, found during the remediation of Stream 5, is located on the northern side of the stream just east of the Small Arms Range. Petroleum product was discovered emanating from the northern side of the excavation. Upon further investigation, a small disposal area (i.e., buried drums, cable, etc.) was discovered upgradient of the location where petroleum was discovered. The site was named the Site 3 – NSA. The Site 3 – NSA was not remediated at the time of the RA-C because the nature and extent of contamination were unknown; however, absorbent booms and hay bales were put in place during

construction activities to minimize the migration of contamination downstream, and plastic sheeting was placed along the stream bank prior to backfilling to minimize further contaminant migration to Stream 5.

Based on the recommendations of the Phase II RI, further investigation of groundwater at Site 3 was completed during the BGOURI (Tetra Tech, 2002a). The field work for the BGOURI was completed prior to the identification of the Site 3 – NSA. The scope of the investigation included the installation of temporary monitoring wells and sampling of groundwater in temporary and existing permanent monitoring wells. Chlorinated VOCs similar to those detected during the Phase II RI were detected at lower concentrations during the BGOURI. It was hypothesized that the Site 3 – NSA, or an upgradient source such as the leach fields at Site 7, may have been the source of the VOCs.

A DGI was conducted at Site 3 in fall 2002 to investigate the NSA and to confirm the groundwater results of the BGOURI. The results of the DGI were presented in the BGOURI Update/FS (Tetra Tech, 2004). The soil sampling program and a portion of the groundwater sampling program were the focus to determine the overall nature and extent of contamination at Site 3 – NSA. The remaining portion of the groundwater sampling program was focused on to confirm the nature and magnitude of the groundwater contamination identified during the BGOURI. Petroleum contamination was identified at the Site 3 – NSA during the DGI; however, no significant source of VOC contamination was identified at the Site 3 – NSA. The groundwater data collected during the DGI indicated that the VOC contamination was originally released upgradient in the Site 7 area and is in the process of migrating through Site 3. It is likely that the primary original compound released was TCE. There were detections of VOCs along Stream 5 from Site 7 to the Thames River. Comparisons of results from the Phase II RI, BGOURI, and DGI showed that VOC concentrations in groundwater were decreasing steadily and that degradation products from the dechlorination of TCE were detected, indicating that natural attenuation was occurring.

An FS (Tetra Tech, 2004) was completed to identify and evaluate appropriate remedial alternatives for soil at Site 3 – NSA and for groundwater at Site 3. A ROD was signed for Site 3 – NSA soil in September 2004 (Navy, 2004a). The ROD called for NFA for the petroleum-contaminated soil because petroleum is excluded from consideration under CERCLA; however, the Navy's cleanup plan to address the petroleum-contaminated soil under other applicable regulations was detailed in an appendix to the ROD. The Site 3 – NSA soil corrective action was completed to meet Connecticut regulations in October 2007.

Institutional controls and monitoring were selected as the remedy for Site 3 groundwater in the Interim ROD in 2004 (Navy, 2004d). A LUC RD was subsequently completed for Site 3 groundwater in June 2005 (Tetra Tech, 2005). To meet the LUC requirements in the ROD, the Navy implemented an updated instruction [SOPA (ADMIN) New London Instruction 5090.18D] (Navy, 2008c). The instruction defined

the Navy's policy regarding ground surface disturbance of soils/sediments, subsurface disturbance of soils/sediments and/or groundwater extraction, and disturbance of any remedial infrastructure at IR sites.

A well inventory was conducted at NSB-NLON in 2007. This inventory included 22 Site 3A wells (Tetra Tech, 2007b). As a result of the inventory, 11 Site 3A wells that were not part of an active monitoring program were abandoned (ECC, 2007b). The updated instruction, SOPA (ADMIN) 5090.25 restricts the use of IR Program sites at NSB-NLON and includes current mapping of existing and abandoned wells (Navy, 2009b).

The Navy began implementation of the groundwater monitoring program, as described in the Remedial Action Work Plan (Tetra Tech, 2006b) and Site 3 Groundwater Monitoring Plan (Tetra Tech, 2006a), in April 2006. Site 3 wells were monitored quarterly during Years 1 and 2, once in Year 3, twice in Year 4, and the frequency was changed to annually starting in Year 5 (Tetra Tech, 2007c; ECC, 2008g; Tetra Tech, 2008h; H&S, 2010, 2011b). After Round 9, it was recommended that Site 3 monitoring wells 2DMW25S, 2DMW28D, 3MW15I, and 3MW15S be abandoned by the Navy if they are no longer needed for other programs because there were no detections of contaminants of concern (COCs) during Rounds 1 through 9 (Tetra Tech, 2008h). In the most recent groundwater monitoring report (2010), no vinyl chloride was detected and TCE was below criteria in samples from all five monitored wells. It was recommended in the report that wells 2DMW16S, 2DMW16D, 3MW16S, 3MW16D, and 2DMW29S continue to be monitored for TCE and vinyl chloride (H&S, 2011b).

Potential risks resulting from exposures to chemicals that have volatilized from groundwater and migrated through building foundations into indoor air were also evaluated in a 2008 memorandum by comparing concentrations of volatile chemicals detected in groundwater to USEPA and CTDEP screening criteria for vapor intrusion. Concentrations of chloroform, TCE, and vinyl chloride exceeded the USEPA screening criteria and were further evaluated using the USEPA's Johnson and Ettinger Model. Modeling results showed that cancer risks and HIs for residential and industrial scenarios did not exceed USEPA acceptable levels. Cancer risks for chloroform and vinyl chloride for residential exposures exceeded CTDEP acceptable risk levels. Cancer risks for TCE based on California Environmental Protection Agency toxicity criteria (as recommended by USEPA Region 1) were within CTDEP acceptable levels for residential and industrial scenarios, but cancer risks based on draft USEPA toxicity criteria exceeded CTDEP acceptable levels (Navy, 2008b). As a result, the Navy provided notice to the CTDEP that buildings will not be constructed within 100 feet of monitoring well 2DMW29S, unless CTDEP and USEPA Region 1 are notified in advance and appropriate measures are taken to mitigate VOCs (Navy, 2009a). In addition, the OU9 LUC RD requires that building construction activities within this localized area of Site 3 must be coordinated through the IR program manager (Tetra Tech, 2009e).

Based on the discovery and encapsulation of contaminated material during the Site 3 soil RA-C, an Explanation of Significant Difference (ESD) was prepared to document the change in the remedy as presented in the 1998 ROD (Navy, 2007). The selected remedy described in the ROD included excavation and off-site disposal of contaminated soil. The RA-C, which included excavation and disposal of approximately 18,050 tons of contaminated soil and sediment, was completed in 2000. However, as described above, an area of contaminated soil and sediment in and around two abandoned pipes could not be excavated without compromising the integrity of the Area A Dike; therefore, this area was encapsulated with concrete rather than excavated. The estimated volume of sediment within the pipes, based on assumptions that the two pipes are completely filled with sediment and that the pipes are 18 inches in diameter and 100 feet long, is 13 cubic yards. The estimated volume of contaminated soil left in place around the pipes is a few cubic yards. Because contaminated material was left in place instead of removed (as was planned based on the remedy detailed in the ROD), institutional controls are now required as part of the remedy. The ROD for OU9, Basewide Groundwater was completed in September 2008 (Navy, 2008b). The final selected remedy for groundwater at Site 3 is Institutional Controls with Monitoring. Tetra Tech Volume II (Groundwater Monitoring Plan) of the O&M Manual was revised in 2008 (REV 2 Draft) and 2010 (REV 2 Draft Final) to address the USEPA comments on the 2006 O&M Manual and to update site information for Site 3 (Tetra Tech, 2008g; 2010f). The Site 2 Inspection Checklist in Volume III of the O&M Manual was revised in 2008 to include inspection of the Site 3 ESD concrete cover and institutional controls document (Tetra Tech, 2008g). In 2010, these items were removed from the Site 2 Inspection Checklist; Volume VI was added to the O&M Manual for Site 3 inspection, including inspection of the Site 3 ESD concrete cover, institutional controls, and groundwater monitoring wells (Tetra Tech 2010f). The concrete that encapsulates contaminated soil was inspected in 2010 and was found to be stable and adequate to prevent erosion (H&S, 2011a). The status of the ESD soil and sediment is RC. Because the concrete cover requires Institutional Controls and inspections, the current phase is LTMgt. The ESD concrete cover is now inspected annually, and was last inspected in April 2011.

Based on the Final ROD for OU9, the 2004 LUC RD was updated to include the entire Basewide Groundwater OU9 (Tetra Tech, 2009e). The RACR for OU9 was prepared to document the completion of site remedies and ongoing activities at Site 3A (Tetra Tech, 2009b). In 2009, a table and map were filed in the land record offices of the Towns of Groton and Ledyard, Connecticut to show the location of monitoring wells, note the remedy in place, and list contaminants of concern and LUCs imposed at Site 3A (Navy, 2009c; Navy 2009d).

As shown in Table 1-1, the most recent milestone completed for Site 3 groundwater is RIP. Groundwater will be continue to be monitored for natural attenuation until remedial goals (RGs) are met; therefore, the current phase is Remedial Action Operation (RA-O). Groundwater is currently being monitored annually,

and Year 6 (Round 13) of groundwater monitoring was performed in April 2011. Monitored groundwater COCs are trichloroethene and vinyl chloride. In the most recent groundwater monitoring report (2010), no vinyl chloride was detected and TCE was below criteria in samples from all five monitored wells. After 4 years of annual monitoring are performed with all results less than RGs, the monitoring program can be discontinued and groundwater LUCs can be eliminated.

Site 3B - OBDA Debris

The OBDA was located on the slope of an earthern dike below and adjacent to the Area A Landfill (Figures 2-2 and 2-4). It was located on the southwestern end of the dike where the angle of the slope approaches 45 degrees. A small wetland at the base of the dike has been designated as the OBDA Pond. The OBDA was used as a disposal site after the earthen dike was constructed in 1957. The IAS report (Envirodyne, 1983) indicated that the material had been there for many years. The IAS report also indicated that the materials were not covered and included 30 partially covered 200-gallon metal fuel tanks and scrap lumber. The site was inspected in 1998; it was observed that the tanks were still present at the site, and old creosote telephone poles, several empty, unlabeled 55-gallon drums, and rolls of wire were also present at the site. Orange iron floc was observed in the sediments in the area where water was discharging from the base of the dike embankment.

The OBDA Pond, located downgradient of the OBDA, was investigated as part of the Area A Downstream Watercourses during the Phase I and II RIs and the FFS and FS for that site. No investigative activities were completed within the limits of the disposal area. All of the debris from the OBDA area was removed and disposed off-site as part of a non-time-critical removal action (NTCRA) in 1997. This removal action was completed during the Area A Landfill RA because the sites are located adjacent to one another. An Engineering Evaluation/Cost Analysis (EE/CA) and Action Memorandum were prepared in 1997 to document the decision process for the NTCRA (Navy, 1997b). The soil resulting from the decontamination of debris and concrete debris was incorporated into the subgrade of the Area A Landfill. Two gas cylinders were removed from the OBDA; one of the tanks (i.e., acetylene) was disposed as hazardous waste. All other debris was disposed off-site as clean waste in permitted landfills or at metal recycling facilities. Because the debris has been removed, the status of this site is RC.

A well inventory was conducted at NSB-NLON in 2007. This inventory included four Site 3B wells (Tetra Tech, 2007b). As a result of the inventory, two Site 3B wells that were not part of an active monitoring program were abandoned (ECC, 2007b; Tetra Tech 2008a).

In 2009, a table and map were filed in the land record offices of the Towns of Groton and Ledyard, Connecticut to show the location of monitoring wells, note the remedy in place, and list contaminants of

concern and LUCs imposed at Site 3A (includes 3B) (Navy, 2009c; Navy 2009d). The milestone completed for the former OBDA is RC.

2.1.4 Site 4 - Rubble Fill Area at Bunker A-86

Site 4 was a 25-foot by 60-foot plot located in the north-central section of NSB-NLON, approximately 80 feet west of Former Bunker A-86 and just south of the Area A Landfill. The site map is included as Figure 2-5. The previous site location, with respect to other IR sites at NSB-NLON, is shown on Figure 1-2. According to the IAS report (Envirodyne, 1983), waste materials, including an electric motor, concrete, asphalt, tar buckets, wood, and gravel were discarded at the site in the early 1970s. In addition to wood and concrete construction debris, previous investigations located an empty 5-gallon container of monothanolanine (labeled as a corrosive), an empty 5-gallon container of thorite (labeled as nonshrinking compound for patching concrete), and a 55-gallon drum of lubricating oil approximately 10 percent full, at the site (Atlantic, 1992).

A low-permeability cover system was installed over the Area A Landfill in 1997. In conjunction with the construction of this cover system, an interception trench was constructed into the hillside between the Area A Landfill and Site 4. Grading required for the construction of the interception trench involved excavating the soil at Site 4 and the hillside between Site 4 and the Area A Landfill to a depth of approximately 8 feet. This excavation constituted a TCRA for Site 4, and an Action Memorandum was written for this site in September 1997 (Navy, 1997d).

Site 4 soil and construction debris were excavated during the removal action and incorporated into the Area A Landfill subgrade, except wood debris, which was sampled and disposed off-site (FWEC, 1997a). Following excavation, verification sampling was conducted in an area of about 17,000 square feet to determine the extent of residual contamination. The Verification Sampling Report (B&RE, 1997c) concluded that, if the human health risk assessment conducted for the Phase II RI was revised using the verification sampling data, the cumulative Incremental Cancer Risk (ICR) would exceed the upper limit of the USEPA target risk range (i.e., $1x\ 10^{-4}$). Based on this information, the Navy decided to remove the remaining soil at Site 4, leaving only exposed bedrock. The Navy prepared a risk evaluation memorandum in March 1998 to document the negligible remaining risks associated with the site. An NFA Proposed Plan (Navy, 1998c) and ROD (Navy, 1998d) were prepared for this site. The status of this site is considered to be RC. Site 4 soil has achieved SC.

The groundwater in this area is being monitored in conjunction with the Site 2A long-term groundwater monitoring plan.

A well inventory was conducted at NSB-NLON in 2007. This inventory included five Site 4 wells (Tetra Tech, 2007b). Three of these wells had been documented as previously abandoned. Of the two remaining Site 4 wells, one is part of the active monitoring program for Site 2 and the other is idle.

2.1.5 Site 6 - Former Defense Reutilization and Marketing Office

Site 6 is located adjacent to the Thames River in the northwestern section of NSB-NLON. The site map is included as Figure 2-6. The site's location relative to other IR sites is shown on Figure 1-2. The site is located between a bedrock outcrop that runs roughly parallel to the Providence and Worchester Railroad to the east and the Thames River to the west. The site covers approximately 3 acres that gently slopes toward the Thames River. A majority of the site is paved with an asphalt layer, and includes buildings, a weighing scale, and miscellaneous storage piles. Currently, the former DRMO site is used as a yacht club boat storage area.

From 1950 to 1969, the DRMO was used as a landfill and waste-burning area. Non-salvageable waste items, including construction materials and combustible scrap, were burned along the Thames River shoreline, and the residue was pushed to the shoreline and partially covered.

During the review of archived aerial photographs of the DRMO area, the 1934 photographs show fill in the southern portion of the site. Fill for bulkheads and docks south of the DRMO did not exist at that time. Aerial photographs from 1951 show the land in its present configuration, except the northwestern portion, which was not filled at that time.

During a site inspection on September 30, 1988, it was noted that metal and wood products were stored throughout most of the site. Buildings 355 and 479 are located in the southern, paved portion of the site and are primarily used for storage. A large scrap yard is located north of Building 479. Building 491, located in the northern, unpaved portion of the site, was used to store miscellaneous items, including batteries. Metal scrap bailing operations are performed adjacent to Building 491 on a gravel surface. Building 491 formerly housed a battery-acid-handling facility. Submarine batteries were previously stored in the southeastern portion of the site, adjacent to the railroad tracks. No evidence of leaks was observed. An in-ground, rubber-lined tank and associated pumping facilities were noted on the plans. DRMO personnel indicated that the tank actually may have been installed directly adjacent to the building to the east.

A Conforming Storage Facility Report [Goldberg-Zoino & Associates (GZA), 1988] for the DRMO was prepared in 1988 as a requirement for the siting of a hazardous waste storage facility in the northern portion of the DRMO. The study performed for the report indicated the presence of PCBs and other contaminants at the DRMO.

A two-phase RI was conducted to determine the nature and extent of contamination at the DRMO. The Phase I RI field investigation conducted from 1990 to 1992 (Atlantic, 1992) consisted of test borings, monitoring well installation, and soil, surface water, and groundwater sampling. Some evidence of the former landfill was encountered during the drilling, including wood fragments, brick, and metal but predominate evidence was earthen fill material. The depth of the fill varied from 0 to 8 feet. Human health risks were determined for Navy workers due to exposure to PCBs, PAHs, and beryllium in the surface soil and due to elevated lead levels in soil at the northern portion of the site. In addition, groundwater quality exceeded drinking water standards; however, no drinking water wells were located within the affected area nor could they be, due to the proximity of the brackish Thames River. Risks to fish in the Thames River estuary were determined to be low from contaminants contained in groundwater discharged from the site. It was recommended that the site proceed to the FS phase. It was also recommended that specific health and safety provisions be made for all subgrade construction projects at the site. The risks were primarily related to incidental oral and dermal exposure of site workers to contaminated surface soils (Atlantic, 1992).

A field investigation in support of the draft FFS was performed at the DRMO in October 1993 to better define the extent of soil contamination. Surface and subsurface soil samples were collected from 17 borings, and one of the borings was completed as a monitoring well. The soil borings indicated that the depth of fill ranged from approximately 1.5 to 20 feet. Fill material consisted of wood, glass, and metal scrap in a predominately sand and gravel matrix (Atlantic, 1994a).

A TCRA was completed at the site in January 1995 at generally the same time as the Phase II RI. Initial activities at the site included pre-excavation sampling and analysis focused on better defining the limits of PCB-contaminated soils in the areas to be excavated. Confirmatory soil sampling and analysis were conducted on the sidewalls of the excavations. Human health and ecological risks associated with the soil left in place after the removal action were evaluated during the Phase II RI. Approximately 2,500 cubic yards of lead-, PAH-, and PCB-contaminated soils were excavated from the northern portion of the DRMO as part of a TCRA. The excavated area was backfilled with clean soil, and the excavated soil was transported off site to a RCRA landfill (B&RE, 1997b). The backfilled area was then capped with woven geotextile liner, a geosynthetic clay liner, a nonwoven geotextile liner and approximately 9 inches of crushed stone, and 3 inches of asphalt. The remaining portion of the DRMO was repaved. An Action Memorandum was prepared in March 1995 (Atlantic, 1995b) to document the removal action completed at the DRMO.

The Phase II RI field investigation was conducted from 1993 to 1995 (B&RE, 1997b) and consisted of the installation of five new monitoring wells, two rounds of groundwater sampling, and subsurface soil sampling. The Phase II RI concluded that the majority of contaminated soil had been removed, that groundwater was not significantly affected, and that relatively low human health and ecological risks were associated with the

DRMO. The Phase II RI recommended that an FS be prepared for DRMO soil and groundwater and that groundwater monitoring be conducted to verify that significant contamination is not leaching to groundwater.

An FS (B&RE, 1997g) was completed for soil and groundwater at the DRMO, and the selected remedial alternative (institutional controls and monitoring) was documented in an interim ROD (Navy, 1998a). As part of the FS, volumes of soil remaining at the site after the 1995 TCRA that exceed PRGs were estimated based on the current industrial land use scenario and a future residential land use scenario. The majority of remaining contaminated soil is below the water table. Soil with contaminant concentrations greater than industrial PRGs remains in three areas totaling 11,230 square feet to depths from 6 to 10 feet, resulting in a total approximate volume of 3,150 cubic yards. Soil with contaminant concentrations greater than residential PRGs remains in six areas totaling 107,780 square feet to depths from 3 to 10 feet, resulting in a total approximate volume of 13,572 cubic yards.

O&M of the cover system at the former DRMO is being performed in accordance with the O&M Manual for Installation Restoration Program Sites (Tetra Tech, 2006a). The O&M process includes annual inspections, reporting of results, and correcting any identified problems. Site 6 has been inspected annually since 2003. The findings of the inspections are documented in the field on inspection checklists and summarized in Annual LIRs (ECC, 2004b; 2005f; 2005i; 2008e; 2008i; 2009c; 2009i; H&S, 2011a). Volume IV (Site 6 O&M) of the O&M Manual was revised in 2008 and 2010 to address USEPA comments on the 2006 O&M Manual and update site information for Site 6 (Tetra Tech, 2008g; 2010f).

A groundwater monitoring program began at the DRMO in April 1998 in accordance with the Groundwater Monitoring Plan (B&RE, 1998a) and is ongoing (Tetra Tech, 2006a). The results of the program are being used to verify the effectiveness of the cap in reducing infiltration and leaching of contaminants and to confirm that contamination is not migrating from soil to groundwater and eventually to the Thames River. To date, the monitoring results have not shown any significant contaminant migration issues (H&S, 2011b). Based on the results of the monitoring program, a final ROD for Site 6 was signed in December 2006 (Navy, 2006b). The selected remedial alternative is similar to the interim remedy selected in 1998 and includes institutional controls, monitoring, and five-year reviews.

Site 6 has been monitored annually for 11 years (Tetra Tech, 1999e; 2000a; 2002b; 2003b; ECC, 2004f; 2005d; 2006a; 2008c; 2008h; 2009e), then biennially since 2008 (H&S, 2011b). The results of 2010 monitoring indicate that none of the COCs exceeded primary monitoring criteria (H&S, 2011b). The results indicate that the TCRA at the site removed sufficient contaminant source material and reduced infiltration of precipitation through any remaining source material so that significant contaminant migration from the site to the Thames River is not occurring.

Volume II (Groundwater Monitoring Plan) of the O&M Manual was revised in 2008 (REV 2 Draft) and 2010 (REV 2 Draft Final) to address USEPA comments on the 2006 O&M Manual and update site information for Site 6 (Tetra Tech, 2008g; 2010f). The Final O&M Manual (REV 2) is expected to be completed in 2011.

A well inventory was conducted at NSB-NLON in 2007. This inventory included 15 Site 6 wells (Tetra Tech, 2007b). As a result of the inventory, seven Site 6 wells not part of the active monitoring program were abandoned (ECC, 2007b).

To meet the land use control requirements in the ROD, the Navy implemented an updated instruction [SOPA (ADMIN) New London Instruction 5090.25] (Navy, 2009b) to restrict the use of IR sites at NSB-NLON. The instruction defines the Navy's policy regarding ground surface disturbance of soils/sediments, subsurface disturbance of soils/sediments and/or groundwater extraction, and disturbance of any remedial infrastructure at IR sites. SOPA (ADMIN) 5090.25 includes current mapping of existing and abandoned wells. In 2009, a table and map were filed in the land record offices of the Towns of Groton and Ledyard, Connecticut to show the location of monitoring wells, note the remedy in place, and list contaminants of concern and LUCs that have been imposed at Site 6 (Navy, 2009c; Navy 2009d).

An RA Completion Report was prepared to document implementation of the soil and groundwater remedies at the site (Tetra Tech, 2007a). As shown on Table 1-1, the most recent milestone completed for Site 6 soil and groundwater is RC, and the current phase is LTMgt. Groundwater is currently being monitored biennially, and the most recent monitoring even was Round 21 (Year 12) in 2010. Monitored groundwater COCs include selected VOCs, SVOCs, PAHs, and metals. The annual site inspection was performed in April 2011 and routine maintenance will be performed as needed.

2.1.6 Site 7 - Torpedo Shops

The Torpedo Shops (Site 7) are located in the northern portion of NSB-NLON on the northern side of Triton Road. Figure 2-7 shows the general site arrangement. The site location with respect to other IR sites at NSB-NLON is shown on Figure 1-2. The site covers approximately 7 acres and is bordered on the east and north by 60-foot-high bedrock cliffs. The remainder of the site slopes to the southwest toward the Area A Downstream Watercourses (Site 3). An earthen berm extends along the base of the eastern portion of the exposed rock face. Three buildings (325, 450, and 477) exist at the site.

Building 325, a torpedo overhaul facility, was built in 1955 and had an on-site sanitary septic system until 1983, when all the building's plumbing facilities were connected to sanitary sewers. The original septic leach field for Building 325 is located southwest of the building, adjacent to Triton Road. This leach field

became clogged in 1975 and was abandoned. A new leach field (south leach field) was constructed next to the original leach field and was used until sanitary sewers were installed in 1983.

A visual inspection of Building 325 was performed March 20, 1989. According to interviews with on-site personnel, a variety of fuels, solvents, and petroleum products have been used in the building. Otto Fuel II [which is comprised of propylene glycol dinitrate (76 percent), 2-nitrodiphenylamine (1.5 percent), and di-n-butyl sebacate (22.5 percent) and produces hydrogen cyanide when burned], high-octane alcohol (190-proof grain alcohol), and TH-Dimer (jet rocket fuel) were observed in maintenance areas. Solvents including mineral spirits, alcohol, and 1,1,1-trichloroethane, as well as petroleum products such as motor oil and grease, were used in this building. A sink in one area was previously used for film development, and another sink was used for the overhaul of alkaline batteries. These sinks drained into the on-site septic system until 1983. A maintenance area has a shallow sump covered with a flush-mounted steel grating. The area surrounding this sump was previously a washdown/blowdown area for weapons. This sump drains to the storm sewer system on the western side of Building 325. Two No. 2 fuel oil USTs were located on the southern side of this building. One of the tanks was closed in 1995. A third tank, which was located above ground adjacent to the building, was used for temporary storage of No. 2 fuel oil but, based on field reconnaissance, had been removed as of March 15, 1995.

A smaller building attached to the eastern side of Building 325 was previously used as an assembly shop for torpedoes and as a paint shop. During a previous inspection at the building, a storage closet was found to include containers of 1,1,1-trichloroethane and methyl ethyl ketone (2-butanone). Drums and cylinders were stored outside on the eastern side of this building. The vessels were labeled as containing propane, isobutane, 2-butanone, xylot, methylene chloride, propellant, and zinc chromate. An addition to the northern side of Building 325 was under construction at the time of the 1989 inspection and has since been completed. This addition is also used as a torpedo shop.

Building 450 is the primary MK-48 torpedo overhaul/assembly facility. It was built in 1974 and was served by its own septic system until 1983 when it was connected to sanitary sewers. Only domestic wastewater from toilets, lavatories, and showers in Building 450 was directed to the septic field (north leach field). Torpedo overhaul/assembly operations in Building 450 generate fuels, solvents, and petroleum products as wastes. An Otto fuel and seawater mixture is drained from the torpedoes, which are then replenished with fresh fuel. The IAS report indicated that Building 450 generates approximately 3,000 gallons of Otto fuel wastewater per month. This building was constructed with a waste collection system that collected waste products from floor drains then discharged to an underground waste tank/sump with a capacity of approximately 1,500 gallons. The waste tank was pumped periodically and the contents were disposed off site. Otto fuel product was previously stored in a 4,000-gallon underground tank south of Building 450.

Building 477, approximately 65 feet east of Building 450, was formerly used to store drums of Otto fuel. On-site personnel report that solvents including 1,1,1-trichloroethane, TCE, toluene, mineral spirits, alcohol, and bulk freon have been used at this facility. Petroleum products, including TL-250 motor oil and hydraulic fluid, have also been used in this building for torpedo maintenance. In the past, only domestic wastewater from toilets, lavatories, and showers in Building 450 was directed to the septic field (north system).

Atlantic performed a site inspection of Building 450 on March 20, 1989. The former septic leach field is located southwest of this building in a flat, elevated area. The hazardous waste sump was no longer in use and reportedly was decommissioned in 1987. It was replaced with three 1,000-gallon above-ground tanks located south of the building. The floor drains were sealed and replaced with a new system for pumping waste products to the new tanks. A 4,000-gallon above-ground Otto fuel storage tank replaced the previous tank and is located south of the building. No construction is planned for the immediate future at Building 450.

The Phase I RI (Atlantic, 1992) for Site 7 focused primarily on subsurface soil, because the sources being investigated at that time were the subsurface leach fields. The investigation began with a soil gas survey of the area surrounding Buildings 450 and 325. These results were used to guide the installation of monitoring wells and the collection of soil samples from well and test borings. The Phase I RI concluded that there were negligible health risks associated with the Torpedo Shops and that this site should proceed to Step II of the IR Program (Phase II RI).

During the Phase II RI (B&RE, 1997b), several matrices were investigated (i.e., soil, groundwater, surface water, and sediment), and contamination was detected in soil and groundwater at the site that required further characterization; however, relatively low human health and ecological risks were estimated for the site. Minimal exceedances of state criteria were observed for sediment, and no chemicals detected in surface water exceeded state human health Ambient Water Quality Criteria (AWQC) for the consumption of organisms and/or water and organisms.

Phase II RI sampling results included notable detections of contamination in soil and groundwater near the abandoned leach field. A human health risk assessment showed that non-cancer risks were at less than acceptable levels except for the construction worker and future resident, and cancer risks were at less than acceptable levels except for a hypothetical future resident. The Phase II RI recommended that further characterization of the Torpedo Shops be completed before determining whether or not the site should proceed to the FS stage.

A removal action was completed within Site 7 along the southern side of Building 325 in December 1995. This action was completed under the CTDEP UST Program. The focus of the effort was to remove soil contaminated with TPHs in excess of the direct exposure remediation standard for residential use. Approximately 12 cubic yards of soil were removed from the site and disposed at an approved landfill (B&RE, 1996a).

The BGOURI (Tetra Tech, 2002a) was completed based on the recommendation of the Phase II RI. The objectives of the BGOURI at Site 7 were to further characterize the nature and extent of soil and groundwater contamination in the vicinity of the abandoned septic system and to quantify risks to human receptors from soil and groundwater contamination. Organic contaminant detections in soils were scattered and were primarily PAHs. Metals detections were scattered and were generally only slightly greater than background concentrations. Groundwater sampling results from the BGOURI indicated that there are only sporadic, low concentrations of contaminants in groundwater. A small plume of chlorobenzenes was detected west of Building 325, but there were no other discernable contaminant plumes of any size, indicating that there are no significant sources leaching contamination to groundwater at Site 7. Chemical concentrations [bis(2-ethylhexyl)phthalate and TCE] in several wells located within the western portion of Site 7 exceeded Maximum Contaminant Levels (MCLs); however, the exceedances varied from well to well. The human health risk assessment showed that risks posed by exposure to contaminated soil at Site 7 were generally low; however, risks posed by two chemicals exceeded CTDEP's target level for individual chemicals, and there were several chemicals detected at concentrations greater than CTDEP's direct exposure criteria. The risk assessment also determined that risks to current receptors from exposure to groundwater at Site 7 are within acceptable levels, but future residential groundwater usage could result in unacceptable risks.

An FS (Tetra Tech, 2004) was completed to identify and evaluate appropriate remedial alternatives for soil and groundwater at Site 7. The ROD for Site 7 and Site 14 soil (OU8) was signed in September 2004 (Navy 2004b), and the Interim ROD for Sites 3, 7, 14, 15, 18, and 20 groundwater (OU9) was signed in December 2004 (Navy, 2004d). The remedy selected for soil was excavation and off-site disposal. A Remedial Action Work Plan [Tetra Tech EC, Inc. (Tetra Tech EC), 2006a] was prepared for Site 7 soil in 2006, and the RA for the soil was completed in May 2006 (Tetra Tech EC, 2006b). Approximately 1,150 tons of soil and 125 tons of asphalt were removed during the RA. The remedy selected for groundwater was institutional controls and monitoring. A LUC RD was completed for Site 7 groundwater in June 2005 (Tetra Tech, 2005), and the Navy began implementation of the groundwater monitoring program as described in the Remedial Action Work Plan and Site 7 Groundwater Monitoring Plan (Tetra Tech, 2006a) in May 2006. The COCs identified in Site 7 groundwater that precipitated the need for groundwater LUCs are 1,4-dichlorobenzene, benzene, chlorobenzene, TCE, and hexachlorobenzene. The RGs for these COCs were identified in the Interim ROD (Navy, 2004c) and revised in Final ROD to

include CTDEP volatilization criteria. The results of the 2008 vapor intrusion evaluation indicated that NFA is required for vapor intrusion issues at Site 7 (Navy, 2008b). The RC milestone has been achieved and the status of Site 7 soil is SC (see Table 1-1).

The monitoring results presented in the Round 9 Groundwater Monitoring Report (Tetra Tech, 2008h) indicate that the selected remedial action for Site 7 groundwater successfully reduced COC concentrations to levels below RGs. This data supported the discontinuation of LUCs at Site 7. Volume II (Groundwater Monitoring Plan) of the O&M Manual was revised in 2008 to remove Site 7 from the groundwater monitoring program (Tetra Tech, 2008g).

A well inventory was conducted at NSB-NLON in 2007. This inventory included 22 Site 7 IR program wells and one non-IR program well (Tetra Tech, 2007b). As a result of the inventory, 11 Site 7 wells that were not part of an active monitoring program were abandoned (ECC, 2007b).

The RD for LUCs on Basewide Groundwater OU9 documented NFA for Site 7 (Tetra Tech, 2009e) and the RACR for OU9 acknowledged that the RA is complete and that monitoring, LUCs, and five-year reviews have been discontinued (Tetra Tech, 2009b). However, the completion of the groundwater remedial action at Site 7 will be documented in the Third Five-Year Review Report that will be completed in 2011. The RC milestone has been achieved and the status of Site 7 groundwater is SC (see Table 1-1).

2.1.7 Site 8 - Goss Cove Landfill

The Goss Cove Landfill (Site 8) is located in the southwestern corner of NSB-NLON, adjacent to the Thames River. It is west of Shark Boulevard and the intersection of Crystal Lake Road and Military Highway, east of the Thames River, and north of Goss Cove. Figure 2-8 displays the general site arrangement. The site location with respect to other IR sites at NSB-NLON is shown on Figure 1-2. The landfill encompasses approximately 3.5 acres. The Nautilus Museum and a paved parking lot are constructed directly over the site of the former landfill. The Nautilus Museum is a submarine museum operated by the Navy and open to the public.

The IAS report (Envirodyne, 1983) indicated that the Goss Cove Landfill was operated from 1946 through 1957. Incinerator ash and inert rubble were disposed at the site in what was then the northern portion of Goss Cove. It is not known if any other materials were disposed in the former landfill. It has been reported that several large compressed gas cylinders were uncovered during the excavation of a utility trench in the parking area north of the Nautilus Museum building. One of the cylinders was leaking propane, one was filled with ammonia, and the others were empty.

In a 1934 aerial photograph, the limits of Goss Cove appeared to be open water with no evidence of fill. Railroad tracks are shown in the photograph at the same location as they are currently, between the cove and the Thames River. In 1951 aerial photographs, fill extended to the south to approximately the current location of an access driveway to the museum. The 1965 aerial photographs show the landfill extending to the present limit of encroachment on Goss Cove. Aerial photographs from 1965, 1970, 1975, and 1980 show cars parked on the landfill surface. In 1986 photographs, the Nautilus Museum is present on the southern limits of the landfill, and a paved parking area extends over the remaining portion of the landfill to the north. Construction of the Nautilus Museum was completed in 1985. Construction of an addition to the Nautilus Museum was completed in 2000.

The boring logs generated during the construction of the Nautilus Museum indicated the presence of fill material consisting of cinders, metal, brick, glass, and sand and gravel to a depth of 15 feet. Beneath the fill is a layer of organic silt approximately 10 to 15 feet thick. This material is presumably the sediment bottom of the former cove. The silt is underlain by fine sand to depths ranging from 25 to 100 feet below the surface. The thickness of overburden increases from east to west, toward the river.

A two-phase RI was conducted to determine the nature and extent of contamination at the Goss Cove Landfill. The Phase I RI field investigation, conducted from 1990 to 1992 (Atlantic, 1992), consisted of a soil gas survey, test borings, monitoring well installation, and soil, surface water, and groundwater sampling. Overburden monitoring wells were installed within the former landfill, and groundwater samples were obtained. One surface water sample was collected in the Thames River downstream of the landfill. The RI recommended that the site proceed to Step I of the IR Program and additional investigations be conducted at the site.

The Phase II RI field investigation conducted from 1993 to 1995 (B&RE, 1997b) included the collection of surface and subsurface soil samples from well borings. Surface and subsurface soil samples were also collected from test borings. Shallow and deep monitoring wells were installed, and groundwater samples were collected from Phase I and Phase II monitoring wells during two rounds of sampling. Surface water and sediment samples were also collected during the Phase II RI from the perimeter of Goss Cove. Additional sediment sampling was conducted in Goss Cove to perform a supplemental Toxicity Identification Evaluation (TIE). Three rounds of air sampling were performed, including the collection of air samples from within and around the Nautilus Museum.

Full-time employees, older child trespassers, construction workers, and future residents were evaluated as potential human receptors in the site-specific human health risk assessment completed during the Phase II RI. The results of the risk assessment showed that no unacceptable human health risks are associated with exposure to various media, based on exposure to average contaminant concentrations.

All estimated HIs for incidental ingestion, inhalation, and dermal contact with contaminated media were less than 1.0. All estimated cancer risks for these exposure routes were within the USEPA target risk range and less than the cumulative CTDEP target risk of $1x10^{-5}$. Human health risks were also calculated under conditions involving exposure to maximum contaminant concentrations [i.e., the reasonable maximum exposure (RME) scenario] for all potential human receptors. Estimated HIs for the construction worker, older child trespasser, and future resident exceeded 1.0. Elevated risks for the construction worker were primarily attributable to PCE in groundwater, and risks for the future resident were primarily attributable to PCBs, arsenic, and antimony in soil. Estimated cancer risks for the full-time employee, older child trespasser, construction worker, and future resident all exceeded Connecticut's cumulative target cancer risk of $1x10^{-5}$. Except for the construction worker, elevated risks were associated with soil ingestion resulting from exposure to PAHs and arsenic. An additional exposure route of concern was dermal contact with groundwater for the construction worker. PCE was the main contributor to the carcinogenic risks for dermal contact with groundwater. Quantitative risks associated with exposure to ambient air at the Nautilus Museum were calculated for a full-time employee under RME conditions only. The estimated HI (0.28) was significantly less than unity for a full-time employee. The cumulative cancer risk ($1x10^{-5}$) was within the USEPA target risk range and was equal to the CTDEP target risk.

Results of the Phase II RI ecological risk assessment, conducted on samples of surface water and sediment collected in the cove, indicated that several inorganics and organic compounds (i.e., metals and pesticides) were found at concentrations in excess of benchmark values protective of aquatic biota, suggesting that aquatic biota inhabiting the cove could be adversely impacted. In response to the results of the studies conducted during Round I of the Phase II RI, additional sampling was conducted in Goss Cove during the supplemental ecological sampling round. The results indicated that four COCs (aluminum, copper, nickel, and heptachlor) were present in surface water at concentrations that represent a potential risk to aquatic biota. A number of chemicals also had Hazard Quotients (HQs) greater than 1.0, suggesting that benthic macroinvertebrates were potentially at risk. The results of toxicity tests confirmed that chemicals present were biologically available in concentrations that could adversely impact aquatic biota. Results of the simultaneous extracted metals (SEM)/acid volatile sulfide (AVS) analyses conducted to determine the biological availability of copper, cadmium, nickel, lead, and zinc demonstrated that these five metals are not biologically available.

A DGI was conducted in January 1997 (B&RE, 1997e) to determine the source of the PCE contamination detected in groundwater samples collected during the Phase II RI. The DGI concluded that the source of PCE contamination detected in groundwater is off site and upgradient of the site and is likely a neighboring dry cleaning establishment. The CTDEP conducted a Phase I/II Environmental Site Assessment of the dry cleaners in 1998 (CTDEP, 1999). The assessment involved interviewing the operator of the dry cleaners and collecting medium-specific samples. The results of the investigation

conclusively showed that the dry cleaners released PCE to the environment. This information indicates that the dry cleaner is the source of the PCE detected in downgradient groundwater at the Goss Cove Landfill. CTDEP is addressing the source of PCE contamination. They completed injection of an in-situ chemical oxidation agent (permanganate) into the source area and have completed monitoring of soil and groundwater concentrations.

An FS for soil/waste and sediment at Site 8 (Tetra Tech, 1999c) was prepared in 1999. Additional investigations conducted as part of the FS included the following:

- A desktop modeling effort to evaluate the potential for migration of COCs from the former Goss Cove Landfill into Goss Cove. Results of this modeling effort showed that such migration is unlikely to occur in the future.

- A Wetlands Functions and Values Assessment to evaluate if ecological stress in the Goss Cove water body was a result of natural conditions or due to migration of contamination from NSB-NLON sites. This study evaluated the marginal cove vegetation in terms of its ecological functions and values and identified the wetland species associated with the fringing belt. The results of this assessment were that the contrast between the Thames River and cove side is dramatic due to the lack of tidal flushing. Although some tidal action occurs within the cove, it does not appear adequate to aid in supporting a rich, viable, intertidal algal population and invertebrate biota. This may be related to water quality because it appears that estuarine organisms can and have become established in the cove in the past but have failed to thrive.

- Because the Phase II RI ecological risk assessment showed potential risks to ecological receptors from Goss Cove sediment, further investigation and evaluation of the sediment was completed. An Evaluation of Chemical and Toxicological Data study was conducted in 1998 (SAIC, 1998) to evaluate chemical and toxicological relationships for sediments in Goss Cove. The objectives of the study were to establish toxicological response relationships to contaminants in Goss Cove sediments, to describe the extent of ecological risks associated with chemical contaminants in Goss Cove sediments, and to identify risks for biological effects. Chemical, toxicological, and TIE data were collected at 10 stations. The results supported the conclusion of a lack of correlation between contaminants and observed ecological effects. It may be possible to improve benthic habitat quality by reducing hypoxic conditions in the cove, thereby reducing ammonia concentrations that appear to cause the depauperate aquatic community.

The investigations showed that contaminant levels detected in sediment and surface water in Goss Cove did not pose potential adverse risks to human health or the environment. Based on these findings, NFA

was recommended for these media. The two remedial alternatives evaluated for the soil/waste in the FS were no action and installation of an engineered control cap (presumptive remedy) with institutional controls and monitoring. The capping alternative was selected for Site 8, and the ROD for this site was signed by the Navy and regulators in September 1999 (Navy, 1999). Other components of the remedy as detailed in the ROD, included institutional controls to prevent disturbance of the cap and site soil, long-term groundwater monitoring to evaluate the effectiveness of the cap and to ensure that contaminants do not migrate to Goss Cove or the Thames River, and five-year reviews.

The RD for Site 8 soil began in October 1999. Additional field work (i.e., field survey, geotechnical field investigation, and geotechnical laboratory testing program) was conducted to collect the necessary data to complete the design. The RD was finalized in November 2000 (Tetra Tech, 2000b), and construction of the engineered cap system was completed in June 2001 (FWEC, 2002c).

The BGOURI was completed (Tetra Tech, 2002a) to further evaluate the potential risks identified in the Phase II RI associated with exposure to groundwater by human receptors. The field work for the BGOURI was completed prior to construction of the engineered cap system. Groundwater samples were collected from existing permanent monitoring wells to further characterize the site. The analytical data from the RI indicated that sources of VOCs, SVOCs, and metals within the fill material are continuing to impact the shallow groundwater at the site. It is likely that these chemicals are mobile and being transported in the groundwater to the Thames River. However, the results of the human health risk assessment showed that all risks for construction workers exposed to groundwater at Site 8 were less than or within target risk ranges. The BGOURI recommended that the Navy complete the RA-C for the soil, implement LUCs, and begin groundwater monitoring in accordance with the Groundwater Monitoring Plan (Tetra Tech, 2001a) after finalization of the RA-C. It was recommended that the decision for preparation of an FS for groundwater at Site 8 be postponed until site conditions stabilize and trends in groundwater contaminant concentrations are determined based on the results of the groundwater monitoring program. However, it was subsequently determined that groundwater monitoring, as detailed in the ROD, was sufficient and that a separate groundwater ROD was not required.

O&M of the cap system at Site 8 and groundwater monitoring are being performed in accordance with the O&M Manual for IR Program Sites (Tetra Tech, 2006a). The O&M process includes annual inspections, reporting of results, and correcting any identified problems. Site 8 has been inspected annually since 2003. The findings of the inspections are documented in the field on inspection checklists and summarized in annual LIRs (ECC, 2004c; 2005g; 2005j; 2008f; 2008j; 2009d; 2009i). In addition, culverts were inspected by video in 2004, 2005, 2007, 2008, and 2009 (ECC, 2005a; 2006b; 2007a; 2008l; 2009g). Volume V (Site 8 O&M) of the O&M Manual was revised in 2008 to address USEPA comments on the 2006 O&M Manual and update site information for Site 8 (Tetra Tech, 2008g).

The groundwater monitoring program for Site 8 began in 2001 (Tetra Tech, 2001a), and the results of the program are being used to verify the effectiveness of the cap in reducing infiltration and leaching of contaminants and to confirm that contamination is not migrating from the soil to groundwater and eventually to the Thames River. To date, groundwater has been monitored for 9 years (Tetra Tech, 2003c; ECC, 2004d; 2005b; 2006b; 2008a; 2008m; 2009a; H&S, 2010; 2011b). Temporal plots were constructed for Years 1 through 9 (Round 22) for each chemical of potential concern (COPC) to evaluate trends (H&S, 2011b). Fifteen COPCs had shallow downgradient results that were statistically higher than the upgradient concentrations and 14 COPCs had deep downgradient results that were statistically higher than the upgradient concentrations. In general, the plots indicated stable or decreasing trends in concentrations over the first 9 years of monitoring. High PCE concentrations in upgradient wells 8MW8D and 8MW10S, which have been attributed to a former neighboring dry-cleaning facility, appear to be decreasing slowly. Of monitored COPCs, only total and dissolved arsenic were detected above primary monitoring criteria and background concentrations during Round 22. Temporal plots indicated a continued decrease in total and dissolved arsenic concentrations during Round 22 from the anomalous Round 20 concentrations at the shallow and deep downgradient wells (H&S, 2011b).

Volume II (Groundwater Monitoring Plan) of the O&M Manual was revised in 2008 (REV 2 Draft) and 2010 (REV 2 Draft Final) to address USEPA comments on the 2006 O&M Manual and update site information for Site 8 (Tetra Tech, 2008g; 2010f). The Final O&M Manual (REV 2) is expected to be completed in 2011.

A well inventory was conducted at NSB-NLON in 2007. This inventory included 13 Site 8 wells (Tetra Tech, 2007b). As a result of the inventory, two Site 8 wells that were not part of an active monitoring program were abandoned (ECC, 2007b).

To meet the LUC requirements in the ROD, the Navy implemented an updated instruction [SOPA (ADMIN) New London Instruction 5090.25] to restrict the use of IR sites at NSB-NLON. The instruction defines the Navy's policy regarding ground surface disturbance of soils/sediments, subsurface disturbance of soils/sediments and/or groundwater extraction, and disturbance of any remedial infrastructure at IR sites. SOPA (ADMIN) 5090.25 includes current mapping of existing and abandoned wells (Navy, 2009b). In 2009, a table and map were filed in the land record offices of the Towns of Groton and Ledyard, Connecticut to show the location of monitoring wells, note the remedy in place, and list contaminants of concern and LUCs that have been imposed at Site 8 (Navy, 2009c; Navy 2009d).

As documented in Table 1-1, the status of Site 8 soil and groundwater is RC and the current phase is LTMgt. The status of Site 8 surface water and sediment is SC. Groundwater is monitored annually, and

Year 10 (Round 23) of the monitoring was performed in April 2011. Monitored groundwater COCs include selected VOCs, SVOCs, PAHs, and metals. The annual site inspection was performed in April 2011 and found that an aboveground storage tank (AST), its foundation (concrete pad), and associated piping were installed on the cap without prior knowledge or approval from the IRP Manager. An investigation is being planned to determine if installation of the AST impacted the Site 8 engineered cap system.

2.1.8 Site 9 - Oily Wastewater Tank (OT-5)

Site 9, Waste Oil Tank (OT-5), was an underground, concrete storage tank located between Sculpin Avenue and Tang Avenue in the southern portion of NSB-NLON. The investigations at Site 9 were conducted under the CTDEP RCRA UST Program. The site map is included as Figure 2-9. The site's location relative to other IR sites is shown on Figure 1-2. The tank had a diameter of approximately 112 feet and was 11 feet deep. The top of the tank was approximately 5 feet below the ground surface, and the tank had a capacity of approximately 750,000 gallons.

The tank was constructed in the 1940s and was used to store fuel oil. In the late 1970s, the tank was converted to a storage tank for bilge water and other waste solutions. Use of OT-5 stopped in 1993 and all tank contents including floating product and most of the settled sludge were removed. A residual sludge layer of approximately 2 to 3 inches was left in the tank during purging. This sludge contained PCBs at concentrations exceeding 500 milligrams per kilogram (mg/kg) [Halliburton NUS (HNUS), 1994a].

After OT-5 was emptied, groundwater infiltrated through cracks in the concrete surface and partially refilled the tank (HNUS, 1994a). Subsurface contamination of the surrounding soil and groundwater may have been caused by draining of the infiltrated water through the cracks and into the surrounding media.

In 1994, HNUS completed a removal action at OT-5 that included the removal and disposal of PCB-contaminated sludge at OT-5. Removal of OT-5 waste materials from the frac trailers and roll-off containers and off-site disposal of these waste materials was initiated by the Remedial Action Contractor (RAC) on July 21, 1994, and was completed on August 16, 1994. The waste stored inside the two frac trailers and the two roll-off containers was removed in accordance with the procedure described in the Removal Action Work Plan (HNUS, 1994b).

The liquid portion of the waste was aspirated from the frac trailers and roll-off containers into a PCB-dedicated vacuum trailer that was also used to ship the waste for off-site incineration and disposal at the Aptus facility located in Aragonite, Utah. A total of seven vacuum trailer loads were removed from the frac trailers and roll-off containers and shipped to Aptus. The solid portion of the waste was consolidated

into one of the two roll-off containers and shipped in that container for off-site incineration and disposal to the Aptus facility. The empty roll-off container was then returned to the site for decontamination.

Following waste removal, the inside surfaces of the frac trailers and roll-off containers were decontaminated, and wipe samples were collected for verification purposes from inside surfaces. The trailers and containers were decontaminated repeatedly until PCB concentrations in wipe samples were less than the required 10 µg per 100 square centimeter. The Post Removal Action Report (HNUS, 1994b) presents the results of the verification sampling and analysis procedures performed by HNUS to verify that decontamination of the containers used for the temporary on-site storage of the PCB-contaminated sludge removed from OT-5 met cleanup standards.

After the contents of OT-5 were removed, the tank was cleaned and the top of the tank was crushed. The tank was closed in place by filling it with inert material. Based on the results of the RA, no further remedial action is necessary for soil to ensure protection of human health and the environment at Site 9. No documents are needed for Site 9 soil under CERCLA because the petroleum-contaminated soil is being addressed under applicable CTDEP UST regulations.

Site 9 is located within the Fuel Farm (Site 23). Groundwater at Site 23 was investigated under CERCLA during the BGOURI (Tetra Tech, 2002a). Further discussion of the groundwater results for Site 23 is provided in Section 2.1.21.

A well inventory was conducted at NSB-NLON in 2007. This inventory included four Site 9 wells (Tetra Tech, 2007b). None of these wells could be located. Because these wells were shallow and not part of an active monitoring program, no further action was recommended.

Based on the Final ROD for OU9, an RD for LUCs on Basewide Groundwater OU9 was prepared. LUCs at Site 9 are to prevent the withdrawal and/or use of groundwater for potable water purposes until concentrations in groundwater meet criteria acceptable for unrestricted use and unlimited exposure and ensure that groundwater extracted during construction dewatering activities is properly handled, stored, and disposed (Tetra Tech, 2009e). The RACR for OU9 was prepared to document the completion of site remedies and LUCs at OU9, including Site 9 (Tetra Tech, 2009b). In 2009, a table and map were filed in the land record offices of the Towns of Groton and Ledyard, Connecticut to show the location of monitoring wells, note the remedy in place, and list COCs and LUCs that have been imposed at Site 23 (including Site 9) (Navy, 2009b; Navy 2009c). The Site 23 boundary was surveyed in March 2010 and a revised map will be submitted to the Towns of Ledyard and Groton with a corrected Site 23 boundary.

The status of Site 9 groundwater is RC (see Table 1-1. Site 9 is located within Site 23 and LUCs, inspections, and five-year reviews are planned for Site 23 until groundwater meets criteria for unrestricted use and unlimited exposure; however, no additional efforts are needed for Site 9.

2.1.9 Site 10 - Lower Subase-Fuel Storage Tanks and Tank 54-H

Six former USTs, including Tank 54-H, are located at the Lower Subase at the corner of Corvina Road and Amber Jack Road. The site map is included as Figure 2-10. The location of Site 10 in relation to the other IR sites is shown on Figure 1-2.

At Site 10, five concrete USTs located southwest of Building 107 were placed in service during World War II. Three of the tanks (E, F, and G) had 125,000-gallon capacities and were used to store diesel fuel from 1954 to 1987. From 1954 to 1989, Tanks K and L (25,000-gallon capacities) were used to store lubrication and hydraulic oils. A sixth tank (Tank 54-H) was located adjacent to and north of Tank E. Tank 54-H had a 30,000-gallon capacity and was used as a reclamation tank for the other five tanks. The Navy decommissioned Tanks E, F, and G in 1987. Tank 54-H was also decommissioned. In 1989, the Navy decommissioned Tanks K and L and installed new steel tanks within the shells of these two tanks to provide secondary containment. The tanks are routinely tested and are in compliance with Connecticut regulations.

The IAS concluded that there was some measurable leakage from the tanks at Site 10 and recommended monitoring of tank levels to see if the tanks were leaking (Envirodyne, 1983).

In 1989, Fuss & O'Neill conducted a hydrogeologic investigation of two UST areas at NSB-NLON, one at the Tank Farm located southeast of the Lower Subase and the other in the Lower Subase (i.e., Site 10). The study was initiated as a result of subsurface soil contamination encountered during construction activities in the two areas. At Site 10, four monitoring wells (FOMW-13 through 16) were installed around Tank 54-H. Soil samples were collected from each well and field screened with an organic vapor analyzer (OVA). Groundwater samples from monitoring wells were analyzed for volatile aromatic hydrocarbons and scanned for petroleum products.

No. 2 fuel oil was detected in monitoring wells at Tank 54-H at concentrations ranging from 21 to 1,100 milligrams per liter (mg/L). In addition, low concentrations (less than 15 µg/L) of benzene and xylenes were detected in FOMW13. Fuss & O'Neill concluded that petroleum contamination had impacted groundwater in the area.

Sites 10 and 11 were evaluated collectively as Zone 1 in the Phase II RI (B&RE, 1997b) and Lower Subase RI (Tetra Tech, 1999b). The Thames River adjacent to Zone 1 was also investigated during the

Phase II RI and Lower Subase RI. Because of this approach, the remainder of this section only discusses information in terms of Zone 1.

The investigation found that significant amounts of petroleum contamination (No. 2 fuel oil and waste lubricating oils) remain in the soil of Zone 1; however, the historical sources of petroleum contamination have been eliminated. Petroleum and lead contamination were also identified in groundwater. The human health risk assessment indicated potential risks to receptors from exposure to contaminated site media under current and future scenarios. The ecological risk assessment for the Thames River (sediment and surface water) adjacent to Zone 1 indicated that risks to ecological receptors are minor.

The Lower Subase RI Report (Tetra Tech, 1999b) recommended that Zone 1 proceed to an FS for evaluation of appropriate remedial alternatives for soil and limited actions for groundwater. Because of the extensive amount of underground utilities in Zone 1 and the nature of the activities conducted at this location (i.e., national security), it was recommended that the FS for this zone evaluate, to the extent possible, passive and/or in-situ remedial alternatives and the use of LUCs. In addition, it was suggested that "hot spot" removal actions, in lieu of full-scale excavation, be evaluated in the Zone 1 FS. It was also recommended that the FS evaluate limited action scenarios for the groundwater and storm sewer system of Zone 1, in conjunction with the soil remedial alternatives. The scenarios evaluated for groundwater should include light non-aqueous phase liquid (LNAPL) removal from monitoring well 13MW18 and a monitored natural attenuation/tiered groundwater monitoring program. The scenario for the storm sewer system should include cleaning and repair of the system.

The Navy subsequently cleaned the Lower Subase storm sewer catch basins in August 2000. Two Zone 1 catch basins were cleaned by Fleet Environmental using a vacuum truck. The material removed from the catch basins was containerized, tested, and properly disposed off-site. The material removed from the catch basins contained TPH and lead, but the concentrations were low enough for the waste to be classified and disposed of as nonhazardous waste. The storm sewer lines were not surveyed or repaired during the effort. However, the Navy replaced two catch basins in Zone 1 in July 2010, and additional repairs on the storm sewer lines are necessary and will be completed in the future.

Well inventories were conducted at the NSB-NLON Lower Subase in 2007 and 2010 (Tetra Tech 2007b; 2011b). Of the seven Site 10 wells inventoried in 2010, six were identified as not deficient and the condition of the remaining well was unable to be determined. Maintenance needs for the inventoried wells were identified in the document.

The Lower Subase FS was prepared to develop and evaluate appropriate remedial alternatives for potentially impacted media (soil, groundwater, and sediment) at the Lower Subase sites. The final Lower

Subase FS was issued in December 2010 (Tetra Tech, 2010g) with the understanding that additional data collected as part of Soil and Groundwater PDIs would be incorporated into an FS Addendum. Soil and groundwater PDIs to collect additional data at the Lower Subase were conducted in accordance with the final SAPs (Tetra Tech, 2010e; 2010c). In addition, as part of the Soil PDI, the invert elevations of selected storm sewer manholes and catch basins in Site 10 were surveyed to determine which storm sewers pass through contaminated soil and may contribute to contaminant migration. At Site 10, arsenic, copper, and lead concentrations detected during the Groundwater PDI were much less than their respective criteria; therefore, groundwater remediation is not required for CERCLA contaminants at Site 10. Data from the 2010 PDIs and updated evaluations were captured in the draft Soil and Groundwater PDI Completion Report and FS Addendum (Tetra Tech, 2011b). It is expected that the final remedy for Zone 1 soil will be selected in a ROD in 2011.

TPH was not included in the FS Addendum evaluations and alternatives for Site 10 because TPH was not commingled with CERCLA contaminants. TPH and LNAPL contamination at Site 10 will be evaluated in a future Corrective Action Plan that will be developed to meet CTDEP Remediation Standard Regulations (RSRs).

The current site closeout phase of Site 10 is RI/FS. No site closeout milestones have been completed.

2.1.10 Site 11 - Lower Subase-Power Plant Oil Tanks

Site 11 includes four 170,000-gallon USTs (Tanks A, B, C, and D) located adjacent to and east of the power plant (Building 29). The site map is included as Figure 2-10. The location of Site 11 in relation to the other IR sites is shown on Figure 1-2. Tanks A and B were used to store No. 6 fuel oil pumped from the Tank Farm at the southern end of NSB-NLON, Tank C was used to store diesel oil, and Tank D was used to store waste oil generated by the bilge water oil recovery system at the power plant. The tanks have been in place since World War II. Past oil leakage was apparent when the old tanks were cleaned; however, the old tanks were repaired and are now used as containment structures for three 150,000-gallon steel USTs. The new steel USTs are routinely tested and are in compliance with Connecticut regulations.

According to the IAS, there was leakage from the tanks and migration of petroleum to groundwater, steam and fuel pipeline tunnels, and underground vaults. The IAS recommended replacing the tanks at Site 11 and implementing oil recovery (Envirodyne, 1982).

In 1987, Wehran Engineering Corporation (Wehran) completed a Final Site Investigation for subsurface oil contamination and identified an area within Site 11 that was contaminated with heavy oil. This area, comprised electrical conduits and manholes along Corvina Road, contained a mixture of No. 5 and No. 6

fuel oils. Wehran recommended that further review of the operation and distribution of oil in Building 29 be conducted (Wehran, 1987).

Sites 10 and 11 were evaluated collectively as Zone 1 in the Phase II RI (B&RE, 1997b) and Lower Subase RI (Tetra Tech, 1999b). The Thames River adjacent to Zone 1 was also investigated during the Phase II RI and Lower Subase RI. Because of this approach, the remainder of this section only discusses information in terms of Zone 1.

The investigation found that significant amounts of petroleum contamination (No. 2 fuel oil and waste lubricating oils) remain in the soil of Zone 1; however, the historical sources of petroleum contamination have been eliminated. Petroleum and lead contamination were also identified in the groundwater. The human health risk assessment indicated potential risks to receptors from exposure to contaminated site media under current and future scenarios. The ecological risk assessment for the Thames River (sediment and surface water) adjacent to Zone 1 indicated that risks to ecological receptors are minor.

The Lower Subase RI Report (Tetra Tech, 1999b) recommended that Zone 1 proceed to an FS for evaluation of appropriate remedial alternatives for soil and limited actions for groundwater. Because of the extensive amount of underground utilities in Zone 1 and the nature of the activities conducted at this location (i.e., national security), it was recommended that the FS for this zone evaluate, to the extent possible, passive and/or in-situ remedial alternatives and the use of institutional controls. In addition, it was suggested that “hot spot” removal actions, in lieu of full-scale excavation, be evaluated in the Zone 1 FS. It is also recommended that the FS evaluate limited action scenarios for the groundwater and storm sewer system of Zone 1, in conjunction with the soil remedial alternatives. The scenarios evaluated for groundwater should include LNAPL removal from monitoring well 13MW18 and a monitored natural attenuation/tiered groundwater monitoring program. The scenario for the storm sewer system should include cleaning and repair of the system.

The Navy subsequently cleaned the Lower Subase storm sewer catch basins in August 2000. Two Zone 1 catch basins were cleaned by Fleet Environmental using a vacuum truck. The material removed from the catch basins was containerized, tested, and properly disposed off-site. The material removed from the catch basins contained TPH and lead, but the concentrations were low enough for the waste to be classified and disposed of as nonhazardous waste. The storm sewer lines were not surveyed or repaired during the effort. However, the Navy replaced two catch basins in Zone 1 in July 2010, and additional repairs on the storm sewer lines are necessary and will be completed in the future.

Well inventories were conducted at the NSB-NLON Lower Subase in 2007 and 2010 (Tetra Tech 2007b; 2011b). Of the 16 Site 11 wells inventoried, seven were identified as not deficient and nine were not found. Maintenance needs for the inventoried wells were identified in the document.

The Lower Subase FS was prepared to develop and evaluate appropriate remedial alternatives for potentially impacted media (soil, groundwater, and sediment) at the Lower Subase sites. The final Lower Subase FS was issued in December 2010 (Tetra Tech, 2010g) with the understanding that additional data collected as part of Soil and Groundwater PDIs would be incorporated into an FS Addendum. Soil and groundwater PDIs to collect additional data at the Lower Subase were conducted in accordance with the final SAPs (Tetra Tech, 2010c; 2010e). In addition, as part of the Soil PDI, the invert elevations of selected storm sewer manholes and catch basins in Site 11 were surveyed to determine which storm sewers pass through contaminated soil and may contribute to contaminant migration. At Site 11, arsenic, copper, and lead concentrations detected during the Groundwater PDI were much less than their respective criteria; therefore, groundwater remediation is not required for CERCLA contaminants at Site 11. Data from the 2010 PDIs and updated evaluations were captured in the draft Soil and Groundwater PDI Completion Report and FS Addendum (Tetra Tech, 2011b). It is expected that the final remedy for Site 11 soil will be selected in a ROD in 2011.

TPH was not included in the FS Addendum evaluations and alternatives for Site 11 because TPH was not commingled with CERCLA contaminants. TPH and LNAPL contamination at Site 11 will be evaluated in a future Corrective Action Plan that will be developed to meet CTDEP RSRs.

The current site closeout phase of Site 11 is RI/FS. No site closeout milestones have been completed.

2.1.11 Site 13 - Lower Subase-Building 79 Waste Oil Pit

Site 13 (Building 79 Former Waste Oil Pit) is located adjacent to one of the oil-impacted areas identified in the Navy Environmental Support Office (NESO) and Wehran Engineering Corporation reports (NESO, 1979 and Wehran, 1987). The site map is included as Figure 2-11. Figure 1-2 shows the location of the site relevant to the other IR sites at NSB-NLON. A railroad spur was located at Site 13, where diesel engines were serviced inside Building 79 during World War II and through the 1950s. The Building 79 service area included a pit in the northwestern corner of the building into which waste oil and solvents were reportedly drained during the cleaning and servicing of diesel engines. The pit is no longer in use and has been filled with concrete. Available building maps show a subsurface drainpipe extending from the pit to Albacore Road. Building 79 is slated to be demolished as part of a project to build a new Port Operations Center on the footprint of Building 110. Building 79 will be demolished to grade and the area will be subsequently paved and used for parking.

Analytical results from soil samples collected from borings in the area of the waste oil pit indicate that subsurface contamination is primarily lubricating/motor oil (NESO, 1979). The oil was detected at a sample interval of 6 to 9 feet below the ground surface, and the saturated volume of contamination was estimated as approximately 50 feet by 50 feet by 4 feet deep.

In 1987, Wehran completed an investigation to identify and delineate the sources of heavy oils in the subsurface of the Lower Subase (Sites 10, 11, and 13). Manholes and the area underneath the supporting platform in the vicinity of Building 79 (Site 13) contained No. 6 fuel oil older than 1 year and trace levels of waste oils. Wehran recommended removal of the oil from the manholes near Building 79 using absorption pads and/or excavation of oil-laden soil and inspection of fuel lines within the trench and subsequent cleaning of the trench.

During the Phase I RI, a brown, milky oil was identified west of Building 79. The report indicated this oil potentially originated from the former waste pit in Building 79. An old drawing shows the outlet from the waste oil pit 29 feet south of the northern side of Building 79 (Atlantic, 1992).

The Quay Wall Study Area encompassed the area near the Thames River from approximately Pier 2 to Pier 6 (Figure 2-11). The wooden platform and quay wall were constructed in 1940. Petroleum impacts were previously visible in the soil immediately above the wooden platform and in the fill below the wooden platform. The petroleum was found in the area around the stormwater system manhole northeast of former Pier 4. Globules of floating product were also present in standing water in void spaces below the wooden platform. Releases of petroleum product and oily substances were observed in the Thames River in the vicinity of the stormwater system outfall just north of former Pier 4 in November 1994. It was determined that the probable source of the releases was the stormwater system manhole near former Pier 4 and Building 79. An expandable rubber plug was placed in the stormwater system outfall in November 1994, and the stormwater pipe leading to the outfall was abandoned and filled with sand in late December 1994. In addition, a spill response and cleanup contractor removed approximately 2,300 gallons of oily wastewater and generated thirty-nine 55-gallon drums, two 30-gallon drums, and one 18-gallon drum of absorbent pads contaminated with product during cleanup activities. Five product recovery wells (QW-1 through QW-5) were subsequently installed and a total of approximately 16,000 gallons of oily water were pumped from the recovery wells and containerized during four events completed from December 5 and 21, 1994. This action was completed as part of a TCRA for the Quay Wall Study Area (HNUS, 1995b). A small percentage of the liquid pumped (less than 5 percent) was petroleum product. These measures successfully mitigated petroleum releases from this source because no visible petroleum product was observed in the Thames River near the outlet during subsequent inspections. Therefore, the Removal Site Evaluation (HNUS, 1995d) recommended that no further removal action be performed at that time but that further site investigations should focus on lead

concentrations. Additional investigations of the area were completed during the Phase II RI, Lower Subase RI, and the Monitoring Well Inventory. The inventory of wells QW-1, QW-2, QW-3, and QW-5, conducted in October 2007, found no evidence of free product in any of the wells, which provided further support that a significant source of petroleum does not remain at this site. Residual contamination at the site will be addressed through additional remedial actions. The final remedy for Site 13, which includes the Quay Wall Study Area, will be selected in the forthcoming Lower Subase ROD.

A majority of the site is paved or covered with buildings. The site was included in Zone 4, which also includes Site 19 – Former Solvent Storage Area (Former Building 316), the Quay Wall Study Area, and the fuel distribution pipeline, for the Phase II RI and Lower Subase RI. The Thames River adjacent to Zone 4 was also investigated during the Phase II RI and Lower Subase RI. Because of this approach, the remainder of this section only discusses information in terms of Zone 4.

Lead contamination was identified in shallow and deep soil and groundwater in Zone 4. Widespread TPH contamination was identified in deep soil at Zone 4. Some petroleum contamination was also evident in shallow soil and groundwater. The human health risk assessment indicated potential risks to receptors from exposure to contaminated site media under current and future scenarios. The ecological risk assessment for the Thames River (sediment and surface water) adjacent to Zone 4 indicated that risks to ecological receptors were low to moderate.

In the Lower Subase RI, it was recommended that Zone 4 proceed to an FS to evaluate appropriate remedial alternatives. Cleaning and repair of the Zone 4 storm sewer system were recommended for evaluation. The RI also recommended additional characterization of sediment in the Thames River to provide the data necessary to refine the ecological risk assessment prior to proceeding to an FS (Tetra Tech, 1999b).

The Navy subsequently cleaned the Lower Subase storm sewer catch basins in August 2000. Seven Zone 4 catch basins were cleaned by Fleet Environmental using a vacuum truck. The material removed from the catch basins was containerized, tested, and properly disposed off-site. The material removed from the catch basins contained TPH and lead, but the concentrations were low enough for the waste to be classified and disposed of as nonhazardous waste. The storm sewer lines were not surveyed or repaired during the effort. However, the Navy replaced two catch basins in Zone 4 in July 2010, and additional repairs on the storm sewer lines are necessary and will be completed in the future.

Per the recommendations of the Lower Subase RI, Battelle conducted investigations of Thames River sediment that included sampling and ecological risk evaluations for Zones 4 and 7 and Pier 1 (Battelle, 2003; 2004a; 2004b; 2007; 2008a). The Pier 1 site was identified based on the results of sampling

conducted in the area by Science Application International Corporation (SAIC) in 1999 and by the Navy in association with the siting of the Controlled Industrial Facility (CIF) Building. Validation studies were performed to evaluate potential impacts to ecological receptors from contaminant migration from onshore source areas or activities associated with the berthing of submarines and ships in the pier areas (Battelle, 2004a; 2008a). Based on the results of the 2008 Validation Study, an EE/CA was prepared for the Pier 1 Inner Area (Battelle, 2008b).

The results of the Battelle Validation Study were used to complete a BERA. The results of the BERA were used to develop PRGs for the Draft Lower Subase FS. In that document, the Pier 1 site was incorporated into Zone 4 of the Lower Subase, the zone in closest proximity. Zone 4 soil, groundwater, and sediment were evaluated in the Draft Lower Subase FS (Tetra Tech, 2008c).

Additional Thames River sediment data was collected at Zone 4, Inner Pier 1 and Outer Pier 1 to determine the extent of contamination and evaluate disposal options for the contaminated sediment (Tetra Tech, 2008f; 2009a). From the Battelle and Tetra Tech investigations, it was concluded that concentrations of PAHs, PCBs, pesticides, and metals in Inner and Outer Pier 1 sediment posed unacceptable risks to ecological receptors. The additional Tetra Tech data was used to update the Inner Pier 1 EE/CA (Battelle, 2008b) and evaluate NTCRA alternatives in the EE/CA for Inner and Outer Pier 1 (Tetra Tech, 2009c). The selected NTCRA was documented in an Action Memorandum (Tetra Tech, 2009d). The NTCRA for Inner and Outer Pier 1 sediment was initiated in December 2009, and completed in April 2010 (Tetra Tech EC, 2009; 2010). Tetra Tech EC was able to dredge a substantial amount of contaminated sediments from Inner and Outer Pier 1 (8,757 cubic yards total) and properly treat and dispose of the sediments at upland disposal facilities; however, because of obstructions encountered during dredging, and limitations associated with the remedial technology (i.e., mechanical dredging), not all of the contaminated sediment from Inner Pier 1 could be removed. To address the remaining sediment, the Navy will complete another phase of the NTCRA that will use a different remedial technology (e.g., hydraulic dredging). A sediment survey to verify the depth of contaminated sediment remaining in Inner Pier was conducted by Specialty Devices, Inc. (SDI) in October 2010 (SDI, 2010), with assistance from the NFESC. The Removal Action Design for Pier 1 Inner Area was prepared using the results of the survey (Tetra Tech, 2011f). It is anticipated that the second phase of the NTCRA fieldwork will be initiated by the end of calendar year 2011 and completed in early 2012.

The sediment data collected from the Thames River along the Zone 4 Quay Wall and at the outermost portion of Outer Pier 1 were incorporated into the Zone 4 sediment alternatives in the Final FS (Tetra Tech, 2010g). Additional sediment data was not collected during the 2010 PDIs; therefore, the area of contaminated sediment and sediment alternatives were not re-evaluated in the FS Addendum. It is expected that final remedy for Zone 4 (Site 13) sediment will be selected in a ROD in 2012.

Well inventories were conducted at the NSB-NLON Lower Subase in 2007 and 2010 (Tetra Tech 2007b; 2011b). Of the 17 Site 13 wells inventoried in 2010, nine were identified as not deficient, one was not usable, one was damaged but usable, and six were not found. Maintenance needs for the inventoried wells were identified in the document.

The Lower Subase FS was prepared to develop and evaluate appropriate remedial alternatives for potentially impacted media (soil, groundwater, and sediment) at the Lower Subase sites. The final Lower Subase FS was issued in December 2010 (Tetra Tech, 2010g) with the understanding that additional data collected as part of Soil and Groundwater PDIs would be incorporated into an FS Addendum. Soil and groundwater PDIs to collect additional data at the Lower Subase were conducted in accordance with the final SAPs (Tetra Tech, 2010c, 2010e). In addition, as part of the Soil PDI, the invert elevations of selected storm sewer manholes and catch basins in Site 13 were surveyed to determine which storm sewers pass through contaminated soil and may contribute to contaminant migration. At Site 13, arsenic, copper, and lead concentrations detected during the groundwater PDI were much less than their respective criteria; therefore, groundwater remediation is not required for CERCLA contaminants at Site 13. Data from the 2010 PDIs and updated evaluations were captured in the draft Soil and Groundwater PDI Completion Report and FS Addendum (Tetra Tech, 2011b). It is expected that final remedy for Zone 4 (Site 13) soil will be selected in a ROD in 2011.

TPH is commingled with CERCLA contaminants in a portion of the Site 13 and will be collaterally addressed with the CERCLA contaminants after a final remedy is selected for Site 13 soil. In addition, non-commingled TPH contamination is present in Site 13 media and will be evaluated in a future Corrective Action Plan that will be developed to meet CTDEP RSRs.

The current site closeout phase of Site 13 is RI/FS. No site closeout milestones have been completed.

2.1.12 Site 14 - Overbank Disposal Area-Northeast

The OBDANE site is located in a heavily wooded area on the edge of a ravine north of Stream 3 of the Area A Downstream, west of the Area A Weapons Center, and south of the Torpedo Shops. At one time, miscellaneous wastes were apparently dumped over the bedrock edge. The site was circular and approximately 80 feet in diameter. A dirt road provides limited access to the wooded site. Figure 2-12 shows the general site arrangement. The location of Site 14 in relation to the other IR sites is shown on Figure 1-2. A nearly vertical 20-foot-high bedrock face is located at the eastern edge of the site. The rest of the site slopes to the southwest.

The IAS Report (Envirodyne, 1983) stated that vegetation at the site indicated that no dumping had occurred within 10 years prior to the 1982 investigation. The IAS report documented the presence of several empty fiber drums. Atlantic personnel inspected the site on September 30, 1988, and verified that the drums were still present. No visual staining or stressed vegetation was observed at this time. No development of this area was planned.

During the Phase I RI (Atlantic, 1992), surface soil samples were collected from within the limits of the identified disposal area. Based on the sample results, the RI concluded that there was negligible risk associated with Site 14 and recommended that a supplemental Step I Investigation be performed. During the Phase II RI (B&RE, 1997b), a single shallow monitoring well was installed downgradient of the site, and two rounds of groundwater samples were collected. Six additional soil samples were also collected within the limits and downgradient of the disposal area. The Phase II RI concluded that all human health risks were within or less than the USEPA target range; however, arsenic was found in surface soil samples at concentrations slightly exceeding state standards, and lead contamination was found in surface soil samples approximately 80 feet south of the site. The RI Report recommended that further characterization of surface soil with respect to arsenic and lead be completed.

An Action Memorandum for an NTCRA was prepared for Site 14 by the Navy in 1999. Removal and off-site disposal of contaminated soil and debris at the site was the recommended alternative in the Action Memorandum. A work plan for the removal action was prepared, and the removal action was completed in May 2001. A post-removal action report was prepared to document the actions taken during the removal action (FWEC, 2002a). No significant risks from exposure to soil remained at the site after the NTCRA; therefore, an NFA ROD for Site 14 soil was signed in September 2004 (Navy, 2004b).

Groundwater at Site 14 was further characterized during the BGOURI (Tetra Tech, 2002a). For the RI, Site 3 and Site 14 were evaluated collectively because Site 14 falls within the boundary of Site 3, and any impacts from Site 14 would be detected in groundwater beneath Site 3. Twenty-six samples were collected from Site 3 wells, but only one groundwater sample from the single Site 14 well was collected during the BGOURI. Groundwater results for Sites 3 and 14 indicated that water quality was generally good, with only sporadic, low-concentration detections of VOCs and metals in site monitoring wells. The VOCs were detected exclusively in Site 3 monitoring wells. Seven metals were the only chemicals detected in the Site 14 groundwater sample, and all concentrations were less than background groundwater concentrations. The human health risk assessment determined that risks posed by exposure of construction workers to groundwater at Sites 3 and 14 are within USEPA and CTDEP acceptable levels, assuming that the workers are exposed to the maximum observed concentrations of site contaminants. The human health risk assessment also determined that risks posed by exposure of hypothetical future residents to groundwater at Sites 3 and 14 are outside of USEPA and CTDEP

acceptable levels, assuming the residents are exposed to the maximum observed concentrations of site contaminants. Arsenic, benzo(a)pyrene, TCE, and vinyl chloride were the major contributors to the ICRs, and thallium was the major contributor to the HIs. All of the chemicals that contributed significantly to the risks were detected in the Site 3 wells. The BGOURI recommended that an FS be prepared to evaluate the groundwater associated with Sites 3 and 14.

Site 14 groundwater was further evaluated in the BGOURI Update/FS Report (Tetra Tech, 2004). A supplemental human health risk assessment evaluation was performed with Site 14 groundwater data collected during the BGOURI, separate from Site 3 groundwater data. The evaluation indicated no significant risks to potential receptors from exposure to Site 14 groundwater. Based on these results, NFA was recommended for Site 14 groundwater in the BGOURI Update/FS. An interim ROD for OU9 (Navy, 2004d), which includes Site 14, was signed in December 2004 and documented the NFA decision for the site. No VOCs were detected in groundwater samples collected at Site 14 during the BGOURI, indicating that vapor intrusion is not a concern at Site 14. As a result, NFA was selected for Site 14 in the Final OU9 ROD (Navy, 2008b). A final remedy of NFA for Site 14 was also documented in the RACR for OU9 (Tetra Tech, 2009b).

A well inventory was conducted at NSB-NLON in 2007. This inventory included one Site 14 well (Tetra Tech, 2007b). This well was not part of an active monitoring program and was abandoned in December 2007 (ECC, 2007b).

The status of Site 14 soil and groundwater is considered SC (see Table 1-1).

2.1.13 Site 15 - Spent Acid Storage and Disposal Area

The SASDA was located in the southeastern section of NSB-NLON, between the southern side of Buildings 409 and 410. Figure 2-13 displays the general site arrangement. Figure 1-2 shows the location of the site relevant to the other IR sites at NSB-NLON. The site consisted of a concrete storage pad and an UST.

According to previous reports (Atlantic, 1994b), the area was used for storage and disposal of discarded batteries. Acid was removed from the battery housings and temporarily stored in a 4- by 4- by 12-foot, rubber-coated, underground tank. The acid was periodically emptied from the tank by a pumper truck and disposed off-site. The battery housings were temporarily stored on the adjacent concrete pad. The former tank and the surrounding soils encompassed approximately 1,000 square feet.

All battery acid and housing storage at the site was terminated. According to documentation (Atlantic, 1994b), the acid storage tank was filled with soil and covered by a concrete pad. Future plans for this area included the demolition of Buildings 409 and 410 and the construction of a warehouse.

Site 15 was investigated during the Phase I RI (Atlantic, 1992) and the FFS (Atlantic, 1994b). Soil and groundwater samples were collected and analyzed during the investigations to characterize the site and to determine appropriate remedial alternatives. The results of the RI and FFS suggested that a removal action should be completed to address the tank and associated contamination. An Action Memorandum was prepared, and a TCRA was completed by OHM Remediation Services Corporation (OHM) in January 1995. The tank, 318 tons (200 cubic yards) of lead-contaminated soil, contaminated pavement, and the tank contents were removed and disposed off-site (OHM, 1995b).

The site was further evaluated during the Phase II RI (B&RE, 1997b), which included the collection and analysis of soil and groundwater samples from the site. The field investigation was conducted prior to the TCRA, but the only data evaluated during the RI were associated with sample locations not excavated during the TCRA. This approach provided an assessment of post-TCRA conditions at the site. The RI recommended that limited additional sampling be completed to verify that the remaining soil did not contain significant contaminant concentrations that would impact groundwater beneath the site. The RI also recommended that if sampling results confirmed that soil would not impact groundwater, an NFA decision document should be prepared for soil.

Based on the recommendations of the Phase II RI, CTDEP completed additional sampling and analysis at the site in 1997. The results showed that remaining concentrations of inorganics in soil did not present a contaminant migration concern from soil to groundwater. Using these results, the Navy subsequently prepared an NFA Source Control ROD for the site that was signed in September 1997 (Navy, 1997c).

The groundwater associated with this site was further characterized as part of the BGOURI (Tetra Tech, 2002a). The objective of the RI was to further characterize the nature and extent of groundwater contamination to determine if the TCRA was successful and to quantify the risks to potential human receptors associated with groundwater at the site. Groundwater samples were collected from four existing groundwater monitoring wells, and the results indicated that residual contamination (i.e., metals in soil) from the former SASDA was impacting groundwater. Because groundwater at the site was found to be relatively acidic, it was hypothesized that the lead and other metals detected in groundwater will be mobile and migrate from the site. The data also indicated that a source of TCE unrelated to the site is impacting Site 15 groundwater. The human health risk assessment results from the BGOURI indicated that Site 15 groundwater does not pose any significant risks to construction workers, but it does pose potential risks to hypothetical human receptors. Carcinogenic risks for future adult residents exposed to

Site 15 groundwater were less than or within acceptable risk levels, but noncarcinogenic risks for future adult residents exposed to Site 15 groundwater exceeded the acceptable level of 1.0 under the RME scenario. Although not evaluated in the human health risk assessment, potential risks to future child residents resulting from exposures to groundwater would also be expected to marginally exceed acceptable risk levels. Chromium and silver were the major contributors to the noncarcinogenic risks. The BGOURI recommended that an FS be prepared for Site 15 groundwater to address contaminant migration issues and potential risks to hypothetical residential users associated with metals.

A DGI was completed at the site in the fall of 2002 to delineate the extent of the remaining source material and confirm the groundwater results from the BGOURI. The results of the DGI, as documented in the BGOURI Update/FS Report (Tetra Tech, 2004), showed there is no contamination remaining in soil that is acting as a source of contamination to the groundwater and there is no significant groundwater contamination at the site. The human health risk assessment and data screening results showed there are no soil or groundwater COCs for Site 15. Comparison of the Phase II RI and DGI analytical results to the BGOURI results indicate that the BGOURI results were anomalies and not representative of site conditions. The cause(s) of the anomalies may have been the field sampling methodology and/or laboratory issues. Based on the results of the DGI, it was recommended that the existing NFA ROD for Site 15 soil not be amended and that an NFA decision document be prepared for Site 15 groundwater. The Interim ROD for groundwater at Sites 3, 7, 14, 15, 18, and 20 (OU9), signed in December 2004, documented the NFA decision for Site 15 groundwater (Navy, 2004d).

Potential risks resulting from exposures to chemicals that have volatilized from groundwater and migrated through building foundations into indoor air were evaluated in a 2008 memorandum by comparing concentrations of volatile chemicals detected in groundwater to USEPA and CTDEP screening criteria for vapor intrusion. Concentration of chloroform exceeded the USEPA screening criterion and it was further evaluated using the USEPA Johnson and Ettinger Vapor Intrusion Model. Modeling results showed that cancer risks were within USEPA and CTDEP acceptable levels and vapor intrusion is not an issue at Site 15. As a result, NFA was selected for Site 15 in the Final OU9 ROD (Navy, 2008b). A final remedy of NFA for Site 15 was also documented in the RACR for OU9 (Tetra Tech, 2009b).

A well inventory was conducted at NSB-NLON in 2007. This inventory included four Site 15 wells (Tetra Tech, 2007b). None of these wells were part of an active monitoring program; therefore, all four of these wells were abandoned in December 2007 (ECC, 2007b).

The status of Site 15 soil and groundwater is considered SC.

2.1.14 Site 16 - Hospital Incinerator

Site 16 consists of two former locations where the skid-mounted hospital incinerator was reportedly operated. In the 1980s, the Naval Hospital Groton operated a skid-mounted waste incinerator at two sites adjacent to the base hospital. The two sites (16-A and 16-B) are located west of Tautog Road, adjacent to Building 449 and Building 452. The site map is included as Figure 2-14. The location of the site relevant to other IR sites is shown on Figure 1-2.

According to the FFA, the incinerator was used to destroy medical records and medical waste contaminated with pathological agents. Ash generated by the waste incinerator was transferred to dumpsters and disposed at the municipal landfill.

Site 16 was evaluated during the IAS (Envirodyne, 1983) for NSB-NLON, although no sampling activities were conducted as part of the study. The study's recommendation for this site was that no further investigation was necessary because, at the time of the IAS study, the site was still operational. As a result, no investigation of Site 16 was conducted during either the Phase I or the Phase II RIs. The Navy has subsequently ceased operations of the incinerator at the hospital.

The site was investigated during the BGOURI (Tetra Tech, 2002a) to determine the impact of the operation of the incinerator. The BGOURI focused on soil at Site 16, and surface and subsurface soil samples were collected for analysis during test boring activities. Temporary groundwater monitoring wells were to be installed and sampled during the investigation, but were not installed because no overburden groundwater was found before shallow bedrock was encountered. The depth to bedrock at Site 16 was found to be less than 3 feet below the ground surface. Additional efforts were not made to investigate the groundwater in the bedrock because of the following factors:

- The source of contamination at Site 16 was a skid-mounted incinerator, and the contaminants at the site (i.e., dioxins/furans, PCBs, and metals) are not typically mobile in the dissolved phase.

- The bedrock (granite) at NSB-NLON is relatively competent and would likely impede vertical contaminant migration. In addition, regional hydrogeologic information suggests that the depth to groundwater in the bedrock is more than 70 feet below the ground surface.

The nature and extent of contamination and human health risk assessment results from the RI indicated that past operation of the skid-mounted incinerator at Site 16 did not significantly impact the surrounding soil and that site soil does not pose significant risks to any potential human receptors (i.e., all risks were within acceptable levels). Risks to ecological receptors were not evaluated during this RI because the site does not provide suitable ecological habitat.

In addition to the sampling and analytical program, interviews were conducted during the RI to obtain historical information about the incinerator. Personnel at the Naval Groton Hospital (the Director of Records and the Regional Coordinator) and the NSB-NLON Public Works Department were contacted regarding this issue. None of the personnel could provide any historical information about the incinerator or any insight into its operation.

The results of the BGOURI did not indicate that subsequent rounds of investigation were necessary to further characterize Site 16. In addition, the results did not suggest that an FS was necessary for the site. Therefore, the BGOURI recommended that an NFA decision document be prepared for the site (Tetra Tech, 2002a). NFA was selected for Site 16 soil and was documented in the September 2004 ROD (Navy, 2004c).

No wells were determined to exist at Site 16 during the planning of the NSB-NLON well inventory; therefore, Site 16 was not included in the well inventory (Tetra Tech, 2007b).

The status of Site 16 is considered SC.

2.1.15 Site 17 - Lower Subase-Hazardous Materials/Solvent Storage Area (Building 31)

Site 17 is the Former Battery Overhaul Shop (Former Building 31), which was constructed in 1917 and used as a battery shop until the mid-1950s. The site map is included as Figure 2-15. The location of Site 17 relative to other IR sites is shown on Figure 1-2. Battery overhaul was one of the largest submarine maintenance operations conducted at the Lower Subase prior to use of nuclear power. Batteries from diesel-powered submarines, which contained approximately 100 batteries, were routinely serviced in the Battery Overhaul Shop at Building 31. Services ranged from charging the batteries to complete battery overhaul. Spent acid from the overhauled batteries was stored in a tank located at the Spent Acid Storage and Disposal Area (Site 15) (Environdyne, 1983). When the tank was full, the spent acid was pumped into a tank trunk and placed in the Area A Landfill (Site 2).

Building 31 was used as the main hazardous/flammable materials warehouse for NSB-NLON from the 1970s to late 1990s. Materials such as sulfuric acid, methyl isobutyl ketone, potassium hydroxide, potassium tetraborate, hydrofluoric acid, and nitric acid were stored in containers of up to 55-gallon capacity. In 1992, while the concrete floor of the building was being replaced to comply with RCRA regulations, a yellow discoloration was discovered in the soil beneath the floor slab. Analysis of soil samples revealed elevated levels of lead. As a result, the Navy prepared an Action Memorandum (HNUS, 1993) recommending a TCRA and a RD (HNUS, 1995a). The removal action included excavation, onsite solidification of soil with a total lead concentration of 500 mg/kg or greater or a TCLP

leachate lead concentration of 5 mg/L or greater, onsite backfilling, and offsite disposal of impacted debris. Figure 2-16 shows the areas that were remediated at Site 17.

During subsequent investigations, Site 17 has been included in Zone 3 of the Lower Subase, which contains Site 17 – Hazardous Materials/Solvent Storage Area (Building 31) and former subsurface fuel oil distribution lines, and steam, condensate, and electrical ducts. Zone 3 extends from Capelin Road along the southern end of Zone 2 to the southern side of Bullhead Road. Zone 3 includes Site 17, fuel oil distribution lines, and steam, condensate, and electrical ducts. The Providence and Worcester Railroad borders the eastern edge of Zone 3, and the Thames River abuts Zone 3 to the west. Because of this approach, the remainder of this section only discusses information in terms of Zone 3.

Fuel oil distribution lines and utility ducts and trenches run through Zone 3. In 1996, pressure leak testing was performed on the lines and valves in the fuel distribution system within Zone 3. All sections of the line and various valves tested in the portion of the distribution system within Zone 3 passed the pressure testing procedures.

The results of the Lower Subase RI (Tetra Tech, 1999b) indicated that lead is still a concern in soil and groundwater at this site and petroleum compounds are also of concern in soil. The Lower Subase RI recommended that Zone 3 proceed to an FS. Because of the extensive amount of underground utilities in Zone 3 and the sensitive nature of the activities conducted at this location (i.e., national security), it was recommended that the FS for this zone focus on the evaluation of alternatives that rely on institutional controls to limit exposure to contaminated soil and a tiered groundwater monitoring program to verify that significant contaminant migration is not occurring. It was also recommended that “hot spot” removal actions for the lead contamination and cleaning and repair of the Zone 3 storm sewer system be evaluated during the FS. The ecological risk assessment for the Thames River adjacent to Zone 3 showed that risks to ecological receptors in sediment adjacent to Zone 3 are relatively low and lead is not a significant threat to ecological receptors. In addition, the Thames River provides significant dilution and mixing, which minimizes the impact of any contaminant migration from Zone 3.

The Navy subsequently cleaned the Lower Subase storm sewer catch basins in August 2000. Two catch basins in Zone 3 were cleaned by Fleet Environmental using a vacuum truck. The material removed from the catch basins was containerized, tested, and properly disposed off-site. The material removed from the catch basins contained TPH and lead, but the concentrations were low enough for the waste to be classified and disposed of as nonhazardous. The storm sewer lines were not surveyed or repaired during the effort.

Building 31 was demolished in 2001. The building's foundation and floor slab were not disturbed during the demolition. Building 78, which was located adjacent to Building 31, was demolished in 2005, and a parking lot was constructed in the area formerly occupied by Buildings 31 and 78. Three inches of asphalt were placed over the Building 31 floor slab, which covered the solidified waste material and contaminated soil remaining at Site 17, to make the parking lot.

Well inventories were conducted at the NSB-NLON Lower Subase in 2007 and 2010 (Tetra Tech 2007b; 2011b). Of the two Site 17 wells inventoried in 2010, the condition of one was identified as not deficient and one was unable to be determined. Maintenance needs for the inventoried wells were identified in the document.

The Lower Subase FS was prepared to develop and evaluate appropriate remedial alternatives for potentially impacted media (soil, groundwater, and sediment) at the Lower Subase sites. The final Lower Subase FS was issued in December 2010 (Tetra Tech, 2010g) with the understanding that additional data collected as part of Soil and Groundwater PDIs would be incorporated into an FS Addendum. Soil and groundwater PDIs to collect additional data at the Lower Subase were conducted in accordance with the final SAPs (Tetra Tech, 2010e; 2010c). In addition, as part of the Soil PDI, the invert elevations of selected storm sewer manholes and catch basins in Site 17 were surveyed to determine which storm sewers pass through contaminated soil and may contribute to contaminant migration. Data from the 2010 PDIs and updated evaluations were captured in the draft Soil and Groundwater PDI Completion Report and FS Addendum (Tetra Tech, 2011b). It is expected that final remedy for Site 17 soil will be selected in a ROD in 2011.

TPH were not included in the FS Addendum evaluations and alternatives for Site 17 because TPH was not commingled with CERCLA contaminants. TPH contamination at Site 17 will be evaluated in a future Corrective Action Plan that will be developed to meet CTDEP RSRs.

The current site closeout phase of Site 17 is RI/FS (see Table 1-1). No site closeout milestones have been completed.

2.1.16 Site 18 - Solvent Storage Area (Building 33)

Site 18 consists of Building 33, which is located east of Grayback Avenue. The site map is included as Figure 2-17. Several 55-gallon drums containing solvents such as TCE and dichloroethene and some gas cylinders were stored in Building 33 (USEPA, 1995). The solvent storage area was identified during the IAS (Envirodyne, 1983) for NSB-NLON. The site was identified as Study Area F in the FFA and is now identified as ER Program Site 18. The location of Site 18 relative to other IR sites is shown on Figure 1-2.

No sampling activities were conducted at Site 18 prior to the BGOURI (Tetra Tech, 2002a). During the BGOURI, both soil and groundwater samples were collected at Site 18 to perform an initial characterization of the nature and extent of contamination at the site. Another objective of the RI was to quantify the risks to human receptors associated with the site. Ecological risks associated with the site were not evaluated because a majority of the site consists of a building and paved parking lot, which do not represent viable habitat.

During the RI, both surface and subsurface soil samples were collected and analyzed. Three temporary groundwater monitoring wells were installed; however, only two were sampled during the RI because one well was dry. The nature and extent of contamination and human health risk assessment results from the RI indicated that past storage of solvents at Building 33 did not significantly impact the surrounding media and the site does not pose significant risks to any potential human receptors. No significant concentrations of contaminants were detected in groundwater at Site 18. All carcinogenic risks from exposure to soil at Site 18 were less than or within acceptable risk levels, and all noncarcinogenic risks were less than the acceptable level of 1.0.

The results of the BGOURI did not indicate that subsequent rounds of investigation were necessary to further characterize the site. In addition, the results did not suggest that an FS was necessary for the site. Therefore, the RI recommended that an NFA decision document be prepared for this site. Separate RODs for Site 18 soil and groundwater (Navy, 2004c and 2004d) were prepared to document the NFA decisions. The ROD for Site 18 soil was signed in September 2004. The selected NFA remedy for groundwater at Site 18 was documented in the Interim ROD for groundwater at Sites 3, 7, 14, 15, 18, and 20 (OU9) signed in December 2004. No VOCs were detected in groundwater samples collected at Site 18 during the BGOURI, indicating that vapor intrusion is not a concern at Site 18. As a result, NFA was selected for Site 18 in the Final OU9 ROD (Navy, 2008b). A final remedy of NFA for Site 18 was also documented in the RACR for OU9 (Tetra Tech, 2009b).

No wells were determined to exist at Site 18 during the planning of the NSB-NLON well inventory; therefore, Site 18 was not included in the well inventory (Tetra Tech, 2007b).

The status of Site 18 soil and groundwater is considered SC.

2.1.17 Site 19 - Lower Subase-Solvent Storage Area (Building 316)

Site 19 (Former Solvent Storage Area) includes former Building 316, which was located south of the gate valve building (Building 332). Various solvents used for equipment cleaning were stored in Building 316 until approximately 10 years ago. The roof and doors of Building 316 were recently demolished leaving

only the side walls. The site map is included as Figure 2-11. The location of Site 19 relative to other IR sites is shown on Figure 1-2. Several 5-gallon cans containing methyl ethyl ketone were stored in Building 316 (USEPA, 1995). Solvents are no longer stored in this facility.

Historical investigations of Zone 4, which includes Sites 13 and 19, are presented in the Site 13 discussion. No major contamination was found at Site 19.

Well inventories were conducted at the NSB-NLON Lower Subase in 2007 and 2010 (Tetra Tech 2007b and 2011b). The one Site 19 well inventoried in 2010 was identified as not deficient. Should the Navy retain this well, maintenance needs were identified.

The Lower Subase FS and FS Addendum were prepared to develop and evaluate appropriate remedial alternatives for potentially impacted media (soil, groundwater, and sediment) at the Lower Subase sites (see Site 13 discussion). No major contamination was found at Site 19 and the site is outside the Zone 4 residential LUC boundary identified in the Lower Subase FS Addendum, indicating no unacceptable risks were associated with the site. It is expected that final remedy for Zone 4 (including Site 19) soil will be selected in a ROD in 2012.

The current site closeout phase of Site 19 is RI/FS (see Table 1-1). No site closeout milestones have been completed.

2.1.18 Site 20 - Area A Weapons Center

Site 20 is the Area A Weapons Center, located north of the terminus of Triton Road, adjacent to the Area A Wetland. The site map is included as Figure 2-18. The site's location relative to other IR sites is shown on Figure 1-2. The site includes Building 524 and the northern and southern weapons storage areas. Building 524 is used for administration, minor torpedo assembly, and storage of simulator torpedoes (B&RE, 1997b). No weapons production takes place in this building. Chemicals and chemical wastes, including cleaning and lubricating compounds, paints, adhesives, and liquid fuels, were stored in 1- to 5-gallon containers in seven metal storage cabinets located on a paved area south of the building. Many of these materials are classified as corrosive or flammable. Building 524 was constructed in 1990 and 1991. Prior to construction, the area was primarily woodlands. Portions of the site were blasted to remove bedrock during construction.

The northern and southern weapons storage bunkers are located southeast of Building 524. The southern bunkers are first evident in photographs from 1969, and the northern area bunker is evident in photographs from 1974. Weapons containing liquid fuels such as Otto fuel, JP-10, and TH-Dimer (jet rocket fuel), are stored in these bunkers. Routine maintenance and security improvements planned for

the Area A Weapons Center include grouting and waterproofing of bunkers, repaving of roads, regrading, and culvert installation.

This site was investigated during the Phase II RI (B&RE, 1997b), and it was found that minimal contamination of surface water and groundwater exists and that the potential for substantial contaminant transport is low. Therefore, limited action was recommended for this site in the Phase II RI. Although Building 524 is part of Site 20, an RA in this area is not expected because no impacted soil or sediment has been identified.

A ROD was signed for the soil and sediment OU associated with Site 20 in June 2000 (Navy, 2000). A small (less than 200 cubic yards) RA-C was conducted at the site in 2001 to address PAH and arsenic contamination in soil and sediment. The action was intended to mitigate direct exposures to soil and sediment and involved the excavation of soil and sediment with contaminant concentrations exceeding cleanup levels. Confirmatory soil and sediment samples were collected from the bottom and sidewalls of the excavation. Following verification of contaminated soil removal, the excavations were backfilled with clean soil, drainage swales were regraded, and disturbed asphalt was replaced (FWEC, 2002b). Based on the results of the RA at Site 20, the RC milestone has been achieved and the status of site soil is SC (see Table 1-1).

The groundwater at Site 20 was further characterized during the BGOURI (Tetra Tech, 2002a). The objective of the investigation was to further characterize the nature and extent of groundwater contamination and to quantify the risks to human receptors from groundwater contamination. In general, organic and inorganic contaminants were detected infrequently and at low concentrations in groundwater at Site 20. TCE and benzo(a)pyrene were the only organic contaminants identified as significant contaminants in groundwater. Metals detected at significant concentrations in groundwater included antimony, arsenic, nickel, silver, thallium, and zinc. High levels of total suspended solids and total dissolved solids in one sample may be the reason for the elevated concentrations of two of the metals. All the organic and inorganic contaminants were identified in samples from overburden monitoring wells.

The human health risk assessment determined that risks posed by exposure of construction workers to maximum observed concentrations of site contaminants in groundwater at Site 20 are less than acceptable levels. The human health risk assessment also evaluated future residential groundwater usage, and calculated risks were greater than acceptable levels based on exposure to maximum contaminant concentrations. Even though contaminant concentrations were generally low and risks were acceptable under the current land use scenario, the RI recommended that an FS be prepared for the groundwater associated with Site 20.

Prior to proceeding to an FS for the groundwater, a DGI was conducted at Site 20 to confirm the groundwater results of the BGOURI. The results of the DGI were presented in the BGOURI Update/FS (Tetra Tech, 2004). During the DGI, groundwater samples were collected from the two monitoring wells in which high silver concentrations were detected during the BGOURI. The groundwater samples were analyzed for total and dissolved TAL inorganics. Silver was not detected at concentrations greater than the detection limit (4.8 µg/L) in either well during the DGI. These results indicate that the silver concentrations detected during the BGOURI were anomalies because they were not detected during the Phase II RI or the DGI. Further data and risk evaluations were also conducted during the BGOURI Update. The results of the evaluations showed there is no significant contamination in Site 20 groundwater and there are no significant risks to human health associated with exposure to Site 20 groundwater. The BGOURI Update recommended that an FS not be prepared for Site 20 groundwater and an NFA decision document be prepared for the groundwater. The Interim ROD for OU9, signed in December 2004, documented the NFA decision for Site 20 groundwater (Navy, 2004d).

Potential risks resulting from exposures to chemicals that have volatilized from groundwater and migrated through building foundations into indoor air were evaluated in a 2008 memorandum by comparing concentrations of volatile chemicals detected in groundwater to USEPA and CTDEP screening criteria for vapor intrusion. Concentrations of TCE exceeded the USEPA screening criterion and it was further evaluated using the USEPA Johnson and Ettinger Vapor Intrusion Model. Modeling results showed that cancer risks were within USEPA and CTDEP acceptable levels and vapor intrusion is not an issue at Site 20. As a result, NFA was selected for Site 20 groundwater in the Final OU9 ROD (Navy, 2008b). A final remedy of NFA for Site 20 groundwater was also documented in the RACR for OU9 (Tetra Tech, 2009b). The status of Site 20 groundwater is considered SC (see Table 1-1).

A well inventory was conducted at NSB-NLON in 2007. This inventory included four Site 20 wells (Tetra Tech, 2007b). None of these wells were part of an active monitoring program; therefore, all four of these wells were abandoned in December 2007 (ECC, 2007b).

2.1.19 Site 21 - Lower Subase-Berth 16

Site 21, Berth 16, is located at the Lower Subase along the Thames River at the intersection of Amberjack Road and Albacore Road. The site map is included as Figure 2-19. The location of the site relative to other IR sites is shown on Figure 1-2. The following structures (former and current uses) are included in Site 21: Building 106 (Electronics and Storage), Building 157 (Periscope Shop and Optical Shop), Building 173 (Substation and Electrical Distribution), and Buildings 456 and 478 (Maintenance Shop). Buildings 106, 157, and 173 were constructed between 1918 and 1944. Buildings 456 and 478 were constructed after the incinerator (Site 25) was demolished in 1979. Berth 16 formerly included a 250-gallon diesel fuel UST located adjacent to the northern wall of Building 157. The UST was connected

to the diesel fuel transfer line that extended from the storage tank and along Pier 15, east of Building 173. The storage tank supplied the emergency generator for the sewage lift station.

Transformers, which formerly contained PCB-based oils, were located in an outdoor covered electrical vault (Vault 31) at Building 157. The transformers reportedly contained approximately 140 gallons of PCB-containing dielectric fluid. The Navy has since replaced these transformers with non-PCB-containing transformers and constructed secondary containment around the vault.

As late as 1954, underground diesel fuel lines serviced Berth 16. All underground diesel distribution lines have been abandoned. The method of abandonment of these lines is unknown.

Zone 7 includes Site 21 (Berth 16), Site 25 (Classified Materials Incinerator), and Transformers at Building 157 Vault 31. Subsurface fuel oil distribution lines were historically located in Zone 7 but have been abandoned. Subsurface steam, condensate, and electrical ducts are located within Zone 7. A former septic tank with a leaching field serviced Building 173. The exact locations of the former septic tank and leaching field have not been verified.

The area was investigated during the Pier 33 and Berth 16/Former Incinerator Site Investigation (Atlantic, 1995a) and the Lower Subase RI (Tetra Tech, 1999b). A geotechnical investigation for the replacement of the quay wall was also conducted at the site in 1989. The results of the geotechnical investigation were presented in the Site Investigation Report.

During the geotechnical investigation, a soil sample was collected and analyzed for metals, VOCs, TPH, oil type by fluorescence, pesticides, and PCBs. A groundwater sample was collected and analyzed for VOCs. No. 2 fuel oil was detected in subsurface soil in front of Building 173 during the investigation. Petroleum contamination was also evident based on odor and visual inspection.

Following discovery of the petroleum contamination, the site was added to the IR Program. Atlantic conducted a Site Investigation to determine the presence and magnitude of specific contaminants and to determine if the results warranted an RI/FS. The field investigation consisted of a soil gas survey, a utility-manhole inspection, soil boring installation, monitoring well installation, and soil, groundwater, and sediment sampling and analysis. Petroleum and metals contamination was identified during the Site Inspection.

Prior to proceeding to the Lower Subase RI, available data were collected and reviewed to identify data gaps that needed to be filled during the RI. As a result of the review, further investigation of soil and groundwater containing petroleum constituents, contamination in storm sewer catch basins, extent of ash

disposal in the vicinity of 20MW6, and any soils containing TCLP lead levels greater than 150 µg/L were recommended. Also, testing of any UST and piping not recently tested was recommended to eliminate the possibility of an ongoing petroleum source. Additional investigation of site operations and sediment analysis of the storm sewer system were also recommended to determine the extent and source of sediment contamination. Removal and disposal of contaminated sediments and modification of any site operations identified as a contributor to the contaminated sediment were also recommended.

Soil, groundwater, and sediment sampling (in the adjacent Thames River) and analysis were conducted at this site in conjunction with the Lower Subase RI (Tetra Tech, 1999b). Sites 21 and 25 were evaluated collectively as Zone 7 during the Lower Subase RI. Because of this approach, the remainder of this section only discusses information in terms of Zone 7.

A large area of lead contamination was identified in shallow and deep soil in Zone 7. TPH contamination was also identified in two general areas. Little organic contamination was identified in groundwater; however, two areas of lead contamination were identified in Zone 7 groundwater. The human health risk assessment indicated potential risks to receptors from exposure to contaminated site media. The ecological risk assessment for the Thames River (sediment and surface water) adjacent to Zone 7 indicated that risks to ecological receptors were low to moderate. The evaluation indicated that there were potential risks to sediment-dwelling organisms from contaminants near Pier 17 but not near Pier 15. However, most of the sediment near Piers 15 and 17 was subsequently dredged, making interpretation of the results from historical studies difficult.

The Lower Subase RI Report (Tetra Tech, 1999b) recommended additional characterization of the sediment in the Thames River to provide the data necessary to refine the ecological risk assessment prior to proceeding to an FS. The RI also recommended that Zone 7 soil and groundwater proceed to an FS for evaluation of appropriate remedial alternatives. Because of the extensive amount of underground utilities in Zone 7 and the sensitive nature of the activities conducted at this location (i.e., national security), it was recommended that the FS for this zone focus, to the extent possible, on alternatives that rely on institutional controls to limit exposure to contaminated soil and passive and/or in-situ remedial alternatives. “Hot spot” removal actions for the lead contamination were also recommended for evaluation during the FS. In addition, it was recommended that the FS evaluate limited action scenarios for the groundwater and storm sewer system of Zone 7 in conjunction with the soil remedial alternatives. A tiered groundwater monitoring program was recommended for evaluation during the FS.

The Navy subsequently cleaned the Lower Subase storm sewer catch basins in August 2000. Five catch basins in Zone 7 were cleaned by Fleet Environmental using a vacuum truck. The material removed from the catch basins was containerized, tested, and properly disposed off-site. The material removed from

the catch basins contained TPH and lead, but the concentrations were low enough for the waste to be classified and disposed of as nonhazardous waste. The storm sewer lines were not surveyed or repaired during the effort. However, the Navy completed replacement of sewer catch basins in the area between Zones 1 and 7 in July 2010 and additional repairs on the storm sewer lines are necessary and will be completed in the future.

Well inventories were conducted at the NSB-NLON Lower Subase in 2007 and 2010 (Tetra Tech 2007b and 2011b). Of the eight Site 21 wells inventoried in 2010, six were identified as not deficient and two were not found. Maintenance needs for the inventoried wells were identified in the document.

Per the recommendations of the Lower Subase RI, Battelle conducted investigations of Thames River sediment that included sampling and ecological risk evaluations for Zones 4 and 7 and Pier 1 (Battelle, 2003; 2004a; 2004b; 2007; 2008a). Validation studies were performed to evaluate potential impacts to ecological receptors from contaminant migration from onshore source areas or activities associated with the berthing of submarines and ships in the pier areas (Battelle, 2004a; 2008a). Based on the results of the 2008 Validation Study, no footprint at Zone 7 was determined for evaluation in the FS because no areas of sediment had unacceptable ecological risk (Battelle, 2008b).

The Lower Subase FS was prepared to develop and evaluate appropriate remedial alternatives for potentially impacted media (soil, groundwater, and sediment) at the Lower Subase sites. The final Lower Subase FS was issued in December 2010 (Tetra Tech, 2010g) with the understanding that additional data collected as part of Soil and Groundwater PDIs would be incorporated into an FS Addendum. Soil and groundwater PDIs to collect additional data at the Lower Subase were conducted in accordance with the final SAPs (Tetra Tech, 2010c and 2010e). In addition, as part of the Soil PDI, the invert elevations of selected storm sewer manholes and catch basins in Site 21 were surveyed to determine which storm sewers pass through contaminated soil and may contribute to contaminant migration. All Zone 7 copper and lead concentrations detected during the Groundwater PDI were less than their respective criteria; therefore, further investigation for these metals in Zone 7 groundwater was not warranted. Regarding arsenic in Zone 7 groundwater, the low frequency of criterion exceedance (one of six) and the fact that the exceedance was only marginally greater than the criterion, further investigation of arsenic in Zone 7 groundwater was not warranted. Data from the 2010 PDIs and updated evaluations were captured in the draft Soil and Groundwater PDI Completion Report and FS Addendum (Tetra Tech, 2011b). It is expected that the final remedy for Zone 7 soil will be selected in a ROD in 2011.

TPH was not included in the FS Addendum evaluations and alternatives for Site 21 because TPH was not commingled with CERCLA contaminants. TPH contamination at Site 21 will be evaluated in a future Corrective Action Plan that will be developed to meet CTDEP RSRs.

The current site closeout phase of Site 21 is RI/FS (see Table 1-1). No site closeout milestones have been completed.

2.1.20 Site 22 - Lower Subase - Pier 33

Site 22 is located at the Lower Subase along the Thames River and includes Pier 33, Building 175, and approximately 400 linear feet of additional riverfront property adjacent to these two structures. The site map is included as Figure 2-20. The site's location relative to other IR sites is shown on Figure 1-2.

Building 175 was originally used to house several above-ground battery acid (sulfuric acid) storage tanks (Atlantic, 1995a). Large above-ground storage tanks were installed throughout the interior of Building 175. Transfer lines from the battery acid storage tanks extended in trenches along Amberjack Road to the piers. The Navy removed the above-ground storage tanks and associated transfer piping. There are no known or reported spills from the storage tanks or transfer system. Building 175 is currently used for miscellaneous storage and administrative purposes. No underground steam or fuel-oil utilities service Building 175.

A 1,000-gallon, UST was located adjacent to the southern side of Building 175. No leakage was identified during a tightness test on May 22, 1990. Stained soil was observed around the fill pipe of the UST, and concentrations of TPH in soil from the vicinity of the UST exceeded federal and state criteria (Atlantic, 1995a). The UST was removed and replaced by a new 1,500-gallon above-ground storage tank. A 250-gallon, diesel fuel UST was located adjacent to the northern side of Building 175. This UST was removed and replaced with a 550-gallon above-ground storage tank. All current storage tanks are monitored and inspected per the requirements of the Subase Integrated Contingency Plan.

Zone 5 consists of Site 22. The area was investigated during the Pier 33 and Berth 16/Former Incinerator Site Investigation (Atlantic, 1995a) and the Lower Subase RI (Tetra Tech, 1999b). A geotechnical investigation for the replacement of the quay wall was also conducted at the site in 1989. The results of the geotechnical investigation were presented in the Site Investigation Report.

During the geotechnical investigation, soil samples were collected and analyzed for metals, VOCs, TPH, oil type by fluorescence, pesticides, and PCBs. No. 2 fuel oil was detected in subsurface soils in front of Building 175 during the investigation. Petroleum contamination was also evident based on odor and visual inspection.

Following discovery of the petroleum contamination, the site was added to the IR Program. Atlantic conducted a Site Investigation at the site to determine the presence and magnitude of specific

contaminants and to determine if the results warranted an RI/FS. The field investigation consisted of a soil gas survey, a utility-manhole inspection, soil boring installation, monitoring well installation, and soil, groundwater, and sediment sampling and analysis.

Prior to proceeding to the Lower Subase RI, available data were collected and reviewed to identify data gaps that needed to be filled during the RI. It was recommended that additional investigation of the stained soil at the southwestern corner of Building 175, metal contaminants in storm sewer drains, and any TCLP lead levels greater than 150 µg/L be completed during the RI. Additional investigation of site operations and sediment analysis of the storm sewer system were also recommended to determine the extent and source of sediment contamination. Removal and disposal of contaminated sediment and modification of any site operations identified as a contributor to the contaminated sediment were also recommended.

Additional soil, groundwater, and sediment sampling (in the adjacent Thames River) were conducted at this zone in conjunction with the Lower Subase RI. Petroleum compounds and lead were identified as the primary COCs for this site. The petroleum contamination appears to be from an UST formerly located at the site. The lead contamination, detected in sediment collected from a catch basin between Zones 5 and 6, appears to be related to the storage of lead ballast in this area and to surface water runoff. The human health risk assessment indicated potential risks from exposure to site media under a hypothetical future residential scenario. The ecological risk assessment for the Thames River adjacent to Zone 5 indicated that risks to ecological receptors in this area are relatively low.

The Lower Subase RI Report (Tetra Tech, 1999b) recommended that Zone 5 proceed to an FS to evaluate appropriate remedial alternatives. Because of the extensive amount of underground utilities in Zone 5 and the sensitive nature of the activities conducted at this location (i.e., national security), it was recommended that the FS for this zone focus, to the extent possible, on alternatives that rely on institutional controls to limit exposure to contaminated soil and passive and/or in-situ remedial alternatives. It was also recommended that a “hot spot” removal action for the petroleum contamination in the soil of Zone 5 should be included in one of the alternatives evaluated during the FS and that the FS evaluate limited action scenarios for the groundwater and storm sewer system of Zone 5, in conjunction with the soil remedial alternatives. The scenario for the groundwater should include a combination of monitored natural attenuation and a tiered groundwater monitoring program.

The Navy subsequently cleaned the Lower Subase storm sewer catch basins in August 2000. Two catch basins in Zone 5 were cleaned by Fleet Environmental using a vacuum truck. The material removed from the catch basins was containerized, tested, and properly disposed off-site. The material removed from the catch basins contained TPH and lead, but the concentrations were low enough for the waste to be

classified and disposed of as nonhazardous waste. The storm sewer lines were not surveyed or repaired during the effort. The Navy is aware that additional repairs on the storm sewer lines are necessary and will complete them in the future.

Well inventories were conducted at the NSB-NLON Lower Subase in 2007 and 2010 (Tetra Tech 2007b; 2011b). Of the four Site 22 wells inventoried in 2010, three were identified as not deficient and one was not found. Maintenance needs for the inventoried wells were identified in the document.

The Lower Subase FS was prepared to develop and evaluate appropriate remedial alternatives for potentially impacted media (soil, groundwater, and sediment) at the Lower Subase sites. The final Lower Subase FS was issued in December 2010 (Tetra Tech, 2010g) with the understanding that additional data collected as part of Soil and Groundwater PDIs would be incorporated into an FS Addendum. Soil and groundwater PDIs to collect additional data at the Lower Subase were conducted in accordance with the final SAPs (Tetra Tech, 2010c and 2010e). At Site 22, arsenic, copper, and lead concentrations detected during the Groundwater PDI were much less than their respective criteria; therefore, groundwater remediation is not required for CERCLA contaminants at Site 22. Data from the 2010 PDIs and updated evaluations were captured in the draft Soil and Groundwater PDI Completion Report and FS Addendum (Tetra Tech, 2011b). It is expected that final remedy for Zone 5 (Site 22) soil will be selected in a ROD in 2011.

TPH was not included in the FS Addendum evaluations and alternatives for Site 22 because TPH was not commingled with CERCLA contaminants. TPH contamination at Site 22 will be evaluated in a future Corrective Action Plan that will be developed to meet CTDEP RSRs.

The current site closeout phase of Site 22 is RI/FS (see Table 1-1). No site closeout milestones have been completed.

2.1.21 Site 23 - Fuel Farm

In the early 1940s, Crystal Lake was drained and dredged to allow for construction of the nine concrete USTs (see Figure 2-9). When construction was complete, the former lake bed was reportedly filled with soil excavated from a small hill west of the Site 23 and graded to create a level surface for development at NSB-NLON. The location of Site 23 relative to the other IR sites is shown on Figure 1-2. The Fuel Farm features include the following:

- Nine former 110-foot-diameter, 11-foot-high USTs (OT-1 to OT-9)
- A 30,000-gallon, double-walled UST (OT-10)
- An oil/water separator (at OT-10)

- A 10,000-gallon waste oil tank (at OT-10)
- A fuel oil loading area adjacent to Building 482
- A tanker truck dumping pad and trough (at OT-10)
- Associated UST piping systems
- The Morale, Welfare, and Recreation (MWR) Center (Building 461)
- Buildings 310, 322, and O-831
- Six baseball/softball fields
- A restroom facility (Building 445)
- An partially abandoned air sparging (AS)/soil vapor extraction (SVE) facility for the Naval Exchange (NEX) service station
- Two 150,000-gallon diesel above-ground storage tanks
- Six baseball/recreational fields and a number of parking areas are located on top of the Fuel Farm

Each of the nine former USTs had a holding capacity of 750,000 gallons and was approximately 110 feet in diameter and 11 feet in depth. Tank stability was obtained using a combination of a site-wide drainage system, a series of columns inside the tanks, and an underdrain system. A site-wide stormwater drainage/dewatering system and french drains were installed around OT-1, OT-2, OT-3, OT-4, and OT-5. A series of 37 columns transmitted the weight of the tank roof and overlying fill to the floor of the tank.

The Fuel Farm originally contained an extensive drainage system consisting of numerous catch basins, corrugated metal pipe, perforated corrugated metal pipe, vitrified clay pipe, and reinforced concrete pipe. According to NSB-NLON personnel, the drainage system served approximately one-third of the entire facility. Portions of the drainage system were installed with perforated corrugated metal pipe to depress the water table in the Fuel Farm. The surface water and groundwater collected by the storm sewer system ultimately discharge to a boomed area of the Thames River, adjacent to the Goss Cove Landfill. Based on known elevations of storm sewer catch basins, the elevation of the drainage system was below the process piping.

No. 6 fuel oil was stored in tanks OT-1 through OT-3 from the date of construction until they were removed from service in the summer of 1991. Tanks OT-7 through OT-9 were decommissioned in the summer of 1990 and were used exclusively for storage of diesel during all 48 years of service. Product (No. 6 fuel oil or diesel fuel) was historically delivered via barge to a pier, where it was pumped via pipelines to the Fuel Farm USTs through the Building 332 valve house. Product was transferred via pipeline from the USTs to the power plant or the submarines at the Lower Subase on an as-needed basis. The No. 6 fuel oil transfer lines were situated within concrete-lined trenches but were removed because No. 6 fuel oil was no longer used at NSB-NLON. The trenches for the diesel lines were not lined.

A reduced demand for diesel fuel at NSB-NLON in the mid-1970s led to the decommissioning and demolition of tank OT-6. This reduced demand also led to the modification of tank OT-5 for waste oil storage purposes. Tank OT-4 was used to store tank bottom wastes from OT-1. Tank OT-5 was used as part of an oil/water separator system. Tanks OT-4 and OT-5 were reportedly decommissioned after the installation of a new 30,000-gallon waste oil underground tank (OT-10) in 1990. Tanks OT-1 through OT-9 have been demolished and closed in place. Tank closure was accomplished following RCRA closure requirements by cleaning the tanks, demolishing the tank roof supports, and allowing the roof to collapse into the tank. The void was then filled with gravel, and the site was restored using soil and topsoil.

A number of petroleum releases were documented by the Navy in the vicinity of the Fuel Farm at NSB-NLON. Investigations of the Fuel Farm conducted from 1989 through 1999 detected evidence of releases of petroleum products from these tanks and their associated piping and, possibly, from other nearby sources. Both soil contamination and free-product were identified at Site 23 during the investigations. Petroleum hydrocarbons have been detected periodically at the outfall of the Fuel Farm storm sewer system.

RAs were conducted to address free product and soil contamination at Site 23 in 1997. The actions were conducted in accordance with the Corrective Action Plan contained in the Site Investigation Report (B&RE, 1997i). Approximately 783 tons of petroleum-impacted soil were removed from Site 23 near OT-8 and Tang Avenue during the removal actions.

The Fuel Farm drainage system was rehabilitated in 2000. The original combined groundwater and stormwater system was separated into a deep groundwater system and a new shallow stormwater system. The old deteriorated pipes in the groundwater collection system were slip-lined to improve their integrity and conductance. The old tank ring-drains (french drains) were not rehabilitated, but their connection with the groundwater collection system was maintained. As part of the drainage system rehabilitation project, contaminated soil and free product, which were previously identified during the Tank Farm Site Investigation Addendum (Tetra Tech, 1999d) in the vicinity of the former UST OT-3, were removed and disposed off-site. The Navy initiated a sampling program for the deep groundwater collection system after construction activities were completed. It was anticipated that the results would be used to determine if further action was required for groundwater.

Site 23 was further characterized during the BGOURI in 2000 (Tetra Tech, 2002a). Groundwater samples were collected from monitoring wells completed in the overburden and bedrock aquifers. Soil samples were collected to characterize the hydrogeologic properties of the overburden aquifer. VOCs

and SVOCs were detected infrequently in groundwater samples collected during the BGOURI. Metals were detected frequently in groundwater samples, but the detections are likely related to the fill material used to construct the Fuel Farm. The human health risk assessment did not identify any significant risks to receptors from exposure to groundwater. The RI recommended postponing any decisions on the groundwater at Site 23 until a sufficient amount of data was available from the groundwater collection system monitoring program to properly characterize the groundwater. A work plan for quarterly sampling of groundwater from the metering pit at Site 23 was implemented in 2007. The Site 23 underdrain metering pit was sampled after construction and quarterly for a period of 1 year starting in June 2007 (Tetra Tech, 2008d). Samples were collected from the metering pit that collects groundwater from the Site 23 area underdrains from four former tanks. All relevant concentrations were less than established Connecticut criteria (with the exception of some anomalous results). Based on results less than criteria, Site 23 groundwater (including Site 9 groundwater) being collected and conveyed in the storm sewer system does not pose a significant threat to human health or the environment under the current land use scenario; however, risks would be unacceptable if groundwater at the site was used as a drinking water supply (Navy, 2008b). In the four rounds of Year 2 monitoring, no contaminants were detected at concentrations greater than any established Connecticut criteria (surface water protection, residential volatilization, or stormwater discharge permit criteria). The Year 2 monitoring report recommended no additional monitoring at Site 23 (ECC, 2009h).

Concentrations of chloroform and TCE exceeded the USEPA screening criterion at Sites 23. Chloroform and TCE were further evaluated using the Johnson and Ettinger Vapor Intrusion Model. Modeling results showed that cancer risks for chloroform under a residential scenario were within USEPA acceptable levels but exceeded CTDEP acceptable levels. Cancer risks for TCE based upon California USEPA toxicity criteria were within USEPA and CTDEP acceptable levels for residential and industrial scenarios but cancer risks for a residential scenario based upon draft USEPA toxicity criteria exceeded CTDEP acceptable levels. Further valuation against Applicable or Relevant and Appropriate Requirements (ARARs) showed that vapor intrusion is not an issue at Site 23. NFA is required for vapor intrusion issues (Navy, 2008b).

A well inventory was conducted at NSB-NLON in 2007. This inventory included 52 Site 23 IR program wells and 16 Site 23 UST wells (Tetra Tech, 2007b). As a result of the inventory, two Site 23 IR program wells were properly abandoned because they were not functional (ECC, 2007b). The conditions of 25 wells were identified as not deficient and conditions of four wells could not be determined. Although not part of an active monitoring program, it was recommended that the remaining functional Site 23 wells be maintained until a decision is reached on the selection of a remedial action at this site (Tetra Tech, 2007b).

Based on the Final ROD for OU9, an RD for LUCs on Basewide Groundwater OU9 was prepared. LUCs at Site 23 are to prevent the withdrawal and/or use of groundwater for potable water purposes until concentrations in groundwater meet criteria acceptable for unrestricted use and unlimited exposure and ensure that groundwater extracted during construction dewatering activities is properly handled, stored, and disposed (Tetra Tech, 2009e). The RACR for OU9 was prepared to document completion of site remedies and LUCs at OU9, including Site 23 (Tetra Tech, 2009b). In 2009, a table and map were filed in the land record offices of the Towns of Groton and Ledyard, Connecticut to show the location of monitoring wells, note remedy in place, and list contaminants of concern and LUCs that have been imposed at Site 23 (Navy, 2009c; Navy 2009d). The Site 23 boundary was surveyed in March 2010 and a revised map with a corrected Site 23 boundary was submitted to the Towns of Ledyard and Groton in May 2010.

As indicated in Table 1-1, the status of Site 23 groundwater is RIP. LUC inspections and five-year reviews are planned for Site 23 until groundwater meets criteria for unrestricted use and unlimited exposure; therefore, the current phase is LTMgt.

2.1.22 Site 24 - Lower Subase-Central Paint Accumulation Area (Building 174)

Site 24 - Central Paint Accumulation Area (Building 174) is located in the northern section of the Lower Subase along the Thames River, immediately east of Pier 32. The site map is included as Figure 2-21. The location of Site 24 relative to other IR sites is shown on Figure 1-2.

Building 174 was used as the primary storage facility for paints used in boat maintenance. In 1982, Building 174 was refitted to allow boat anchor sandblasting and other paint activities (USEPA, 1995). Although no formal documentation is available, the Navy believes the sandblast residue was disposed at an off-site location. The Navy's rationale for this assertion is that the roadway to the west of Building 174, and the associated fill, was constructed prior to the building and soil borings completed during the various investigations at the site do not indicate the presence of sandblast residue.

Surface water runoff within the zone drains to the river via storm sewers. Two stormwater system outfalls discharge directly to the Thames River from Zone 6. The stormwater system outfall located midway between Building 175 in Zone 5 and Building 174 in Zone 6 was previously monitored annually during a storm event under the basewide General National Pollutant Discharge Elimination System (NPDES) Storm Water Permit. Sampling of the outfall was discontinued in 2004.

For investigation purposes, Site 24 and the surrounding area were identified as Zone 6 during the Lower Subase RI (Tetra Tech, 1999b). Because of this approach, the remainder of this section only discusses information in terms of Zone 6.

Petroleum compounds (TPH and PAHs) and several inorganics were identified as COCs for this zone. The source(s) of the TPH and PAHs is not known. Lead contamination detected in sediment collected from a catch basin between Zones 5 and 6 appears to be related to the storage of lead ballast in this area and to surface water runoff. The human health risk assessment indicated potential risks from exposure to site media under a hypothetical future residential scenario. The ecological risk assessment for the Thames River adjacent to Zone 6 indicated that risks to ecological receptors in this area are relatively low.

The Lower Subase RI Report (Tetra Tech, 1999b) recommended that Zone 6 proceed to an FS to evaluate appropriate remedial alternatives. Because of the extensive amount of underground utilities in Zone 6 and the sensitive nature of the activities conducted at this location (i.e., national security), it was recommended that the FS for this zone focus, to the extent possible, on alternatives that rely on institutional controls to limit exposure to contaminated soil and passive and/or in-situ remedial alternatives. It was also recommended that the FS evaluate limited action scenarios for the groundwater and storm sewer system of Zone 6, in conjunction with the soil remedial alternatives. A tiered groundwater monitoring program was also recommended for evaluation during the FS.

The Navy subsequently cleaned the Lower Subase storm sewer catch basins in August 2000. Two catch basins in Zone 6 were cleaned by Fleet Environmental using a vacuum truck. The material removed from the catch basins was containerized, tested, and properly disposed off site. The material removed from the catch basins contained TPH and lead, but the concentrations were low enough for the waste to be classified and disposed of as nonhazardous waste. The storm sewer lines were not surveyed or repaired during the effort. However, the Navy replaced one catch basin in Zone 6 in July 2010, and additional repairs on the storm sewer lines are necessary and will be completed in the future.

Well inventories were conducted at the NSB-NLON Lower Subase in 2007 and 2010 (Tetra Tech 2007b and 2011b). Of the five Site 24 wells inventoried in 2010, four were identified as not deficient and one was not found. Maintenance needs for the inventoried wells were identified in the document.

The Lower Subase FS was prepared to develop and evaluate appropriate remedial alternatives for potentially impacted media (soil, groundwater, and sediment) at the Lower Subase sites. The final Lower Subase FS was issued in December 2010 (Tetra Tech, 2010g) with the understanding that additional data collected as part of Soil and Groundwater PDIs would be incorporated into an FS Addendum. Soil and groundwater PDIs to collect additional data at the Lower Subase were conducted in accordance with the final SAPs (Tetra Tech, 2010e, 2010c). Data from the 2010 PDIs and updated evaluations were captured in the draft Soil and Groundwater PDI Completion Report and FS Addendum (Tetra Tech, 2011b). It is expected that final remedy for Zone 6 (Site 24) soil will be selected in a ROD in 2011.

TPH was not included in the FS Addendum evaluations and alternatives for Zone 6 (Site 24) because TPH was not commingled with CERCLA contaminants. TPH contamination at Site 24 will be evaluated in a future Corrective Action Plan that will be developed to meet CTDEP RSRs.

The current site closeout phase of Site 24 is RI/FS (see Table 1-1). No site closeout milestones have been completed.

2.1.23 Site 25 - Lower Subase-Classified Materials Incinerator

Site 25 consists of the former Classified Materials Incinerator located on the Lower Subase, approximately 300 feet east of Pier 17. The site map is included as Figure 2-19. The site's location relative to other IR sites is shown on Figure 1-2.

Between 1944 and 1963, the incinerator, located within former Building 97, was used to burn classified materials and other wastes generated at NSB-NLON. Materials generated by base operations that were not salvageable were incinerated at Site 25. Residual ash from the incinerator was disposed in the Goss Cove Landfill. Adjacent to the incinerator was a dumpster cleaning operation. The incinerator was demolished in 1979, and Buildings 456 and 478 were constructed in the areas previously used for the dumpster cleaning operation and incinerator, respectively.

Zone 7 includes Site 21 (Berth 16), Site 25 (Classified Materials Incinerator), and Transformers at Building 157 Vault 31. Subsurface fuel oil distribution lines were historically located in Zone 7 but have been abandoned. Subsurface steam, condensate, and electrical ducts are located within Zone 7.

The area was investigated during the Pier 33 and Berth 16/Former Incinerator Site Investigation (Atlantic, 1995a) and the Lower Subase RI (Tetra Tech, 1999b). A geotechnical investigation for the replacement of the quay wall was also conducted at the site in 1989. The results of the geotechnical investigation were presented in the Site Investigation Report.

During the geotechnical investigation, a soil sample was collected and analyzed for metals, VOCs, TPH, oil type by fluorescence, pesticides, and PCBs, and a groundwater sample was collected and analyzed for VOCs. No. 2 fuel oil was detected in subsurface soils in front of Building 175 during the investigation. Petroleum contamination was also evident based on odor and visual inspection.

Following discovery of the petroleum contamination, the site was added to the IR Program. Atlantic conducted a Site Investigation at the site to determine the presence and magnitude of specific contaminants and to determine if the results warranted an RI/FS. The field investigation consisted of a

soil gas survey, a utility-manhole inspection, soil boring installation, monitoring well installation, and soil, groundwater, and sediment sampling and analysis. Petroleum and metal contamination was identified during the Site Inspection.

Prior to proceeding to the Lower Subase RI, available data were collected and reviewed to identify data gaps that needed to be filled during the RI. As a result of the review, further investigation of soil and groundwater containing petroleum constituents, contamination in storm sewer catch basins, extent of ash disposal in the vicinity of 20MW6, and any soils containing TCLP lead levels greater than 150 µg/L were recommended. Also, testing of any UST and piping not recently tested was recommended to eliminate the possibility of an ongoing petroleum source. Additional investigation of site operations and sediment analysis of the storm sewer system were also recommended to determine the extent and source of sediment contamination. Removal and disposal of contaminated sediments and modification of any site operations identified as a contributor to the contaminated sediment were also recommended.

Soil, groundwater, and sediment sampling (in the adjacent Thames River) and analysis were completed at this site during the Lower Subase RI (Tetra Tech, 1999b). Site 25 was evaluated collectively with Site 21 and Transformers at Building 157, Vault 31 during the RI as Zone 7. Because of this approach, the remainder of this section only discusses information in terms of Zone 7.

A large area of lead contamination was identified in shallow and deep soil in Zone 7. TPH contamination was also identified in two general areas. Little organic contamination was identified in groundwater; however, two areas of lead contamination were identified in Zone 7 groundwater. The human health risk assessment indicated potential risks to receptors from exposure to contaminated site media. The ecological risk assessment for the Thames River (sediment and surface water) adjacent to Zone 7 indicated that risks to ecological receptors were low to moderate. The evaluation indicated that there were potential risks to sediment-dwelling organisms from contaminants near Pier 17 but not near Pier 15. However, most of the sediment near Piers 15 and 17 were subsequently dredged, making interpretation of the results from historical studies difficult.

The Lower Subase RI Report (Tetra Tech, 1999b) recommended additional characterization of the sediment in the Thames River to provide the data necessary to refine the ecological risk assessment prior to proceeding to an FS. The RI also recommended that Zone 7 soil and groundwater proceed to an FS for evaluation of appropriate remedial alternatives. Because of the extensive amount of underground utilities in Zone 7 and the sensitive nature of the activities conducted at this location (i.e., national security), it was recommended that the FS for this zone focus, to the extent possible, on alternatives that rely on institutional controls to limit exposure to contaminated soil and passive and/or in-situ remedial alternatives. “Hot spot” removal actions for the lead contamination were also recommended for

evaluation during the FS. In addition, it was recommended that the FS evaluate limited action scenarios for the groundwater and storm sewer system of Zone 7, in conjunction with the soil remedial alternatives. A tiered groundwater monitoring program was recommended for evaluation during the FS.

The Navy subsequently cleaned the Lower Subase storm sewer catch basins in August 2000. Five catch basins in Zone 7 were cleaned by Fleet Environmental using a vacuum truck. The material removed from the catch basins was containerized, tested, and properly disposed off-site. The material removed from the catch basins contained TPH and lead, but the concentrations were low enough for the waste to be classified and disposed of as nonhazardous waste. The storm sewer lines were not surveyed or repaired during the effort. However, the Navy completed replacement of seven catch basins in the area between Zones 1 and 7 in July 2010, and additional repairs on the storm sewer lines are necessary and will be completed in the future.

Well inventories were conducted at the NSB-NLON Lower Subase in 2007 and 2010 (Tetra Tech 2007b and 2011b). Of the two Site 25 wells inventoried in 2010, one was identified as not deficient and one was not found. Maintenance needs for the inventoried wells were identified in the document.

Per the recommendations of the Lower Subase RI, Battelle conducted investigations of Thames River sediment that included sampling and ecological risk evaluations for Zones 4 and 7 and Pier 1 (Battelle, 2003; 2004a; 2004b; 2007; 2008a). Validation studies were performed to evaluate potential impacts to ecological receptors from contaminant migration from onshore source areas or activities associated with the berthing of submarines and ships in the pier areas (Battelle, 2004a and 2008a). Based on the results of the 2008 Validation Study, no footprint at Zone 7 was determined for evaluation in the FS because no areas of sediment had unacceptable ecological risk (Battelle, 2008b).

The Lower Subase FS was prepared to develop and evaluate appropriate remedial alternatives for potentially impacted media (soil, groundwater, and sediment) at the Lower Subase sites. The final Lower Subase FS was issued in December 2010 (Tetra Tech, 2010g) with the understanding that additional data collected as part of Soil and Groundwater PDIs would be incorporated into an FS Addendum. Soil and groundwater PDIs to collect additional data at the Lower Subase were conducted in accordance with the final SAPs (Tetra Tech, 2010c and 2010e). All Zone 7 copper and lead concentrations detected during the Groundwater PDI were less than their respective criteria; therefore, further investigation for these metals in Zone 7 groundwater was not warranted. Regarding arsenic in Zone 7 groundwater, the low frequency of criterion exceedance (one of six) and the fact that the exceedance was only marginally greater than the criterion, further investigation of arsenic in Zone 7 groundwater was not warranted. Data from the 2010 PDIs and updated evaluations were captured in the draft Soil and Groundwater PDI

Completion Report and FS Addendum (Tetra Tech, 2011b). It is expected that the final remedy for Zone 7 soil will be selected in a ROD in 2011.

TPH were not included in the FS Addendum evaluations and alternatives for Site 25 because TPH was not commingled with CERCLA contaminants. TPH contamination at Site 25 will be evaluated in a future Corrective Action Plan that will be developed to meet CTDEP RSRs.

The current site closeout phase of Site 25 is RI/FS (see Table 1-1). No site closeout milestones have been completed.

2.2 SITE GROUPINGS

Several sites are located in the area of NSB-NLON referred to as the Lower Subase. The Lower Subase site is bounded on the west by the Thames River and to the east by the Providence and Worcester Railroad. The Lower Subase extends from Pier 1 in the south to Pier 33 in the north. The Lower Subase is the original Subase and the history of its use dates back to 1867. Most of the construction at the Lower Subase took place in the early 1900s, with a major expansion from 1935 to 1945. Sites in the Lower Subase, which were described in previous sections, have been grouped together to facilitate additional investigation. The following sites are included in the Lower Subase:

Site 10 - Lower Subase - Fuel Storage Tanks and Tank 54-H
Site 11 - Lower Subase - Power Plant Oil Tanks
Site 13 - Lower Subase - Building 79 Waste Oil Pit
Site 17 - Lower Subase - Hazardous Materials/Solvent Storage Area (Building 31)
Site 19 - Lower Subase - Solvent Storage Area (Building 316)
Site 21 - Lower Subase - Berth 16
Site 22 - Lower Subase - Pier 33
Site 24 - Lower Subase - Central Paint Accumulation Area (Building 174)
Site 25 - Lower Subase - Classified Materials Incinerator

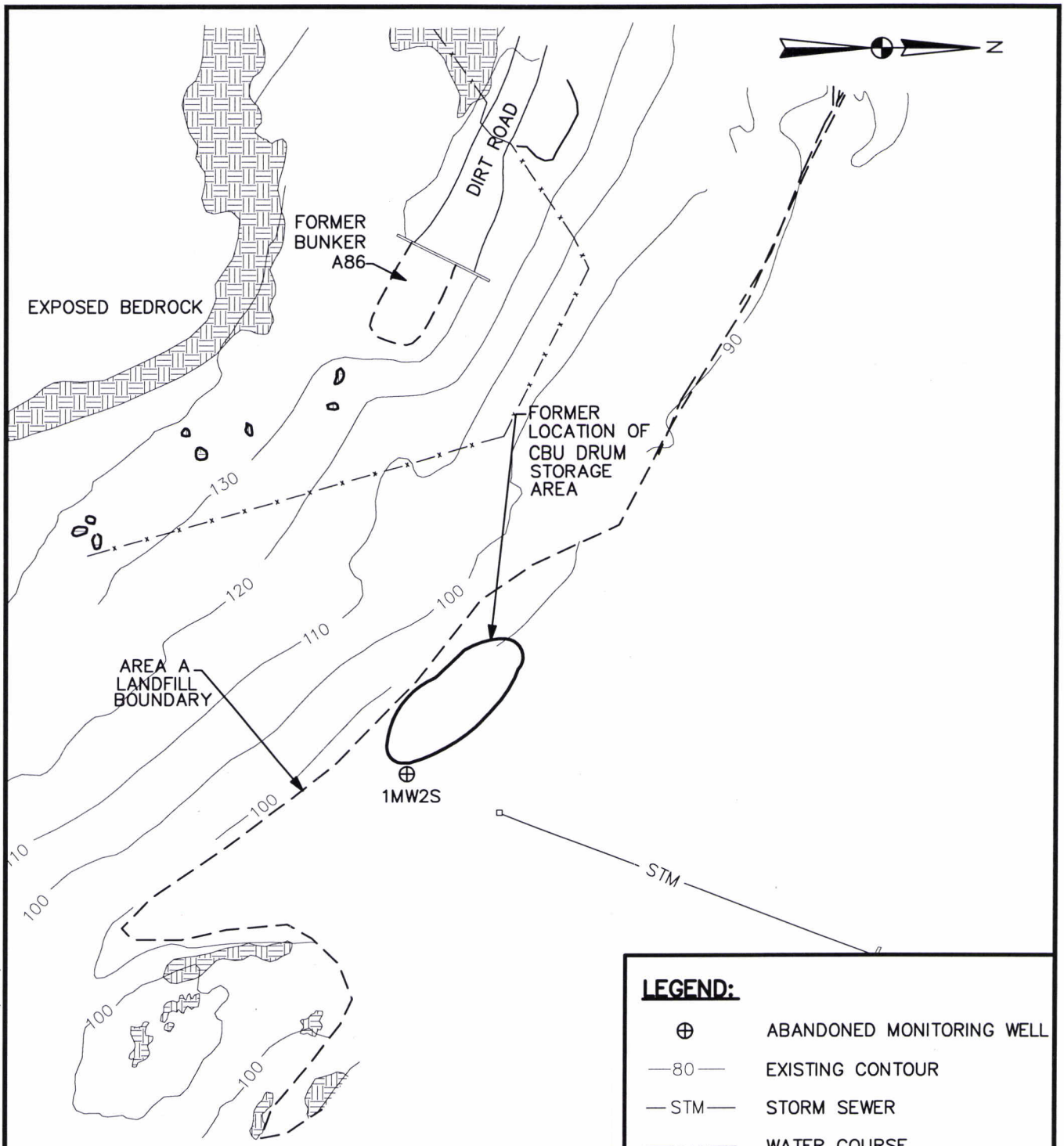
In the Lower Subase RI and FS documents, the Lower Subase is divided into seven Zones. Sites are included in the Lower Subase zones as follows:

Zone 1 - Sites 10 and 11
Zone 2 - Former fuel distribution lines
Zone 3 - Site 17
Zone 4 - Sites 13 and 19 and Thames River sediment adjacent to Zone 4 and the outermost area of Pier 1

Zone 5 - Site 22

Zone 6 - Site 24

Zone 7 - Sites 21 and 25



LEGEND:

- ⊕ ABANDONED MONITORING WELL
- —80— EXISTING CONTOUR
- —STM— STORM SEWER
- — · · · — WATER COURSE
- — x — x — FENCE

0 80 160

GRAPHIC SCALE IN FEET

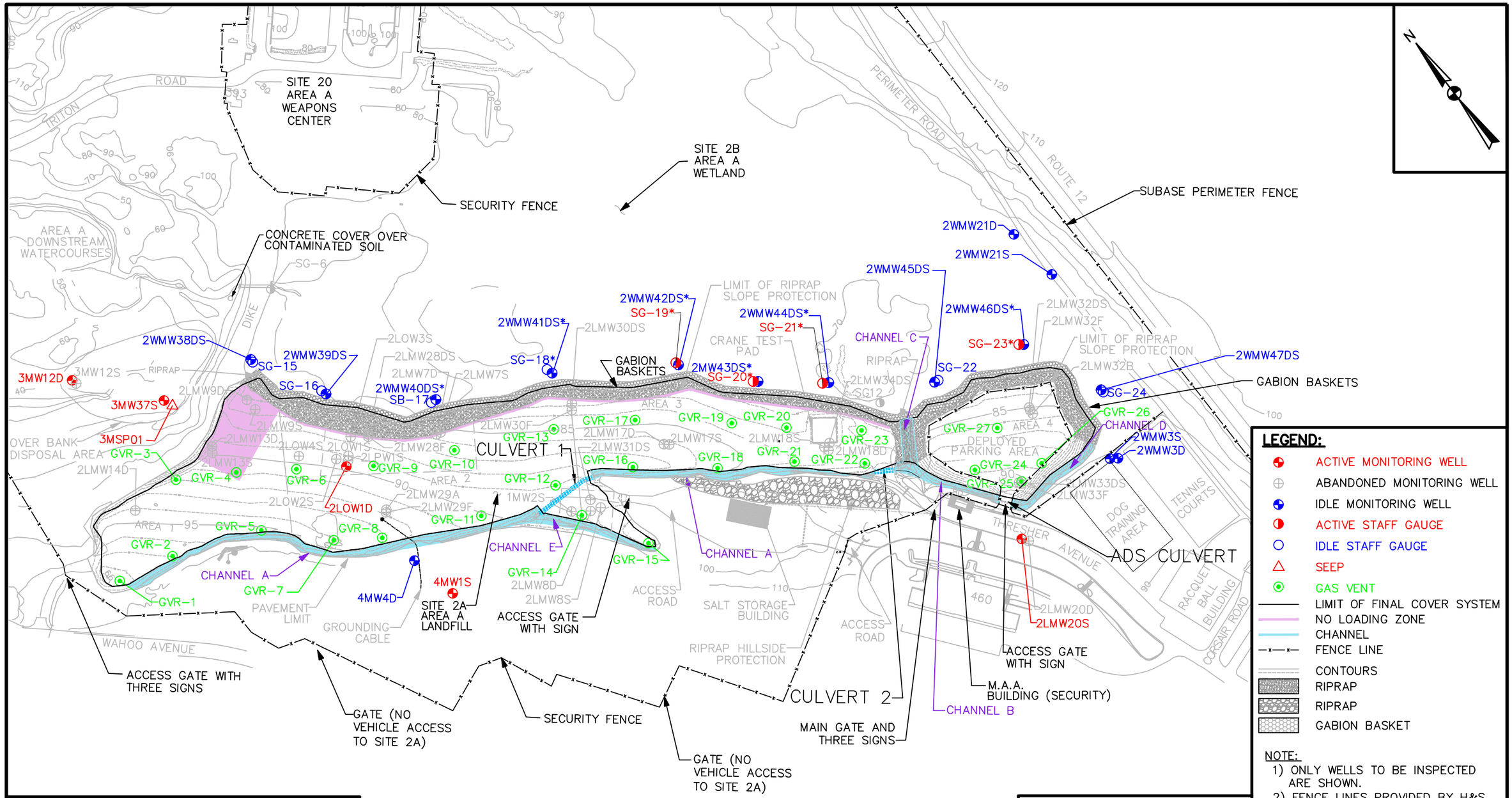
NOTES

1. UNDERGROUND UTILITY LOCATIONS ARE APPROXIMATE.
2. BASE MAP AND UTIITY INFORMATION FROM MAPS OF NSB–NLON AND PHASE II RI WORK PLAN.

DRAWN BY BH DATE 11/26/08	Tetra Tech NUS, Inc.	SITE MAP SITE 1 – CBU DRUM STORAGE AREA NSB–NLON GROTON, CONNECTICUT
CHECKED BY DATE 11/26/08		
REVISED BY DATE		
SCALE AS NOTED		

CONTRACT NO. 1484	
OWNER NO. 134	
APPROVED BY CAR DATE 12/3/08	
DRAWING NO. FIGURE 2–1	REV. 1

R:\1484\Figures\1484CM01.dwg PIT BEN.HOPPE 11/25/2008



LEGEND:

- ACTIVE MONITORING WELL
- ABANDONED MONITORING WELL
- IDLE MONITORING WELL
- ACTIVE STAFF GAUGE
- IDLE STAFF GAUGE
- SEEP
- GAS VENT
- LIMIT OF FINAL COVER SYSTEM
- NO LOADING ZONE
- CHANNEL
- FENCE LINE
- CONTOURS
- RIPRAP
- RIPRAP
- GABION BASKET

NOTE:
1) ONLY WELLS TO BE INSPECTED ARE SHOWN.
2) FENCE LINES PROVIDED BY H&S (2010).

*WELL/STAFF GAUGE SHOWN OUT OF POSITION FOR ILLUSTRATION PURPOSE

SOURCES:
1. BASE MAP AND UTILITY INFORMATION FROM MAPS OF NSB–NLON AND PHASE II RI WORK PLAN (ATLANTIC, 1993).
2. GAS VENT COORDINATE INFORMATION FROM SAI SURVEY CO. FOSTER WHEELER AS–BUILT REPORT 11–1–97.

NOTE:
MONITORING WELL 3MW12D REINSTALLED OCTOBER 2002 DURING ROUND 11 MONITORING ACTIVITIES

0 200 400
GRAPHIC SCALE IN FEET

DRAWN BY / DATE	CK 3/10/10
CHECKED BY / DATE	NJB 4/12/11
REVISED BY / DATE	CW 10/20/10
SCALE	AS NOTED

Tetra Tech NUS, Inc.

SITE PLAN FOR
SITE 2A – AREA A LANDFILL
NSB–NLON
GROTON, CONNECTICUT

CONTRACT NO.	WE33
OWNER NO.	3386
APPROVED BY / DATE	CAR 4/12/11
DRAWING NO.	FIGURE 2–2
REV.	2

R:\0616 – NSB New London\Figures\0616C07.dwg PIT NICHOLE.DILLA 4/21/11

P:\GIS\NEWLONDON_NSB\MXD\SITE2B_SITEMAP_APR11.MXD 06/27/11 SS

Aerial photograph taken in 2008, and supplied by the NAVFAC Mid-Atlantic Georeadiness Center.

N

SEE INSET

2WMW2S
2WCSD9
2WSD15
2WSD14
2WSD13
2WSD83
2WCSD8
2WSD53
2WSD108
2WCSD4 / 2WSD59
2WSD112
2WMW6S
2WMW6D
2WSD113
2WSD20
2WSD111
2WSD100
2WSD109
2WSD54
2WSD64
2WCSD5
2WSD107
2WSD106
2WCSD7
2WSD105
2WSD103
2WSD102
2WSD99
2WCSD11
2WSD100
2WSD88
2WSD86
2WCSD12
2WSD85
2WSD7
2WSD17
2WSD18
2WSD9
2WSD57 / 2WSD62
2WSD16
2WSD87
2WSCD14 / 2WSD79
2WSD56
2WSD89
2WSD98
2WSD96
2WSD97
2WSD95
2WSD101
2WSD6
2WCSD13
2WCSD15
2WTB7 / 2WSD81
2WSD19
2WSD91
2WSD90
2WSD92
2WSD94
2WSD93
2WSD22
2WCSD6
2WSD104
2WTB6
2WSD21
2WSD55 / 2WSD60
2WSD1
2WSD45
2WSD4
2WSD30
2WSD31
T4A
T4B
2WSD27
2WSD29
2WSD46
2WSD148
2WSD28
2WTB4
2WSD5
2WSD147
2WSD151
2WSD153
2WSD2
T5A
2WSD76
T5B
2WSD155
2WSD156
2WSD159
2WSD160
2WMW5D
2WMW5S
2WSD149
2WSD150
2WSD33
2WSD32
T6A
T6B
2WSD34
2WSD63
2WSD152
T8B
T8A
2WSD44 / 2WSD67
2WSD162
2WSD161
2WSD43 / 2WSD73
2WSD158
2WSD157
2WTB2
T7B / 2WSD68
T7A
2WSD154
T9B
2WSD36
2WSD3 / 2WSD80
2WSD37
2WSD35
T9A

0 80 Feet

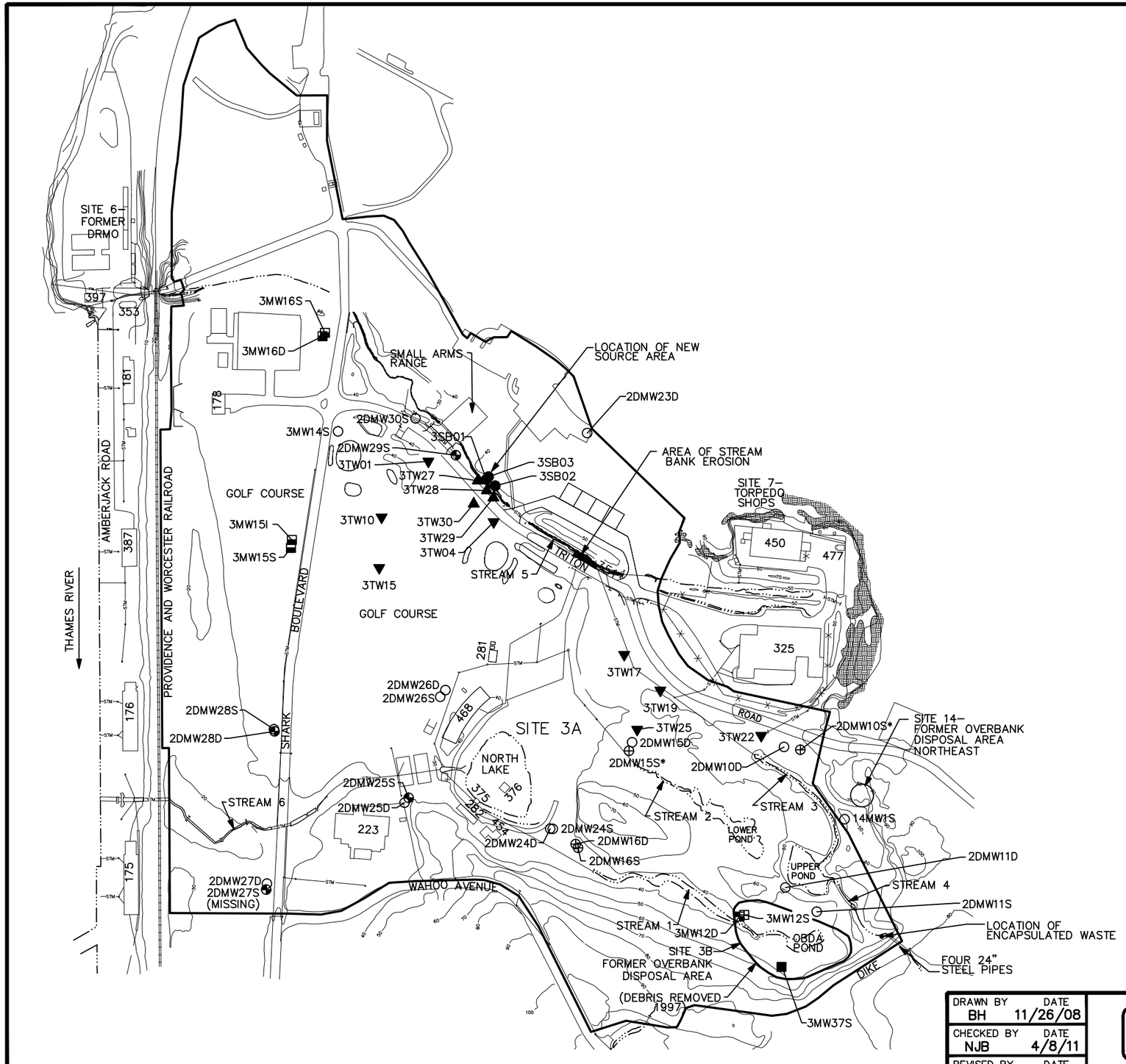
2WSD26
2WSD52 / 2WSD71
2WSD117
2WSD115
2WSD25 / 2WSD77
2WSD114
2WSD50 / 2WSD65
2WSD116
2WSD49 / 2WSD70
2WSD66
2WSD24 / 2WSD78
2WSD122
2WSD131
2WSD127
2WSD121
2WSD119
2WSD118
2WSD120
2WSD123
2WSD124
2WSD51
2WSD23
2WSD126
2WSD125
2WSD130
2WSD129
2WSD128
2WSD133
2WSD132
2WSD134
2WSD136
2WSD137
T1A
T1B
2WSD139
2WSD47 / 2WSD72
2WSD140
2WSD138
2WSD135
2WSD141
T2B
T2A
2WSD142
2WSD143
2WMW39DS
2WSD144
2WSD48 / 2WSD69
2WSD75
2WSD145
T3B
2WSD74
T3A
2WSD146

200 0 200 Feet

Legend

- Existing Well Location
- 2011 Sediment Sample Location (Phase I Analysis)
- 2011 Sediment Sample Location (Phase II Analysis)
- 2008 Sediment Sampling Location / Previous Sampling Location
- Sediment Sample Location Does Not Exceed PRGs
- Sediment Sample Location Exceeds PRGs
- Extent of Contamination Area
- Area A Wetland Boundary

DRAWN BY: J. ENGLISH	DATE: 04/14/11	TETRA TECH	CONTRACT NUMBER: 3386	CTO NUMBER: WE33
CHECKED BY: N. BALSAMO	DATE: 06/27/11	SITE 2B AREA A WETLAND NAVAL SUBMARINE BASE NEW LONDON GROTON, CONNECTICUT	APPROVED BY: CAR	DATE: 04/21/11
REVISED BY: ___	DATE: ___		APPROVED BY: ___	DATE: ___
SCALE: AS NOTED			FIGURE NO.: FIGURE 2-3	REV: 0



NOTES

1. UNDERGROUND UTILITY LOCATIONS ARE APPROXIMATE.
2. BASE MAP AND UTILITY INFORMATION FROM MAPS OF NSB–NLON AND PHASE II RI WORK PLAN, (ATLANTIC, MAY 1993).
3. *–2DMW10S AND 2DMW15S WERE NOT COMPLETED DUE TO A LACK OF GROUNDWATER. SOIL SAMPLES WERE COLLECTED FROM THESE BORINGS.
4. 3MW12S AND 3MW12D WERE DESTROYED DURING THE SOIL AND SEDIMENT OU3 REMEDIAL ACTION. 3MW12D WAS SUBSEQUENTLY REPLACED DURING ROUND 11 (2002) OF THE AREA A LANDFILL GROUNDWATER MONITORING PROGRAM.

N

LEGEND:

- 3MW37S — AREA A LANDFILL GROUNDWATER MONITORING PROGRAM MONITORING WELL
- 3TW1 — BGOURI TEMPORARY WELL
- 3TW27 — BGOURI DGI TEMPORARY WELL
- 3SB01 — SOIL BORING
- 3MW12D — REPLACED WELL
- 3MW12S — ABANDONED WELL
- 2DMW25D — PHASE I MONITORING WELL
- 2DMW26D — PHASE II MONITORING WELL
- 3MW16S — POST–ROD MONITORING WELL
- 2DMW25D — ABANDONED MONITORING WELL
- 10 — TOPOGRAPHIC CONTOUR
- 123 — BUILDING No.
- WATERCOURSE
- STM — STORM SEWER AND CATCH BASIN
- EXPOSED BEDROCK
- FENCE
- SITE 3 BOUNDARY

0 300 600
GRAPHIC SCALE IN FEET

BASE MAP SOURCE: PREPARED BY THE NAVAL SUBMARINE BASE PUBLIC WORKS DEPT., ENGINEERING DIVISION. MARCH 2006, DRAWING NO. A–667.

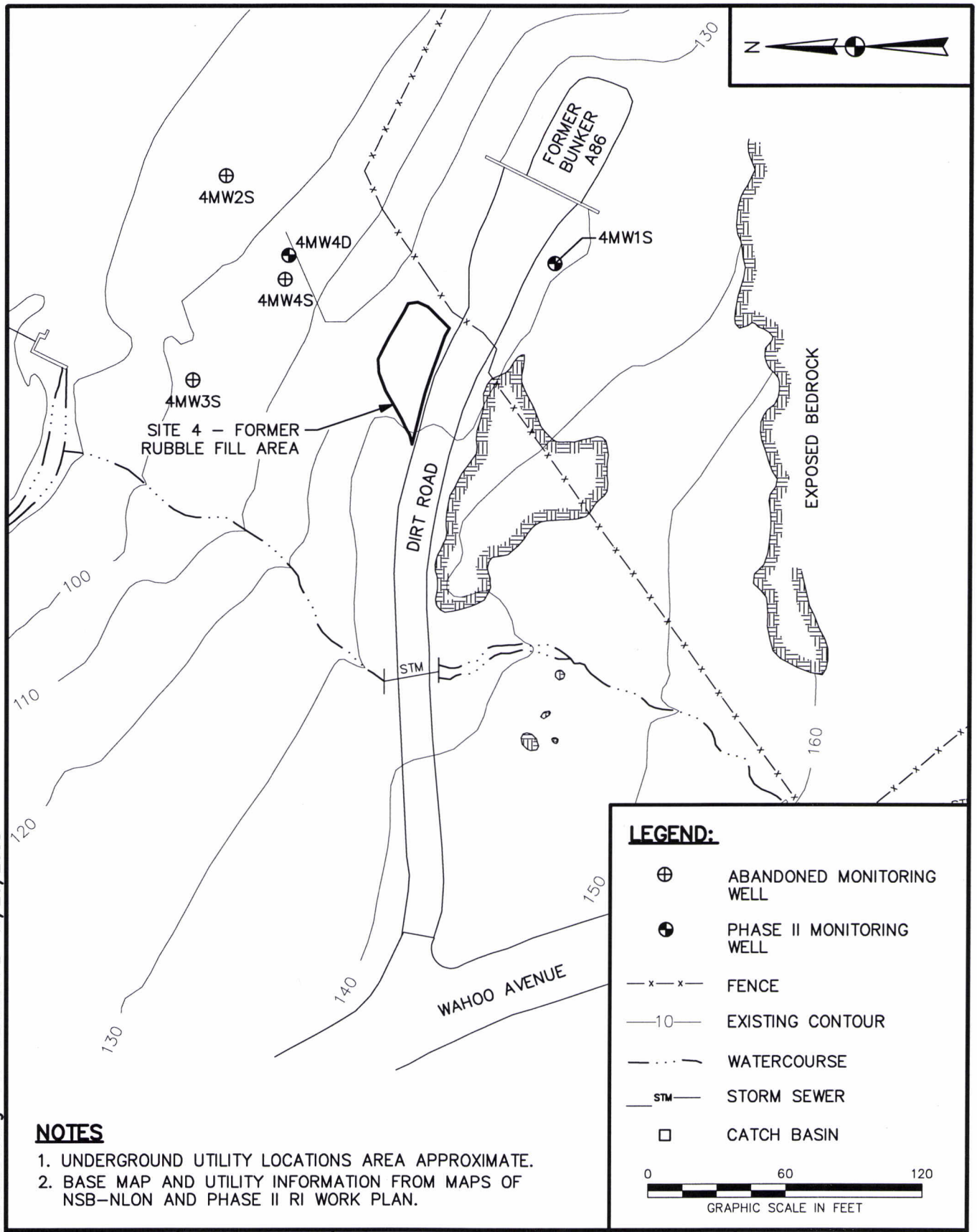
DRAWN BY / DATE	BH 11/26/08
CHECKED BY / DATE	NJB 4/8/11
REVISED BY / DATE	
SCALE	AS NOTED

Tetra Tech NUS, Inc.

SITE MAP
SITE 3 – AREA A DOWNSTREAM WATERCOURSES/OBDA
NSB–NLON
GROTON, CONNECTICUT

CONTRACT NO.	WE33
OWNER NO.	3386
APPROVED BY / DATE	CAR 4/8/11
DRAWING NO. / REV.	FIGURE 2–4 / 1

R:\3386 – NSB New London\Figures\3386FG09.dwg PIT NICHOLE.DILLA 4/13/2011



NOTES

1. UNDERGROUND UTILITY LOCATIONS AREA APPROXIMATE.
2. BASE MAP AND UTILITY INFORMATION FROM MAPS OF NSB–NLON AND PHASE II RI WORK PLAN.

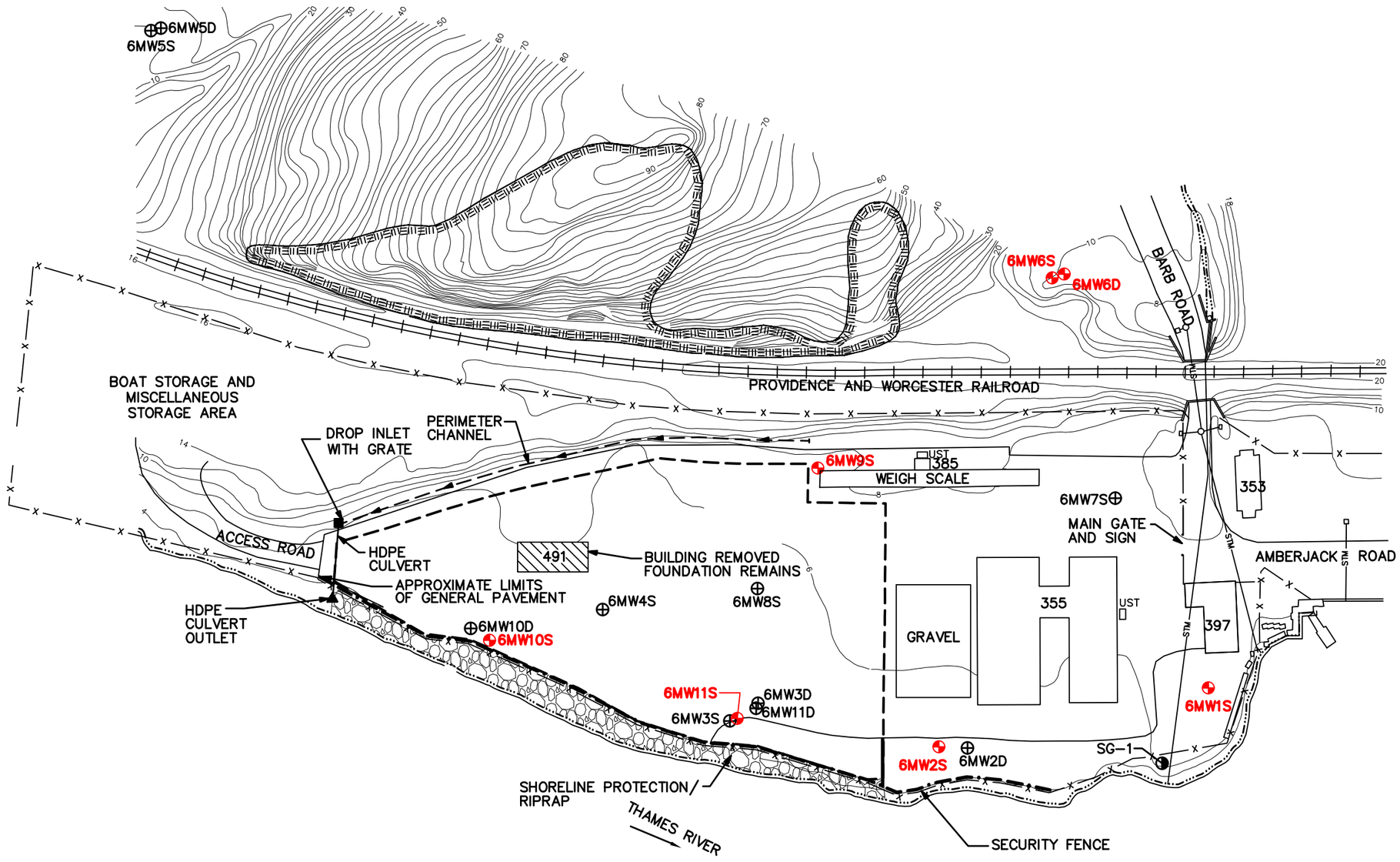
R:\1484\Figures\1484CM05.dwg PIT BEN.HOPPE 11/26/2008

DRAWN BY BH	DATE 11/26/08
CHECKED BY	DATE 11/26/08
REVISED BY	DATE
SCALE AS NOTED	

Tetra Tech NUS, Inc.

SITE MAP
SITE 4 – RUBBLE FILL AREA AT BUNKER A86
NSB–NLON
GROTON, CONNECTICUT

CONTRACT NO. 1484	
OWNER NO. 134	
APPROVED BY CAR	DATE 12/3/08
DRAWING NO. FIGURE 2–5	REV. 1



LEGEND:

- BUILDING REMOVED
- MONITORING WELL IN SITE 6 GROUNDWATER MONITORING PROGRAM
- ABANDONED MONITORING WELL
- HISTORICAL STAFF GAUGE
- FENCE
- APPROXIMATE LIMIT OF CAP
- APPROXIMATE LOCATION OF JERSEY BARRIER
- APPROXIMATE LOCATION OF DEBRIS NOTED DURING APRIL 2011 INSPECTION

NOTES:

1. UNDERGROUND UTILITY LOCATIONS ARE APPROXIMATE.
2. BASE MAP AND UTILITY INFORMATION FROM MAPS OF NSB–NLON AND PHASE II RI WORK PLAN (ATLANTIC, 1993.)
3. APPROXIMATE CAP LIMITS AND OTHER FEATURES COMPILED FROM OHM COMPLETION REPORT AND ATLANTIC DESIGN SHEET C–2.
4. FENCE LINE PROVIDED BY H&S (2010)

0 80 160
SCALE IN FEET

REVISIONS

NO.	DATE	INL	REMARKS
1	10–8–08	BH	UPDATED STATUS OF ABANDONED WELLS INSIDE CAPPED AREA
2	10–19–10	ND	CHANGED FENCE LINE REMOVED BUILDING 479
3	4–19–11	ND	UPDATED SECURITY FENCE ALONG RIVER AND BOAT STORAGE AREA.

DRAWN BY CK	DATE 11/24/08
CHECKED BY BC	DATE 5/16/1
REVISED BY	DATE
SCALE AS NOTED	

Tetra Tech NUS, Inc.

SITE PLAN FOR
SITE 6
NSB–NLON
GROTON, CONNECTICUT

CONTRACT NO. WE33	
OWNER NO. 3386	
APPROVED BY CAR	DATE 5/16/1
DRAWING NO. FIGURE 2–6	REV. 2

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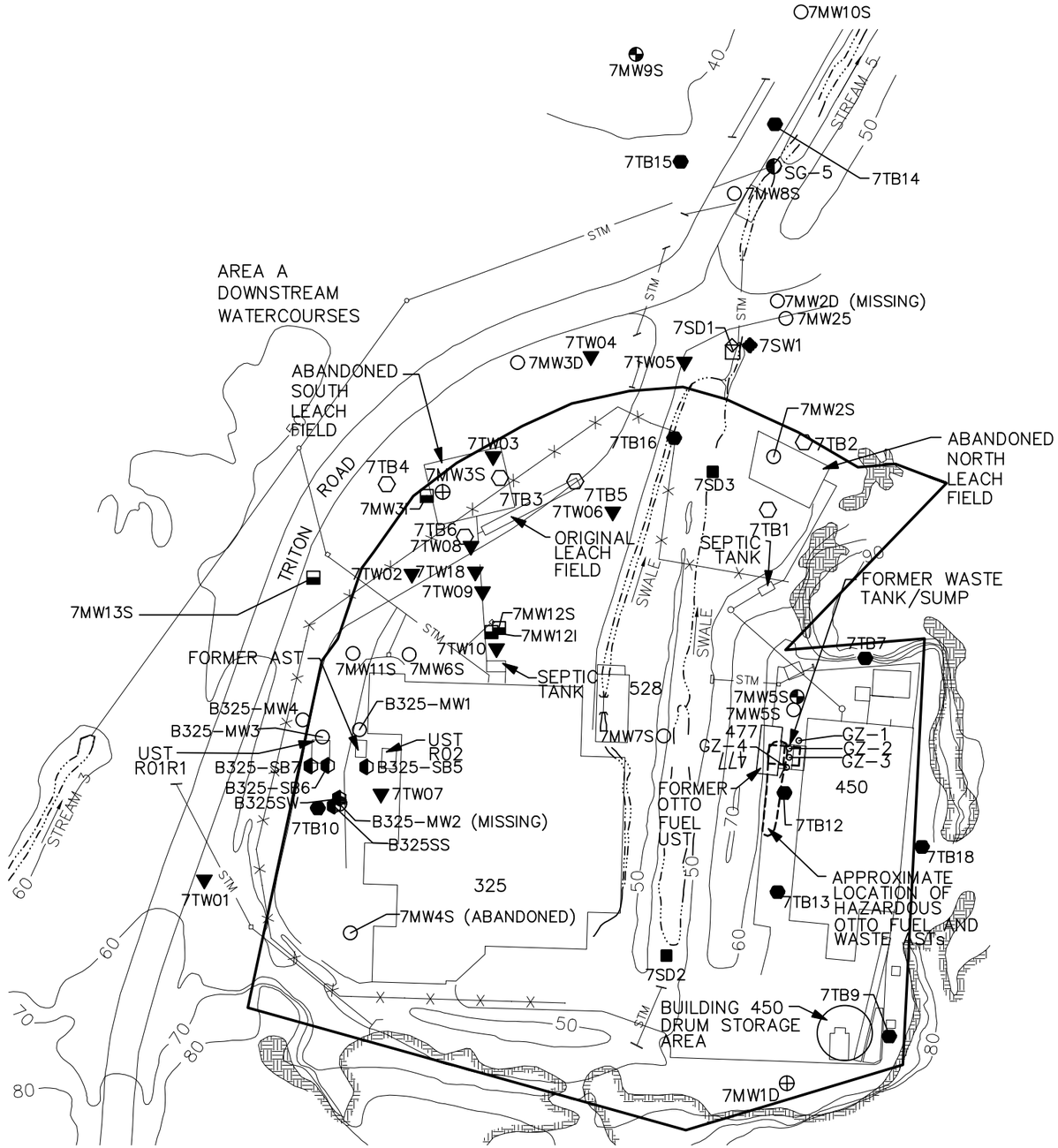

N

LEGEND:

7MW3I	POST-ROD MONITORING WELL
7MW2S	PHASE I RI MONITORING WELL
7MW2S	ABANDONED MONITORING WELL
7MW7S	PHASE II RI MONITORING WELL
B325-MW1	SITE CHARACTERIZATION MONITORING WELL
7TB1	PHASE I RI TEST BORING
7TB12	PHASE II RI TEST BORING
B325-SB6	SITE CHARACTERIZATION SOIL BORING
7SW1	PHASE I RI SURFACE WATER SAMPLE
7SW1	PHASE II RI SURFACE WATER SAMPLE
7SD1	PHASE I RI SEDIMENT SAMPLE
7SD3	PHASE II RI SEDIMENT SAMPLE
SG-5	PHASE II RI STAFF GAUGE
7TB17	BGOURI TEST BORING LOCATION
7TW02	BGOURI TEMPORARY WELL
10	TOPOGRAPHIC CONTOUR
123	BUILDING No.
	WATERCOURSE
STM	STORM SEWER AND CATCH BASIN
	EXPOSED BEDROCK
	FENCE
	SITE 7 BOUNDARY

NOTES:

UNDERGROUND UTILITY LOCATIONS ARE APPROXIMATE.

0 100 200

GRAPHIC SCALE IN FEET

BASE MAP SOURCE: PREPARED BY THE NAVAL SUBMARINE BASE PUBLIC WORKS DEPT., ENGINEERING DIVISION. MARCH 2006, DRAWING NO. A-667.

DRAWN BY BH	DATE 11/26/08	Tetra Tech NUS, Inc.
CHECKED BY NJB	DATE 4/8/11	
REVISED BY	DATE	
SCALE AS NOTED		

SITE MAP
SITE 7 - TORPEDO SHOPS
NSB-NLON
GROTON, CONNECTICUT

CONTRACT NO. WE33	
OWNER NO. 3386	
APPROVED BY CAR	DATE 4/8/11
DRAWING NO. FIGURE 2-7	REV. 1

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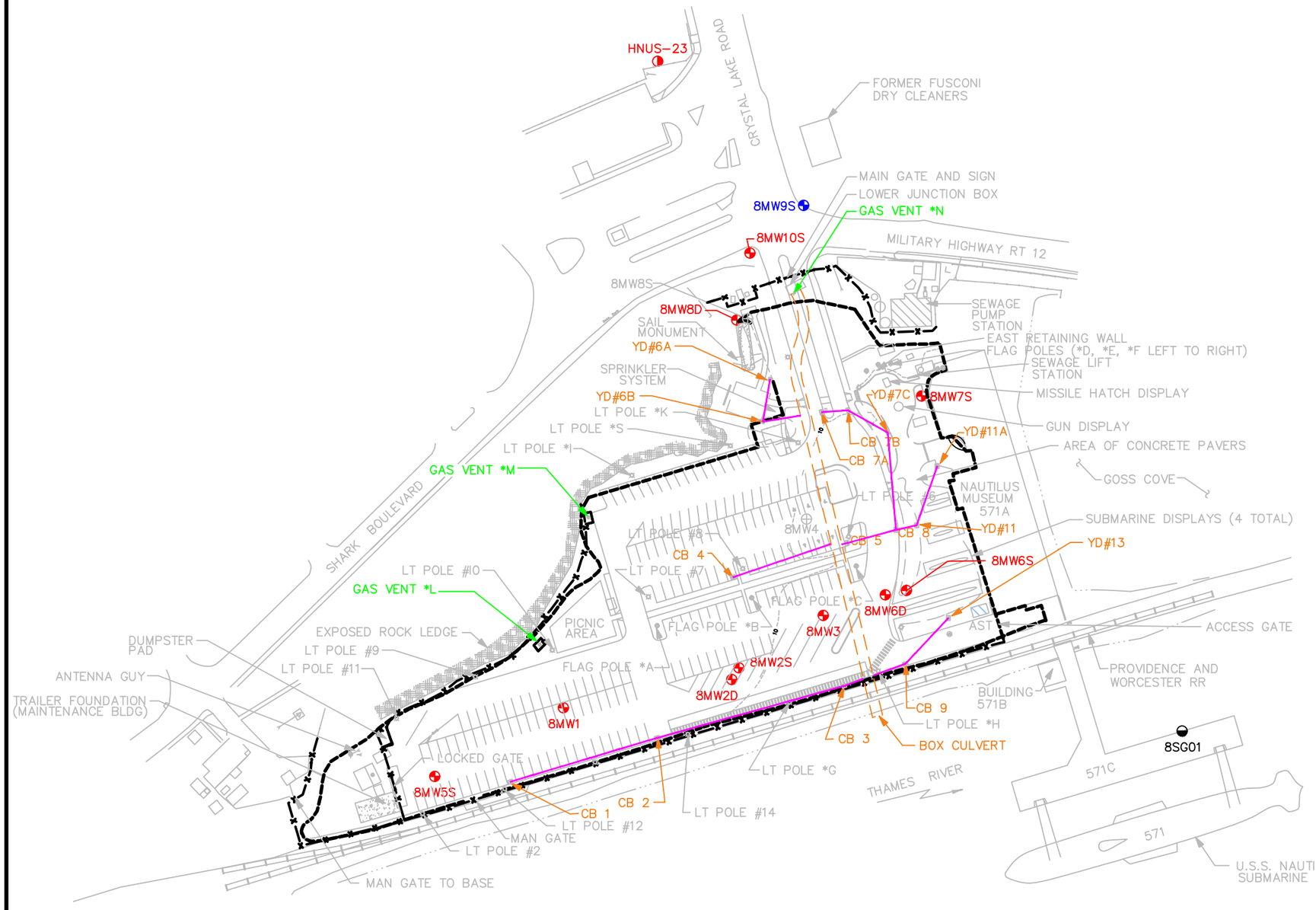


LEGEND:

- IDLE MONITORING WELL
- ACTIVE MONITORING WELL
- ABANDONED MONITORING WELL
- TANK FARM MONITORING WELL
- HISTORICAL STAFF GAUGE
- STORM DRAIN LINES
- EXISTING SHORELINE
- ASPHALT PAVEMENT AREA CAP SYSTEM BOUNDARY
- 10 — TOPOGRAPHIC ELEVATION
- CONTOUR (NAVD 88)
- CHAIN LINK FENCE
- BOX CULVERT
- LT — LIGHT
- CB — CATCH BASIN
- YD — YARD DRAIN

NOTES:

1. IDENTIFICATION NUMBER/LETTER WITH AN ASTERISK INDICATES AN ARBITRARY DESIGNATION BECAUSE NONE WAS PROVIDED IN THE DESIGN OR AS–BUILT DOCUMENTATION.
2. ALL MONITORING WELLS TO BE INSPECTED ARE SHOWN

0 100 200
SCALE IN FEET

REF: BOX CULVERT LOCATION TAKEN FROM BIDDING DOCUMENT DRAWING TITLED "GOSS COVE LANDFILL (SITE 8) CAP, STORM SEWER PLAN AND PROFILE", NAVFAC DRAWING NO. 2204124, DIS. SH. NO. C–10, SEPTEMBER 4, 2001 REVISION.

REVISIONS			
NO.	DATE	INL	REMARKS
1	12–16–08	BH	UPDATED TO SHOW ABANDONED WELLS, LOCATION OF LOWER JUNCTION BOX, BOX CULVERT AND CURRENT GUN DISPLAY.
2	10–19–10	ND	MAN GATE NEAR LIGHT POLE REMOVED, TWO GATES ADDED, COLOR CODING ADDED, DELETED STAFF GAUGE.
3	3–29–11	ND	CORRECTED LOCATION OF BOX CULVERT, ADDED STORM DRAIN LINES.
4	6–24–11	CK	ADDED AST

DRAWN BY BH — DATE 12/16/08
CHECKED BY NJB — DATE 4/8/11
REVISED BY — DATE
SCALE AS NOTED

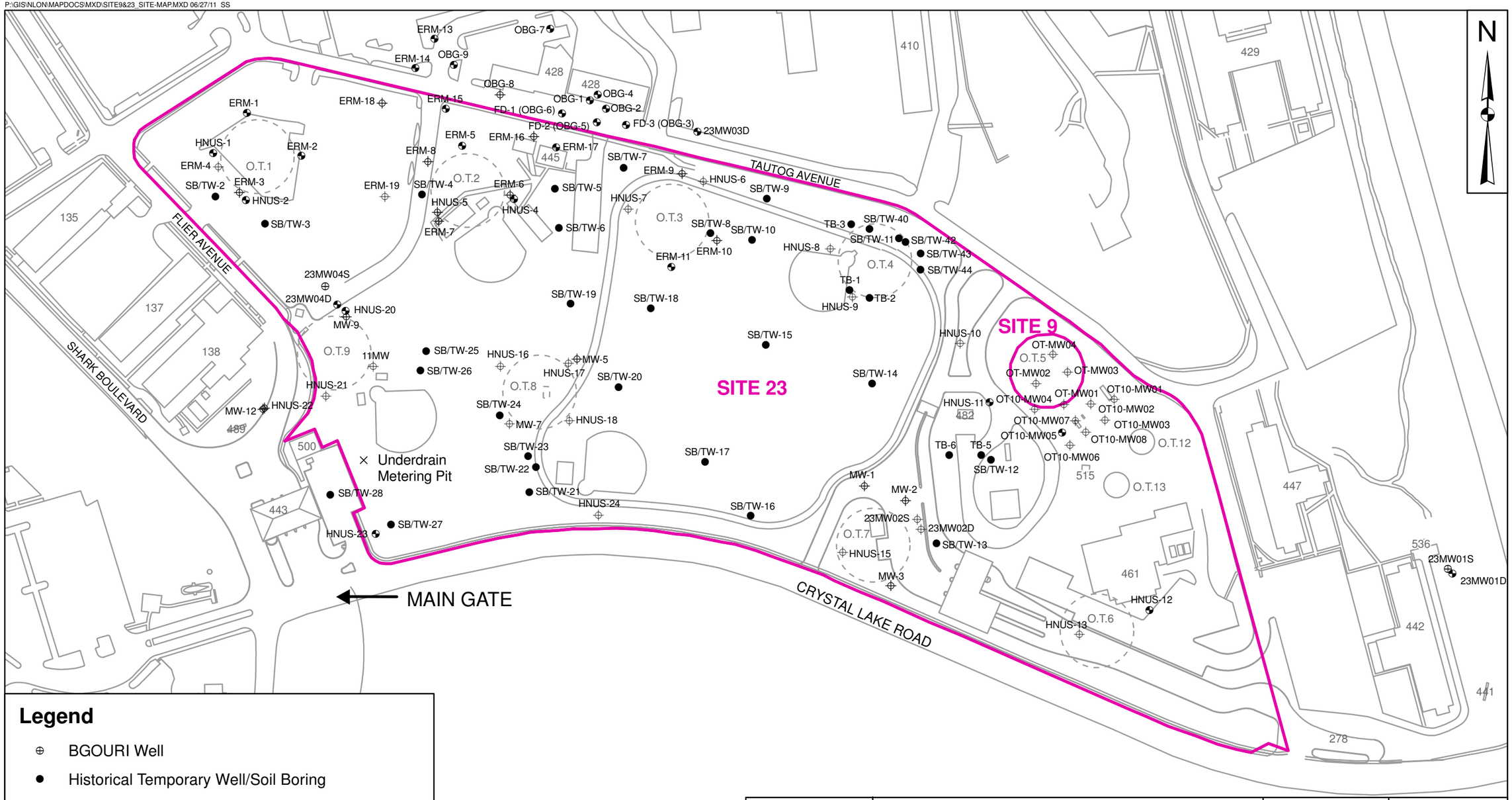
Tetra Tech NUS, Inc.

SITE PLAN FOR
SITE 8 – GOSS COVE LANDFILL
NSB–NLON
GROTON, CONNECTICUT

CONTRACT NO. WE33
OWNER NO. 3386
APPROVED BY CAR — DATE 4/8/11
DRAWING NO. FIGURE 2–8
REV. 2

R:\3386 – NSB New London\Figures\3386FG02.dwg PIT CARLY.KRAMER 6/27/2011

P:\GIS\NLON\MAPDOCS\MXD\SITE9&23_SITE-MAP.MXD 06/27/11 SS



Legend

- BGOURI Well
- Historical Temporary Well/Soil Boring
- Destroyed, Missing, or Abandoned Monitoring Well
- Existing Monitoring Well
- Site Boundary
- Former Tank

NOTES:
1.) Air sparging and soil vapor extraction wells and testing points not shown.
2.) Base Map Source: Prepared by the Naval Submarine Base Public Works Dept., Engineering Division. March 28, 2006. Drawing No. A-667.
3.) Site 23 Boundary Surveyed by CME Associates Inc. on March 30, 2010.

DRAWN BY K. MOORE	DATE 05/11/07	Tetra Tech NUS, Inc.	CONTRACT NO. CTO WE33 / OWNER NO. 3386
CHECKED BY D. WITT	DATE 07/15/10	SITE MAP SITE 9 FORMER OT-5 AND SITE 23 FORMER FUEL FARM NSB-NLON GROTON, CONNECTICUT	APPROVED BY / DATE
REVISED BY S. STROZ	DATE 07/15/10		APPROVED BY -- / DATE --
SCALE AS NOTED			FIGURE NO. 2-9 / REV. 1

PGH P:\GIS\NLON\MAPDOCS\MXD\SITES10_11_SITEMAP_APR11_2.MXD 06/27/11 SS

Aerial photograph taken in 2008, and supplied by the NAVFAC Mid-Atlantic Georeadiness Center.

N

ZONE 1

PROVIDENCE AND WORCESTER RAILROAD

SEE INSET

SITE 10

SITE 11

A, B, C, D

E, F, G

H

J

K, L

NESO1 TGN PC TGS 13MW20/13TB17 Z1PDI-009 TB5-1RI FOMW15 FOMW13 FOMW16 TB4-1RI 13MW21/13TB15 Z1PDI-010 13MW4 NESO3 FOMW14 Z1PDI-004 13MW1 Z1PDI-006 Z1PDI-008 NESO7 TB6-1RI NESO2 13MW19/13TB16 Z1PDI-013 13MW2 MW1-1PDI 13MW3 TB2-1RI 13MW18 Z1PDI-001 13MW7 Z1PDI-002 Z1PDI-003 USTPW-01 (Shown out of position for illustrative purposes) BUILDING TO BE REPLACED (CURRENTLY GRAVEL) TB7-1RI Z1PDI-012 13MW8 Z1PDI-014 GS-32L 13MW5 Z1PDI-011 GS-31L TB8-1RI NESO5 GS-28L Z1PDI-005 TB9-1RI TB1-1RI GS-30L GS-26L GS-29L 13MW9 Z1PDI-007 NESO4 13MW6 GS-25L MW-6 NESO6 13MW10 13MW17

ALBACORE RD PIER 10 CORVINA RD CISCO RD ARGONAUT RD AMBERJACK RD PIER 8

89 107 29 490 527 471 1/2 17 20

100 0 100 Feet

50 0 50 Feet

Legend

- PDI Sample Location
- UST Well
- Monitoring Well
- Monitoring Well Installed and Sampled During GW PDI
- Abandoned, Destroyed or Missing Monitoring Well
- Test Boring / Direct Push Location
- Lower Subase RI Test Boring Location
- Catch Basin
- Manhole
- Sanitary / Sewer Junction
- Site Boundary
- Current UST Boundary
- Former UST Boundary
- Compressed Air Line
- Electric Line
- Former Diesel Oil Line
- Natural Gas Line
- Sanitary Sewer Line
- Steam Line
- Storm Sewer Line
- Telephone Line
- Water Line
- 78 Building Number
- Former Building
- Grass/Gravel Area

TB5-1RI FOMW15 FOMW16 FOMW13 FOMW14 H Z1PDI-004 C932 13MW1 E, F, G NESO7 TB6-1RI Z1PDI-013 13MW3 K, L USTPW-01 Z1PDI-001 13MW18 C503 C502 C924 Z1PDI-003

DRAWN BY J. ENGLISH	DATE 05/20/11	Tetra Tech NUS, Inc.	CONTRACT NUMBER WE33 / OWNER NUMBER 3386
CHECKED BY N. BALSAMO	DATE 06/27/11	SITE MAP SITE 10 - FUEL STORAGE TANKS AND TANK 54-H AND SITE 11 - POWER PLANT OIL TANKS NSB-NLON, GROTON, CONNECTICUT	APPROVED BY CAR / DATE 05/23/11
COST/SCHEDULE-AREA			APPROVED BY — / DATE —
SCALE AS NOTED			DRAWING NO. FIGURE 2-10 / REV 0

PGH P:\GIS\NLON\MAPDOCS\MXD\SITES13_18_SITEMAP_APR11_2.MXD 06/27/11 SS

Aerial photograph taken in 2008, and supplied by the NAVFAC Mid-Atlantic Georeadiness Center.

N

SITE 17

TO BE PAVED

ZONE 4

BULLHEAD RD

PROVIDENCE AND WORCESTER RAILROAD

PIER 6

GS-11L

13TB4

Z4PDI-007

QW-2

WE5

WE1

13TB3A

13TB4A

TB4-4RI

13TB3

NESO9

Z4PDI-001

Z4PDI-008

QW-1

WE4

GS-10L

WE4A

QW-6

13MW16

13MW13

13TB2A

WE3

Z4PDI-006

13MW14

GS-9L

Z4PDI-002

13TB1

SITE 13

BLUEFISH RD

13MW15

MW1-4PDI

GS-8L

QW-3

NESO10

NESO11

TB3-4RI

Z4PDI-003

QW-4

13TB6

Z4PDI-009

MW2-4RI

GS-7L

QUAY WALL STUDY AREA

SITE 19

BLUEFISH RD

NESO12

GS-6L

Z4PDI-004

MW1-4RI

QW-5

Z4PDI-005

PIER 2

INNER PIER 1

OUTER PIER 1

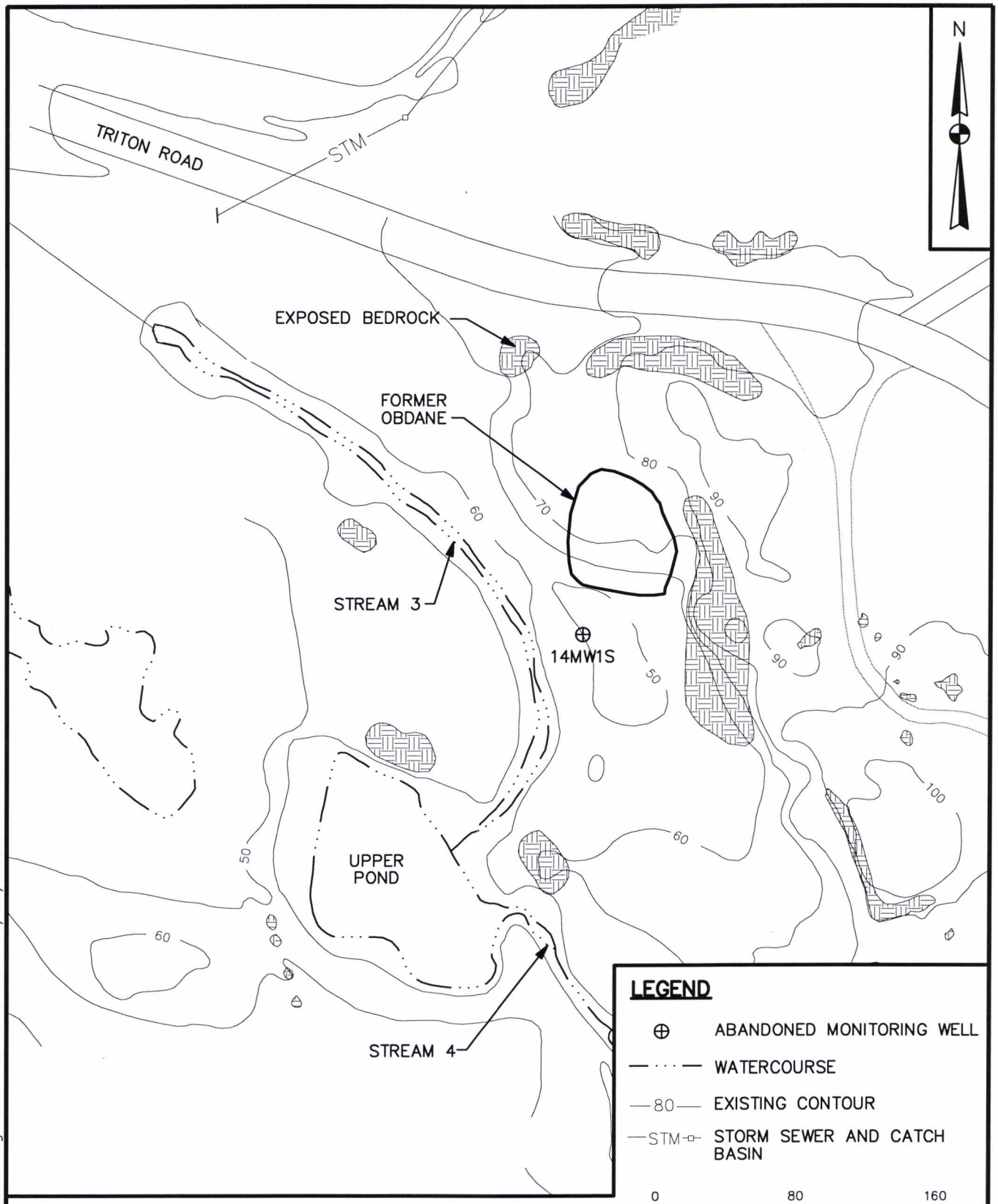
78 35 105 79 85 316 485 110 564 476 20 554 553

Legend

- PDI Sample Location
- Monitoring Well
- Monitoring Well Installed and Sampled During GW PDI
- Abandoned, Destroyed or Missing Monitoring Well
- Test Boring / Direct Push Location
- Lower Subase RI Test Boring Location
- Catch Basin
- Manhole
- Sanitary / Sewer Junction
- Area of Contaminated Sediment
- Site Boundary
- Compressed Air Line
- Electric Line
- Former Diesel Oil Line
- Natural Gas Line
- Sanitary Sewer Line
- Steam Line
- Storm Sewer Line
- Telephone Line
- Water Line
- 78 Building Number
- Former Building
- Grass/Gravel Area

100 0 100 Feet

DRAWN BY J. ENGLISH	DATE 05/20/11	Tetra Tech NUS, Inc.	CONTRACT NUMBER WE33 / OWNER NUMBER 3386
CHECKED BY N. BALSAMO	DATE 06/27/11	SITE MAP SITE 13 - BUILDING 79 FORMER WASTE OIL PIT, AND SITE 19 - FORMER SOLVENT STORAGE AREA (FORMER BUILDING 316), AND PIER 1 NSB-NLON, GROTON, CONNECTICUT	APPROVED BY CAR / DATE 05/23/11
COST/SCHEDULE-AREA			APPROVED BY — / DATE —
SCALE AS NOTED			DRAWING NO. FIGURE 2-11 / REV 0



BASE MAP SOURCE: PREPARED BY THE NAVAL SUBMARINE BASE PUBLIC WORKS DEPT., ENGINEERING DIVISION. MARCH 2006, DRAWING NO. A-667.

DRAWN BY BH DATE 11/26/08	Tetra Tech NUS, Inc.	SITE MAP SITE 14 – OBDANE NSB–NLON GROTON, CONNECTICUT	CONTRACT NO. 1484
CHECKED BY DATE 11/26/08			OWNER NO. 134
REVISED BY DATE			APPROVED BY DATE CAR 12/3/08
SCALE AS NOTED			DRAWING NO. FIGURE 2–12 REV. 1

R:\1484\Figures\1484CM11.dwg PIT BEN.HOPPE 11/26/2008

PAVEMENT

410

30

APPROXIMATE LOCATION OF CONCRETE APRON

15TW01

15TW02

15TW03

15MW2S

15SB03

15MW1S

15MW1D

FORMER SPENT ACID STORAGE TANK

APPROXIMATE LIMIT OF EXCAVATION

15SB01

15SB02

15MW3S

FUEL FARM

PAVEMENT

409

N

LEGEND:

- 15TW01 — TEMPORARY WELL
- 15SB01 — SOIL BORING
- 15MW2S — ABANDONED MONITORING WELL
- STORM SEWER MANHOLE
- SANITARY SEWER MANHOLE
- LIGHT POLE
- WATER VALVE
- CATCH BASIN
- FIRE HYDRANT
- DIESEL OIL LINE
- WATER LINE
- SANITARY SEWER
- STORM DRAIN
- ELECTRIC LINE
- OILY WASTEWATER
- 30 — TOPOGRAPHIC CONTOUR (BASE 1982)
- 410 — BUILDING NO.

NOTE:

UTILITY LOCATIONS ARE APPROXIMATE AND WERE OBTAINED FROM NSB-NLON PUBLIC WORKS DEPARTMENT.

0 30 60

GRAPHIC SCALE IN FEET

BASE MAP SOURCE: PREPARED BY THE NAVAL SUBMARINE BASE PUBLIC WORKS DEPT., ENGINEERING DIVISION. MARCH 2006, DRAWING NO. A-667.

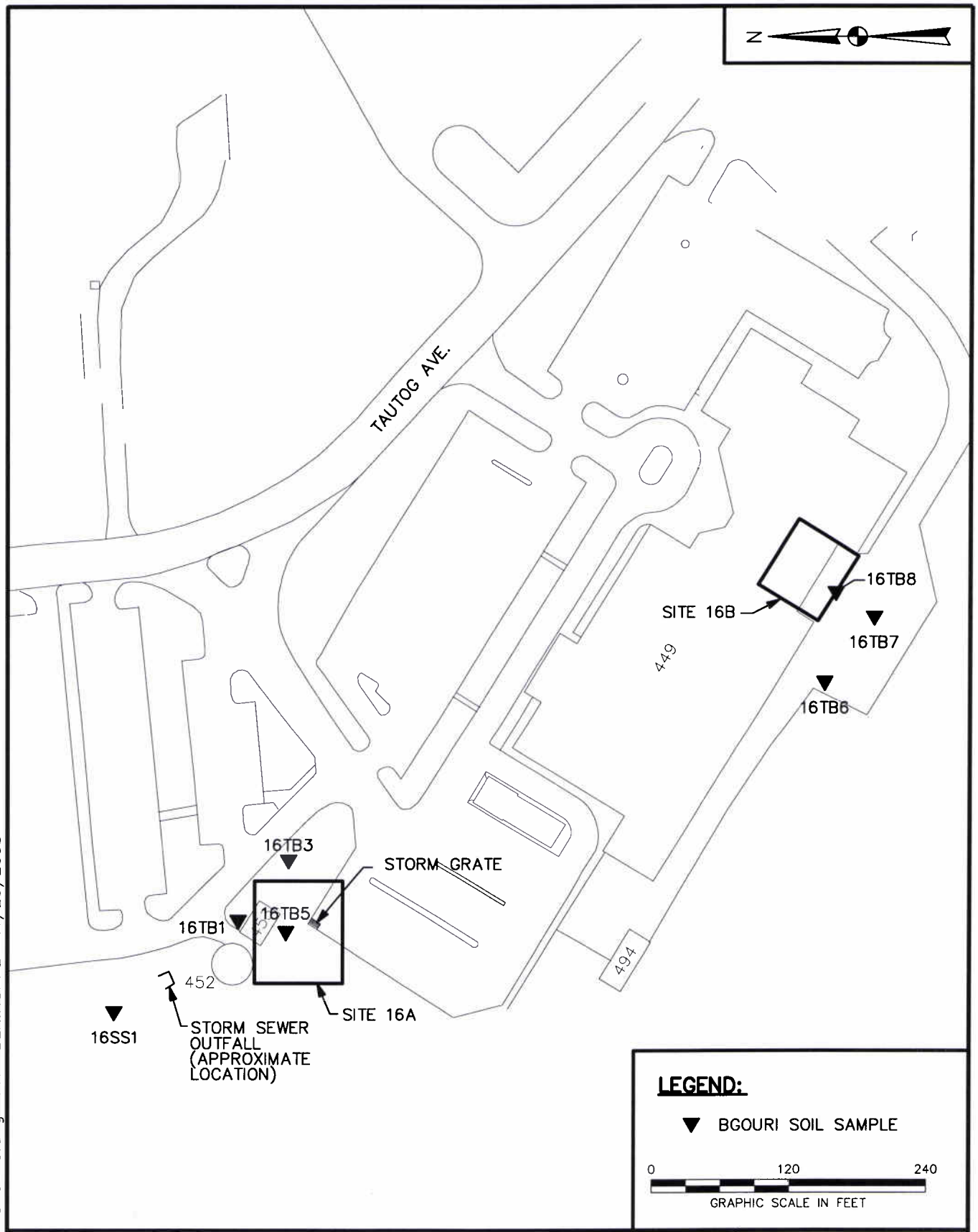
DRAWN BY BH	DATE 11/26/08
CHECKED BY CLE	DATE 11/26/08
REVISED BY	DATE
SCALE AS NOTED	

Tetra Tech NUS, Inc.

SITE MAP
SITE 15 – SPENT ACID STORAGE AND DISPOSAL AREA
NSB-NLON
GROTON, CONNECTICUT

CONTRACT NO. 1484	
OWNER NO. 134	
APPROVED BY CAR	DATE 12/3/08
DRAWING NO. FIGURE 2-13	REV. 1

R:\1484\Figures\1484CM12.dwg PIT BEN.HOPPE 11/26/2008



DRAWN BY BH	DATE 11/26/08	Tetra Tech NUS, Inc.	SITE MAP SITE 16 – HOSPITAL INCINERATORS NSB–NLON GROTON, CONNECTICUT
CHECKED BY	DATE 11/26/08		
REVISED BY	DATE		
SCALE AS NOTED			

CONTRACT NO. 1484	
OWNER NO. 134	
APPROVED BY CAS	DATE 12/3/08
DRAWING NO. FIGURE 2–14	REV. 0

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Aerial photograph taken in 2008, and supplied by the NAVFAC Mid-Atlantic Georeadiness Center.

N

CISCO RD
AMBERJACK RD
ARGONAUT RD
CAPELIN RD
ALBACORE RD
BULLHEAD RD
BLUEFISH RD
PROVIDENCE AND WORCESTER RAILROAD
PIER 8
PIER 6
ZONE 3
SITE 17
SITE 13
QUAY WALL STUDY AREA
SEE INSET
GS-17L
GS-18L
NESO8
13MW11
TB5-3RI
GS-13L
Z3PDI-001
Z3PDI-002
Z3PDI-003
Z3PDI-005
GW-01
GW-02
GW-03
GW-04
MW2-3RI
MW1-3RI
13TB12
13TB18
13TB7
13MW12
GS-12L
TB4-3RI
WE2
TB3-3RI
1/2
169
17
38
76
164
31
87
18
35
105
20
168
79
85
78
16

100 0 100 Feet

Legend

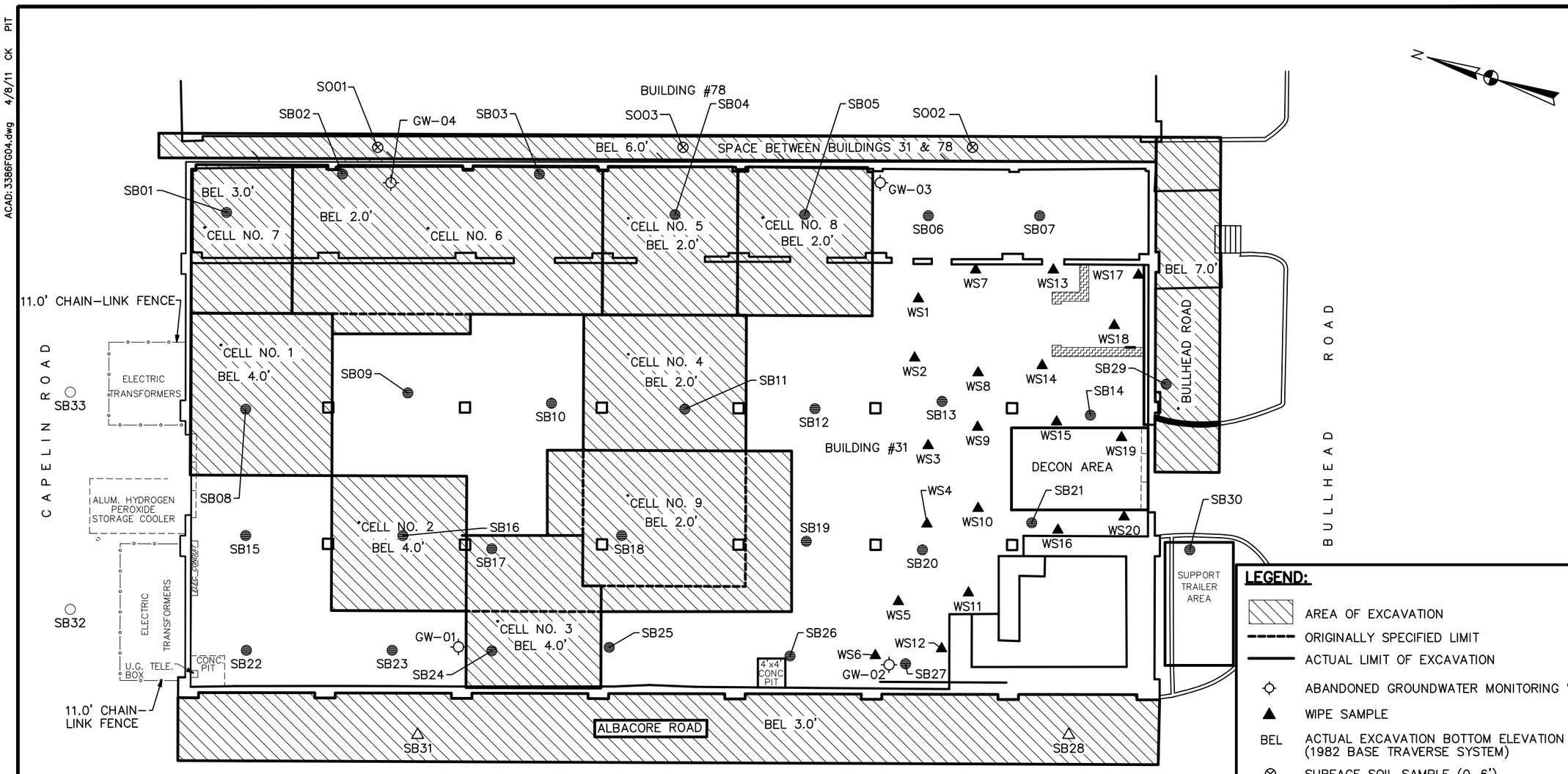
- PDI Sample Location
- Monitoring Well
- Abandoned, Destroyed or Missing Monitoring Well
- Test Boring / Direct Push Location
- Lower Subase RI Test Boring Location
- Catch Basin
- Manhole
- Sanitary / Sewer Junction
- Site Boundary
- Compressed Air Line
- Electric Line
- Former Diesel Oil Line
- Natural Gas Line
- Sanitary Sewer Line
- Steam Line
- Storm Sewer Line
- Telephone Line
- Water Line
- 78 Building Number
- Former Building
- Grass/Gravel Area

C521
C587-1

50 0 50 Feet

DRAWN BY J. ENGLISH	DATE 04/14/11	Tetra Tech NUS, Inc.	CONTRACT NUMBER WE33 / OWNER NUMBER 3386
CHECKED BY N. BALSAMO	DATE 06/27/11	SITE MAP SITE 17 - FORMER HAZARDOUS MATERIALS / SOLVENT STORAGE AREA (FORMER BUILDING 31) NSB-NLON, GROTON, CONNECTICUT	APPROVED BY CAR / DATE 05/23/11
COST/SCHEDULE-AREA			APPROVED BY — / DATE —
SCALE AS NOTED			DRAWING NO. FIGURE 2-15 / REV 0

ACAD: 3386FG04.dwg 4/8/11 CK PIT



LEGEND:

- AREA OF EXCAVATION
- ORIGINALLY SPECIFIED LIMIT
- ACTUAL LIMIT OF EXCAVATION
- ABANDONED GROUNDWATER MONITORING WELL
- WIPE SAMPLE
- BEL — ACTUAL EXCAVATION BOTTOM ELEVATION (1982 BASE TRAVERSE SYSTEM)
- SURFACE SOIL SAMPLE (0–6')
- SURFACE SOIL SAMPLE (2', 4' & 6')
- SUBSURFACE SOIL SAMPLE (2')
- SUBSURFACE SOIL SAMPLE (2' & 4')

0 15 30
GRAPHIC SCALE IN FEET

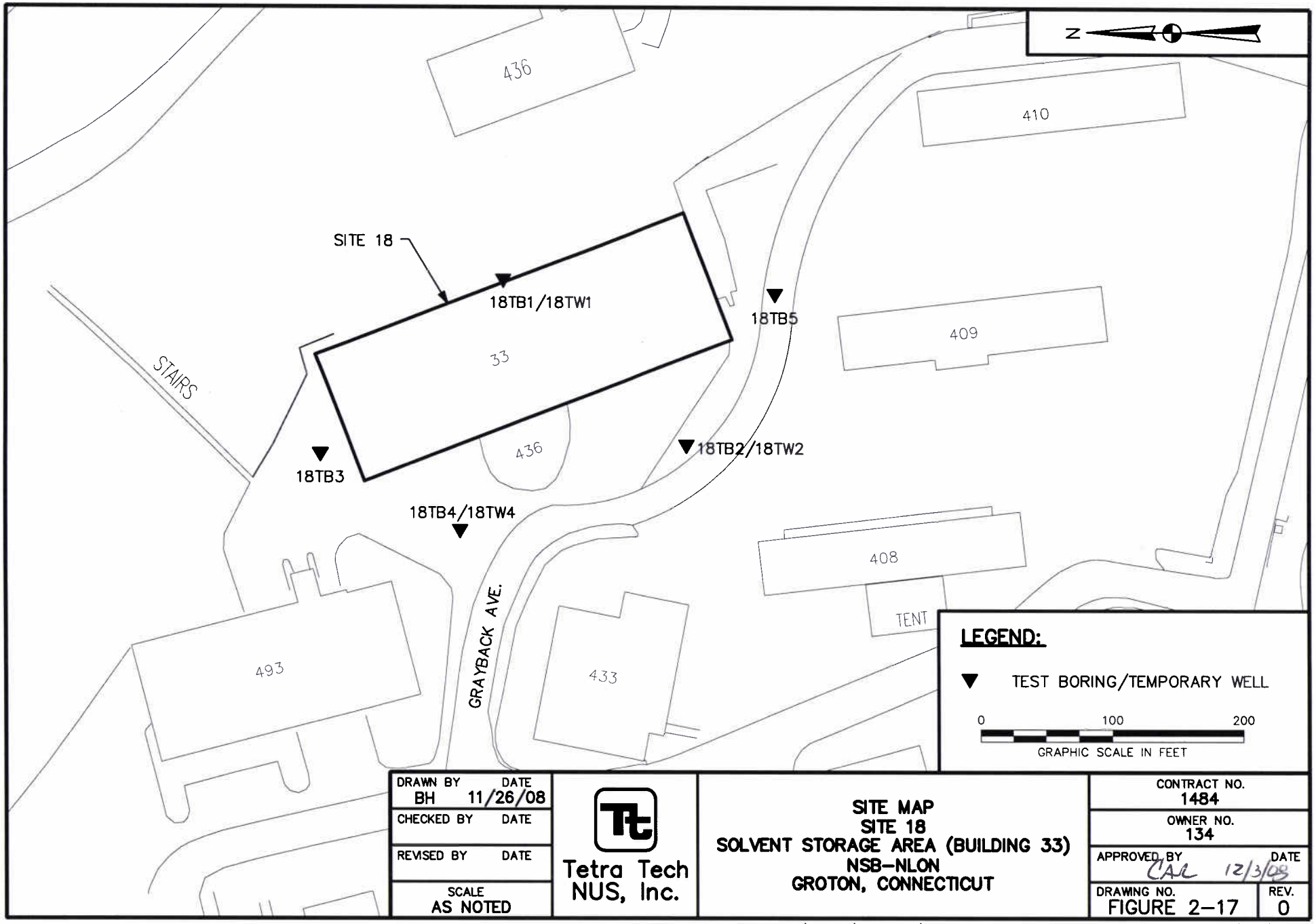
DRAWN BY / DATE	MF 10/13/09
CHECKED BY / DATE	NJB 4/8/11
REVISED BY / DATE	
SCALE	AS NOTED

Tetra Tech NUS, Inc.

SITE MAP
AREAS OF REMEDIATION AT SITE 17
NSB–NLON
GROTON, CONNECTICUT

CONTRACT NO.	WE33
OWNER NO.	3386
APPROVED BY / DATE	CAR 4/8/11
DRAWING NO.	FIGURE 2–16
REV.	0

FORM CADD NO. TTNUS–BH.DWG – REV 1 – 9/10/98



DRAWN BY BH DATE 11/26/08	Tetra Tech NUS, Inc.	SITE MAP SITE 18 SOLVENT STORAGE AREA (BUILDING 33) NSB–NLON GROTON, CONNECTICUT	CONTRACT NO. 1484
CHECKED BY DATE			OWNER NO. 134
REVISED BY DATE			APPROVED BY CAL DATE 12/3/08
SCALE AS NOTED			DRAWING NO. FIGURE 2–17 REV. 0

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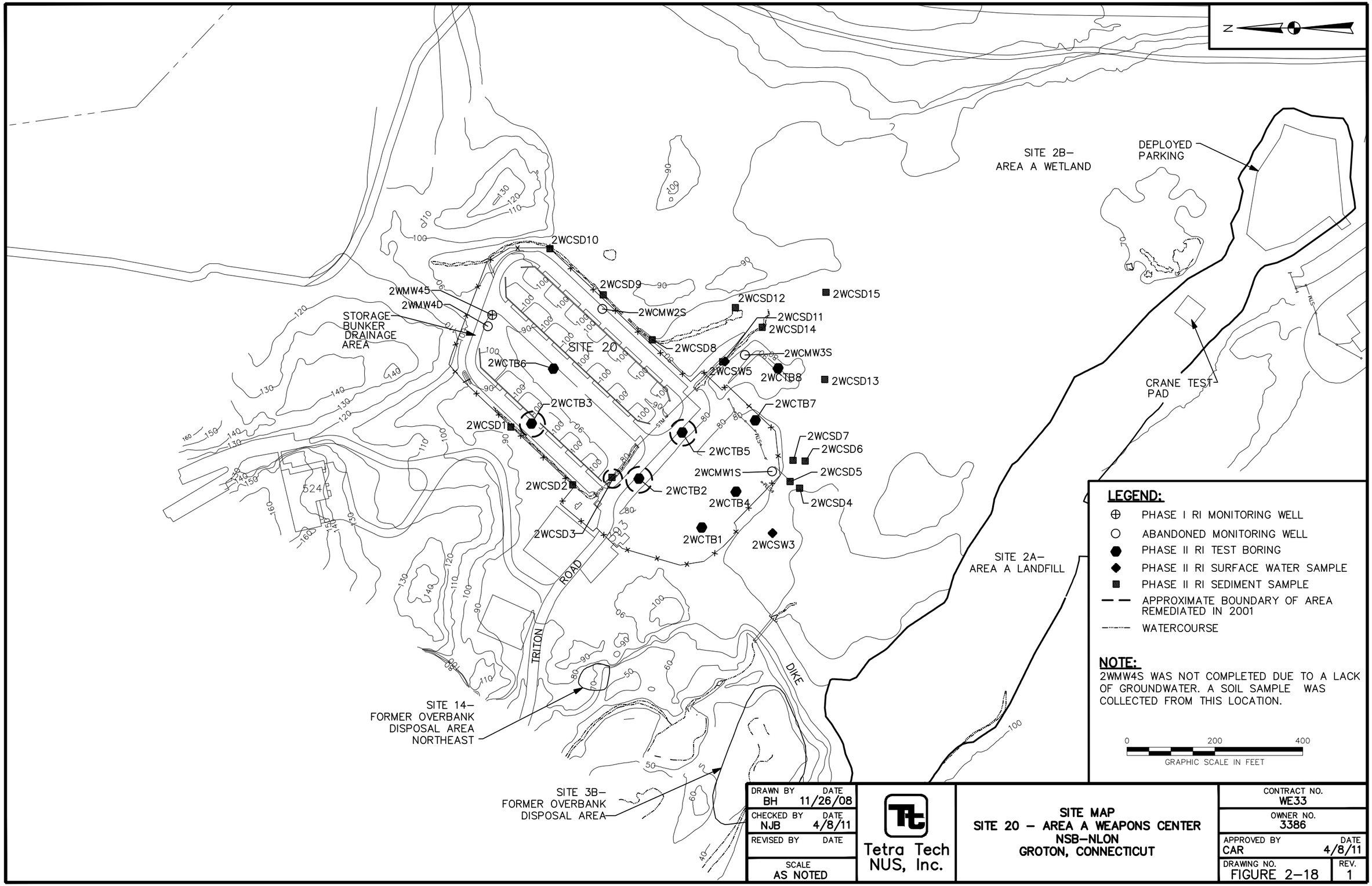

DRAWN BY / DATE	BH 11/26/08
CHECKED BY / DATE	NJB 4/8/11
REVISED BY / DATE	
SCALE	AS NOTED

Tetra Tech NUS, Inc.

SITE MAP
SITE 20 – AREA A WEAPONS CENTER
NSB–NLON
GROTON, CONNECTICUT

CONTRACT NO.	WE33
OWNER NO.	3386
APPROVED BY / DATE	CAR 4/8/11
DRAWING NO.	FIGURE 2–18
REV.	1

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PGH P:\GIS\NLON\MAPDOCS\MXD\SITES21_25_SITEMAP_APR11_2.MXD 06/27/11 SS

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N

ZONE 7

SITE 25

SITE 21

476

APPROX. LOCATION OF FORMER INCINERATOR

APPROX. LOCATION OF FORMER DUMPSTER WASHING AREA

PROVIDENCE AND WORCESTER RAILROAD

THAMES RIVER

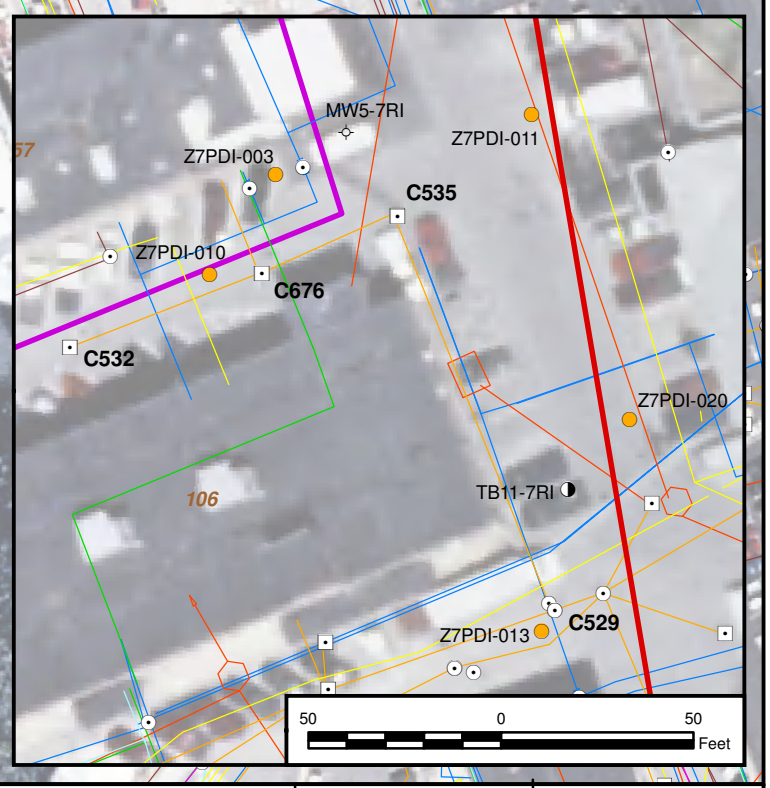
SEE INSET

20TB6
Z7PDI-006
MW4-7RI
TB8-7RI
20MW7
20TB5
MW1-7PDI
Z7PDI-001
Z7PDI-004
MW3-7RI
20MW5
20MW6
456
Z7PDI-005
20TB7
Z7PDI-009
Z7PDI-002
TB9-7RI
Z7PDI-007
B-37
TB5-7RI
20TB3
Z7PDI-008
B-39
Z7PDI-017
B-32
B-35
20TB4
B-40
B-34
20MW4
Z7PDI-011
Z7PDI-014
B-36
157
Z7PDI-003
MW5-7RI
MW2-7RI
Z7PDI-015
20MW3
103
Z7PDI-010
Z7PDI-016
Z7PDI-020
Z7PDI-018
TB11-7RI
20TB2
106
TB2-7RI
Z7PDI-013
20
20TB1
153
MW1-7RI
173
Z7PDI-012
20MW2
Z7PDI-019
TB1-7RI
88
40

100 0 100 Feet

Legend

- PDI Sample Location
- Monitoring Well
- Monitoring Well Installed and Sampled During GW PDI
- Abandoned, Destroyed or Missing Monitoring Well
- Test Boring / Direct Push Location
- Lower Subase RI Test Boring Location
- Catch Basin
- Manhole
- Sanitary / Sewer Junction
- Site Boundary
- Compressed Air Line
- Electric Line
- Former Diesel Oil Line
- Natural Gas Line
- Sanitary Sewer Line
- Steam Line
- Storm Sewer Line
- Telephone Line
- Water Line
- 78 Building Number
- Former Building
- Grass/Gravel Area



DRAWN BY J. ENGLISH	DATE 05/20/11	Tetra Tech NUS, Inc.	CONTRACT NUMBER WE33 / OWNER NUMBER 3386
CHECKED BY N. BALSAMO	DATE 06/27/11	SITE MAP SITE 21 - BERTH 16 AND SITE 25 - FORMER CLASSIFIED MATERIALS INCINERATOR NSB-NLON, GROTON, CONNECTICUT	APPROVED BY CAR / DATE 05/23/11
COST/SCHEDULE-AREA			APPROVED BY — / DATE —
SCALE AS NOTED			DRAWING NO. FIGURE 2-19 / REV 0

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Aerial photograph taken in 2008, and supplied by the NAVFAC Mid-Atlantic Georeadiness Center.

N

176

B-15 B-23 B-26

B-20 B-27

557A

ZONE 5

557B

B-18

B-21 B-28

SITE 22

19TB4

TB5-5RI

Z5PDI-005

APPROXIMATE LOCATION OF FORMER 250 GALLON UNDERGROUND STORAGE TANK FOR GENERATOR DIESEL FUEL

19MW2

B-16 B-24 B-29

TB6-5RI

19MW1

285

B-22

19TB3

B-19

B-30

19MW3

175

B-17

B-25

TB3-5RI

Z5PDI-002

MW1-5PDI

19MW4

19SS1

Z5PDI-004

APPROXIMATE LOCATION OF 1000 GALLON UNDERGROUND STORAGE TANK FOR HEATING OIL

19TB2

TB1-5RI

Z5PDI-001

Z5PDI-003

TB2-5RI

19TB1

THAMES RIVER

PROVIDENCE AND WORCESTER RAILROAD

255

295

174

100 0 100 Feet

Legend

- PDI Sample Location
- Monitoring Well
- Monitoring Well Installed and Sampled During GW PDI
- Abandoned, Destroyed or Missing Monitoring Well
- Test Boring / Direct Push Location
- Lower Subase RI Test Boring Location
- Historic Soil Sample Location
- Catch Basin
- Manhole
- Sanitary / Sewer Junction
- Compressed Air Line
- Electric Line
- Former Diesel Oil Line
- Natural Gas Line
- Sanitary Sewer Line
- Steam Line
- Storm Sewer Line
- Telephone Line
- Water Line
- 78 Building Number
- Former Building
- Site Boundary
- Grass/Gravel Area

DRAWN BY J. ENGLISH	DATE 04/14/11	Tetra Tech NUS, Inc.	CONTRACT NUMBER WE33 / OWNER NUMBER 3386
CHECKED BY N. BALSAMO	DATE 04/20/11	SITE MAP SITE 22 - PIER 33 NSB-NLON, GROTON, CONNECTICUT	APPROVED BY CAR / DATE 04/14/11
COST/SCHEDULE-AREA			APPROVED BY — / DATE —
SCALE AS NOTED			DRAWING NO. FIGURE 2-20 / REV 0

PGH P:\GIS\NEWLONDON_NSB\MAPDOCS\MXD\SITE24_SITEMAP_APR11_2.MXD 06/27/11 SS

Aerial photograph taken in 2008, and supplied by the NAVFAC Mid-Atlantic Georeadiness Center.

N

THAMES RIVER

PROVIDENCE AND WORCESTER RAILROAD

ZONE 6

Z6PDI-001
MW5-6RI
Z6PDI-003
Z6PDI-004
Z6PDI-002
MW4-6RI
MW1-6RI
MW3-6RI
MW2-6RI
SITE 24

295
174
478

Legend

- PDI Sample Location
- Lower Subase RI Monitoring Well Location
- Abandoned, Destroyed or Missing Monitoring Well
- Catch Basin
- Manhole
- Sanitary / Sewer Junction
- Compressed Air Line
- Electric Line
- Former Diesel Oil Line
- Natural Gas Line
- Sanitary Sewer Line
- Steam Line
- Storm Sewer Line
- Telephone Line
- Water Line
- 78 Building Number
- Former Building
- Site Boundary
- Grass/Gravel Area

100 0 100 Feet

DRAWN BY J. ENGLISH	DATE 05/20/11	Tetra Tech NUS, Inc.	CONTRACT NUMBER WE33 / OWNER NUMBER 3386
CHECKED BY N. BALSAMO	DATE 05/23/11	SITE MAP SITE 24 - CENTRAL PAINT ACCUMULATION (BUILDING 174) NSB-NLON, GROTON, CONNECTICUT	APPROVED BY CAR / DATE 05/23/11
COST/SCHEDULE-AREA			APPROVED BY — / DATE —
SCALE AS NOTED			DRAWING NO. FIGURE 2-21 / REV 0

3.0 SCHEDULE

A schedule of milestones and a detailed schedule that covers all active IR Program sites in the SMP are included in Appendix A. The schedules for historical CERCLA activities at the sites have generally been removed from the schedule and only recent and future events are presented.

3.1 SCHEDULE DEVELOPMENT

The schedules were developed using the current status of activity for each site at NSB-NLON, anticipated activities, and projected funding availability. Line item durations were typically developed using the FFA, which provides durations for specific process activities. The FFA durations are presented on Table 3-1.

In some cases, due to requests from regulators, accelerated durations were used for scheduling. The "deliverables" required during the remedial process are separated into two categories: primary and secondary. A description of each of these deliverables is provided below.

3.1.1 Primary Documents

According to the FFA, Primary Documents are developed by the Navy and initially submitted as drafts. The draft Primary Documents are subject to review by the USEPA, CTDEP, and other stakeholders [Natural Resources Trustees (NOAA and USF&W) and Restoration Advisory Board (RAB)]. Following the Navy's response to and resolution of USEPA, CTDEP, and stakeholder comments on draft Primary Documents, draft final versions of the Primary Documents are prepared. Following a regulator concurrence period, the final Primary Documents are prepared and issued. Primary Documents are summarized in Table 3-1.

3.1.2 Secondary Documents

Secondary Documents include those documents that are discrete portions of Primary Documents and are typically input or feeder documents. Secondary Documents are issued by the Navy in draft and are subject to review and comment by the USEPA and CTDEP. Although the Navy will respond to comments received, the draft Secondary Documents may be finalized in the context of the corresponding draft final Primary Documents. Secondary Documents are summarized in Table 3-1.

3.1.3 Durations

The FFA (USEPA, 1995) defines review, response, and revision time frames for Primary and Secondary documents and those time frames are summarized in Table 3-1. The FFA also provides a provision to

extend a timetable, deadline, or schedule for good cause. The review cycle for other documents, including the SMP, Engineering Evaluation/Cost Analyses (EE/CAs), Removal Action Work Plans, Construction Completion Reports (Remedial and Removal), Land Use Control Remedial Designs (LUC RDs), and Remedial Action Completion Reports (RACRs) are also defined in Table 3-1 and include a 30-day period of review and comment by regulators, followed by a 30-day period for the Navy to respond to comments.

TABLE 3-1

PREPARATION AND REVIEW SCHEDULE FOR PRIMARY, SECONDARY, AND OTHER DOCUMENTS PER THE FEDERAL FACILITY AGREEMENT
2011 SITE MANAGEMENT PLAN
NSB-NLON, GROTON, CONNECTICUT

Deliverable Document	Schedule					
	Draft			Draft Final		Final
	Navy Preparation	USEPA/State Review	Navy Response to Comments	Navy Preparation	USEPA/State Review	Navy Preparation
Primary[1]		60 days	45 days	45 days	30 days to issue concurrence letter or initiate dispute resolution	60 days after submittal of draft final document
Preliminary Assessment Report	NR					45 days after dispute resolution
Site Inspection Report	NR					
Remedial Investigation Scope of Work, Work Plan, and Report	Submit draft report for each Site/OU within 540 days of final work plan.					
Feasibility Study Scope of Work, Work Plan, and Report	Submit draft report for each Site/OU within 540 days of final work plan.					
Proposed Plan	Submit draft report for each Site/OU within 30 days of draft final RI/FS.					
Record of Decision and Responsiveness Summary	Submit draft for each Site/OU within 45 days of conclusion of public comment period on Proposed Plan.					
Remedial Design Scope of Work, Work Plan, 60%, and 100%	NR					Propose deadlines for these reports within 21 days of issuance of ROD.
Remedial Action Scope of Work	NR					Remedial Action shall begin within 450 days of signing the ROD by EPA.
Project Closeout Report	NR					Propose deadline for this report within 21 days of issuance of ROD.
Five-Year Review Report	NR					
Secondary[1] Initial Screening of Alternatives Detailed Analysis of Alternatives Treatability Study Work Plan and Report Pilot Study Work Plan and Report Sampling and Data Results Remedial Action Work Plan Pre-Final Remedial Design (85 Percent)	NR	60 days	45 days	45 days	NR	NR
Other[2] Site Management Plan Engineering Evaluation/Cost Analysis Removal Action Work Plan Construction Completion Report (Remedial and Removal) Land Use Control Remedial Designs Remedial Action Completion Reports	NR	30 days	30 days		NR	NR

1: Reference: USEPA, 1995. Federal Facility Agreement under CERCLA 120, In the Matter of the US Department of the Navy, Naval Submarine Base - New London, Groton, Connecticut. January.
2: Not referenced in the 1995 Federal Facility Agreement.

NR No Federal Facility Agreement requirements.

4.0 NSB-NLON CLEANUP TEAM

The names, addresses, and responsibilities of the cleanup team are as follows:

PROJECT MANAGERS:

Mr. Dominic O'Connor
Remedial Project Manager
NAVFAC MIDLANT OPNEEV (Code OPTE3-1)
9742 Maryland Avenue
Bldg Z-144
Norfolk, Virginia 23511-3095

TBD
Installation Restoration Program Manager
NAVFAC Mid-Atlantic
Naval Submarine Base – New London Public Works Environmental Division
Bldg. 439, Box 400, Room 104
Route 12
Groton, Connecticut 06349-5039

Ms. Kymberlee Keckler
Remedial Project Manager
Federal Facilities Superfund Section
U.S. Environmental Protection Agency, Region 1
5 Post Office Square, Suite 100
Mail Code: OSRR07-3
Boston, Massachusetts 02109-3912

Mr. Mark Lewis
Environmental Analyst 3
CTDEP
Eastern District Remediation Program
Remediation Division
Bureau of Water Protection and Land Reuse
79 Elm Street
Hartford, Connecticut 06106-5127

FEDERAL AGENCIES

COMMUNITY RELATIONS

U.S. Navy

Mr. Christopher Zendan, Public Affairs Officer
Naval Submarine Base New London
Box 44
Groton, Connecticut 06349
(860) 694-5980
chris.zendan@navy.mil

U.S. Environmental Protection Agency

Ms. Stacy Greendlinger
U.S. EPA, Region 1
5 Post Office Square
Boston, Massachusetts 02109-3912
(617) 918-1403
greendlinger.stacy@ epa.gov

STAKEHOLDERS

ATSDR

Ms. Carole Hossam
ATSDR MS E32
1600 Clifton Road NE
Atlanta, Georgia 30333

National Oceanic and Atmospheric Administration (NOAA)

Ken Finkelstein, Ph.D.
NOAA
c/o EPA Region 1; Mail Code OSRR07-1
5 Post Office Square, Suite 100
Boston, Massachusetts 02109-3912

U.S. Fish and Wildlife Service (USFWS)

Ken Munney
USFWS
Environmental Contaminants
70 Commercial St - Suite 300
Concord, New Hampshire 03301

OTHER NAVY MEMBERS:

Captain Marc W. Denno, USN
Commanding Officer
Naval Submarine Base - New London
Box 00
Groton, Connecticut 06349-5000

Mr. Mike Brown
Director, Environmental Division
NAVFAC Mid-Atlantic
Naval Submarine Base -- New London Publics Works Environmental Division
Bldg. 439, Box 101, Room 104
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Groton, Connecticut 06349-5039

Ms. Cherryl Barnett
CNRMA REC
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1510 Gilbert St.
Norfolk, Virginia 23511

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Ms. Susan Orrill
7 Pinelock Drive
Gales Ferry, Connecticut 06335

Mr. Larry H. Gibson
22 Partridge Hollow
Gales Ferry, Connecticut 06335

Mr. Noah Levine
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Mr. Felix Prokop, III
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Ms. Carole Hossam
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APPENDIX A

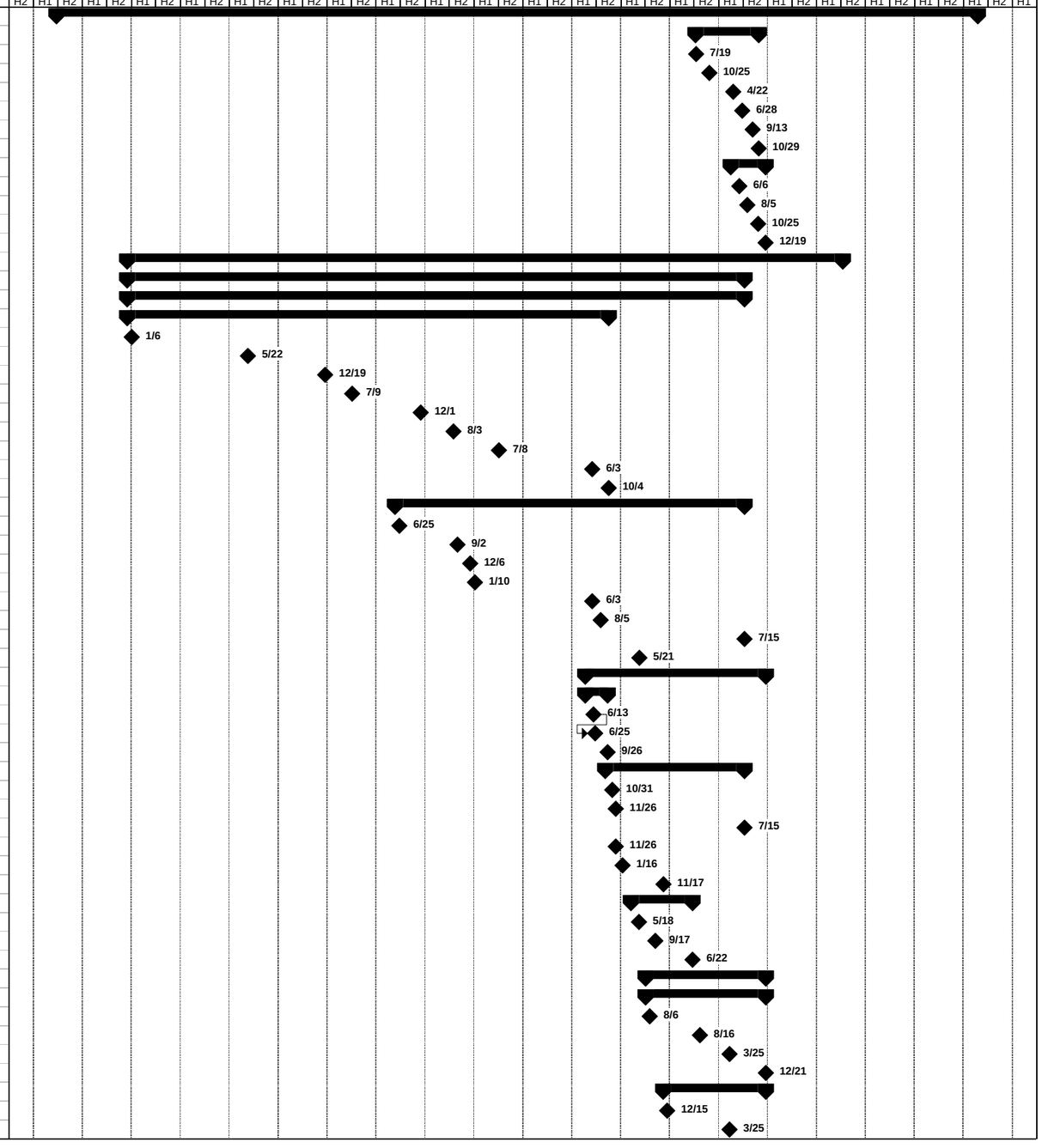
MILESTONE AND DETAILED SCHEDULES

MILESTONE SCHEDULE

2011 SMP SCHEDULE - MILESTONES
NSB-NLON, GROTON, CONNECTICUT

Rev. 0 June 2011

ID	Task Name	Duration	Start	Finish	% Complete	Predecessors	Resource Names
1	**NSB-NLON IRP**	**6876 days**	**Tue 6/24/97**	**Wed 4/20/16**	**55%**		
2	**ANNUAL SITE MANAGEMENT PLAN UPDATE**	**472 days**	**Thu 7/15/10**	**Sat 10/29/11**	**51%**		
4	DRAFT 2010 SMP	0 days	Mon 7/19/10	Mon 7/19/10	100%	3	A/E,NAVY
8	FINAL 2010 SMP	0 days	Mon 10/25/10	Mon 10/25/10	100%	7	A/E,NAVY
10	ROUGH DRAFT 2011 SMP	0 days	Fri 4/22/11	Fri 4/22/11	100%	9	A/E,NAVY
14	DRAFT 2011 SMP	0 days	Tue 6/28/11	Tue 6/28/11	0%	13	A/E,NAVY
18	DRAFT FINAL 2011 SMP	0 days	Tue 9/13/11	Tue 9/13/11	0%	17	A/E,NAVY
22	FINAL 2011 SMP	0 days	Sat 10/29/11	Sat 10/29/11	0%	21	A/E,NAVY
23	**THIRD 5-YEAR REVIEW REPORT**	**260 days**	**Mon 4/4/11**	**Mon 12/19/11**	**25%**		
25	ROUGH DRAFT THIRD 5-YEAR REVIEW REPORT	0 days	Mon 6/6/11	Mon 6/6/11	100%	24	A/E,NAVY
29	DRAFT THIRD 5-YEAR REVIEW REPORT	0 days	Fri 8/5/11	Fri 8/5/11	0%	28	A/E,NAVY
33	DRAFT FINAL THIRD 5-YEAR REVIEW REPORT	0 days	Tue 10/25/11	Tue 10/25/11	0%	32	A/E,NAVY
37	FINAL THIRD 5-YEAR REVIEW REPORT	0 days	Mon 12/19/11	Mon 12/19/11	0%	36	A/E,NAVY
38	**SITE 2 - AREA A LANDFILL (A) AND WETLAND (B)**	**5340 days**	**Fri 12/4/98**	**Wed 7/17/13**	**59%**		
39	**SITE 2A - AREA A LANDFILL (Soil - OU1)**	**4607 days**	**Fri 12/4/98**	**Fri 7/15/11**	**51%**		
40	**LONG-TERM MANAGEMENT**	**4607 days**	**Fri 12/4/98**	**Fri 7/15/11**	**51%**		
41	**GROUNDWATER MONITORING**	**3593 days**	**Fri 12/4/98**	**Sat 10/4/08**	**100%**		
43	FINAL GROUNDWATER MONITORING PLAN	0 days	Wed 1/6/99	Wed 1/6/99	100%	42	A/E,NAVY
45	YEAR 1 FINAL GMR	0 days	Tue 5/22/01	Tue 5/22/01	100%	44	A/E,NAVY
47	YEAR 2 FINAL GMR	0 days	Thu 12/19/02	Thu 12/19/02	100%	46	A/E,NAVY
49	YEAR 3 FINAL GMR	0 days	Wed 7/9/03	Wed 7/9/03	100%	48	A/E,NAVY
51	YEAR 4 FINAL GMR	0 days	Wed 12/1/04	Wed 12/1/04	100%	50	A/E,NAVY
53	YEAR 5 FINAL GMR	0 days	Wed 8/3/05	Wed 8/3/05	100%	52	A/E,NAVY
55	YEAR 6 FINAL GMR	0 days	Sat 7/8/06	Sat 7/8/06	100%	54	A/E,NAVY
57	YEAR 7 FINAL GMR	0 days	Tue 6/3/08	Tue 6/3/08	100%	56	A/E,NAVY
59	YEAR 8 FINAL GMR	0 days	Sat 10/4/08	Sat 10/4/08	100%	58	A/E,NAVY
60	**OPERATION AND MAINTENANCE**	**2608 days**	**Tue 5/25/04**	**Fri 7/15/11**	**31%**		
62	YEAR 1 O&M INSPECTION REPORT	0 days	Fri 6/25/04	Fri 6/25/04	100%	61	A/E,NAVY
64	YEAR 2 O&M INSPECTION REPORT	0 days	Fri 9/2/05	Fri 9/2/05	100%	63	A/E,NAVY
66	YEAR 3 O&M INSPECTION REPORT	0 days	Tue 12/6/05	Tue 12/6/05	100%	65	A/E,NAVY
68	O&M MANUAL UPDATE NO. 1	0 days	Tue 1/10/06	Tue 1/10/06	100%	67	A/E,NAVY
70	YEAR 4 O&M INSPECTION REPORT	0 days	Tue 6/3/08	Tue 6/3/08	100%	69	A/E,NAVY
72	YEAR 5 O&M/LUC INSPECTION REPORT	0 days	Tue 8/5/08	Tue 8/5/08	100%	71	A/E,NAVY
74	O&M MANUAL UPDATE NO. 2	0 days	Fri 7/15/11	Fri 7/15/11	0%	73	A/E,NAVY
76	YEAR 6 O&M/LUC INSPECTION REPORT	0 days	Thu 5/21/09	Thu 5/21/09	100%	75	A/E,NAVY
77	**SITE 2A - AREA A LANDFILL (Groundwater - OU9)**	**1348 days**	**Sun 4/13/08**	**Wed 12/21/11**	**76%**		
78	**PROPOSED PLAN/ROD**	**167 days**	**Sun 4/13/08**	**Fri 9/26/08**	**100%**		
80	FINAL PROPOSED PLAN	0 days	Fri 6/13/08	Fri 6/13/08	100%	79	A/E,NAVY
81	PUBLIC MEETING	0 days	Wed 6/25/08	Wed 6/25/08	100%	80FS+12 days	PUBLIC
83	FINAL ROD	0 days	Fri 9/26/08	Fri 9/26/08	100%	82	A/E,NAVY
84	**RD**	**1040 days**	**Tue 9/9/08**	**Fri 7/15/11**	**68%**		
86	ROUGH DRAFT GMP	0 days	Fri 10/31/08	Fri 10/31/08	100%	85	A/E,NAVY
90	DRAFT GMP	0 days	Wed 11/26/08	Wed 11/26/08	100%	89	A/E,NAVY
94	FINAL GMP	0 days	Fri 7/15/11	Fri 7/15/11	0%	93	A/E,NAVY
96	ROUGH DRAFT LUC RD	0 days	Wed 11/26/08	Wed 11/26/08	100%	95	A/E,NAVY
100	DRAFT LUC RD	0 days	Fri 1/16/09	Fri 1/16/09	100%	99	A/E,NAVY
104	FINAL LUC RD	0 days	Tue 11/17/09	Tue 11/17/09	100%	103	A/E,NAVY
105	**RA**	**460 days**	**Fri 3/20/09**	**Tue 6/22/10**	**100%**		
107	ROUGH DRAFT RA COMPLETION REPORT	0 days	Mon 5/18/09	Mon 5/18/09	100%	106	A/E,NAVY
111	DRAFT RA COMPLETION REPORT	0 days	Thu 9/17/09	Thu 9/17/09	100%	110	A/E,NAVY
115	FINAL RA COMPLETION REPORT	0 days	Tue 6/22/10	Tue 6/22/10	100%	114	A/E,NAVY
116	**LONG-TERM MANAGEMENT**	**897 days**	**Wed 7/8/09**	**Wed 12/21/11**	**72%**		
117	**GROUNDWATER MONITORING**	**897 days**	**Wed 7/8/09**	**Wed 12/21/11**	**76%**		
119	YEAR 9 FINAL GMR	0 days	Thu 8/6/09	Thu 8/6/09	100%	118	A/E,NAVY
121	YEAR 10 FINAL GMR	0 days	Mon 8/16/10	Mon 8/16/10	100%	120	A/E,NAVY
123	YEAR 11 FINAL GMR	0 days	Fri 3/25/11	Fri 3/25/11	100%	122	A/E,NAVY
125	YEAR 12 FINAL GMR (2011)	0 days	Wed 12/21/11	Wed 12/21/11	0%	124	
126	**OPERATION AND MAINTENANCE**	**766 days**	**Mon 11/16/09**	**Wed 12/21/11**	**67%**		
128	YEAR 7 O&M/LUC INSPECTION REPORT	0 days	Tue 12/15/09	Tue 12/15/09	100%	127	A/E,NAVY
130	YEAR 8 O&M/LUC INSPECTION REPORT	0 days	Fri 3/25/11	Fri 3/25/11	100%	129	A/E,NAVY



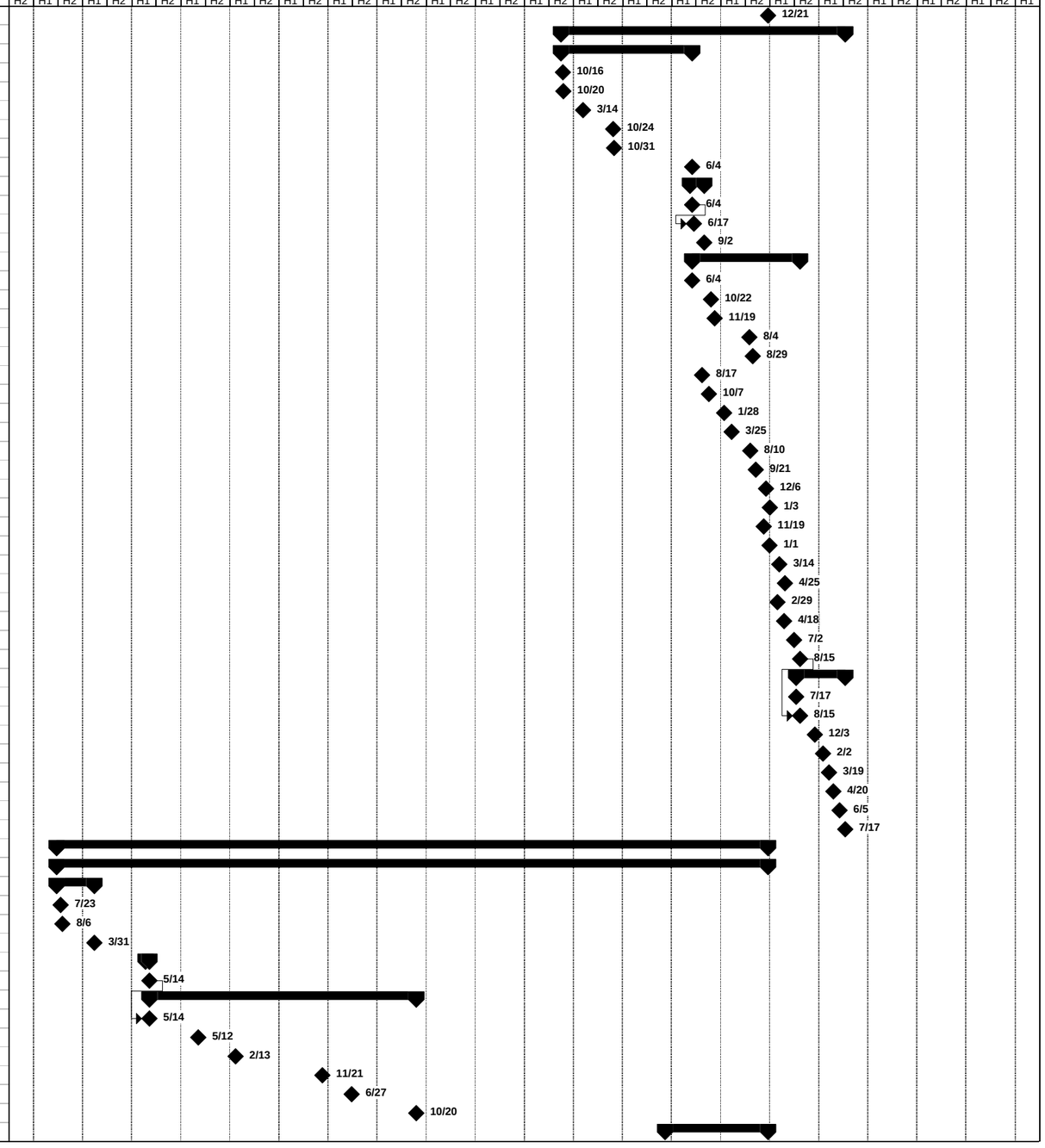
Project: SMP_2011Rev0_Mlstn_06231
Date: Thu 6/23/11

Task | Milestone | Rolled Up Task | Rolled Up Progress | Project Summary | Rolled Up Split | Deadline
Progress | Summary | Rolled Up Milestone | External Tasks | Split | External Milestone

2011 SMP SCHEDULE - MILESTONES
NSB-NLON, GROTON, CONNECTICUT

Rev. 0 June 2011

ID	Task Name	Duration	Start	Finish	% Complete	Predecessors	Resource Names
132	YEAR 9 O&M/LUC INSPECTION REPORT (2011)	0 days	Wed 12/21/11	Wed 12/21/11	0%	131	
133	**SITE 2B - AREA A WETLAND (Sediment - OU12)**	**2115 days**	**Wed 10/3/07**	**Wed 7/17/13**	**45%**		
134	**RI/FS**	**976 days**	**Wed 10/3/07**	**Fri 6/4/10**	**100%**		
136	FINAL PHASE III WORK PLAN	0 days	Tue 10/16/07	Tue 10/16/07	100%	135	A/E,NAVY
138	PHASE III FIELD WORK	0 days	Sat 10/20/07	Sat 10/20/07	100%	137	A/E,NAVY
141	DRAFT PHASE III ERA	0 days	Fri 3/14/08	Fri 3/14/08	100%	140	A/E,NAVY
145	FINAL PHASE IV WORK PLAN	0 days	Fri 10/24/08	Fri 10/24/08	100%	144	A/E,NAVY
147	PHASE IV FIELD WORK	0 days	Fri 10/31/08	Fri 10/31/08	100%	146	A/E,NAVY
150	FINAL RI UPDATE/FS REPORT	0 days	Fri 6/4/10	Fri 6/4/10	100%	149	A/E,NAVY
151	**PROPOSED PLAN/ROD**	**106 days**	**Thu 5/20/10**	**Thu 9/2/10**	**100%**		
153	FINAL PROPOSED PLAN	0 days	Fri 6/4/10	Fri 6/4/10	100%	152	A/E,NAVY
154	PUBLIC MEETING	0 days	Thu 6/17/10	Thu 6/17/10	100%	153FS+13 days	PUBLIC
156	FINAL ROD	0 days	Thu 9/2/10	Thu 9/2/10	100%	155	A/E,NAVY
157	**RD**	**803 days**	**Fri 6/4/10**	**Wed 8/15/12**	**35%**		
158	Award RD	0 days	Fri 6/4/10	Fri 6/4/10	100%		NAVY
160	INTERNAL DRAFT LUC RD	0 days	Fri 10/22/10	Fri 10/22/10	100%	159	A/E,NAVY
164	DRAFT LUC RD	0 days	Fri 11/19/10	Fri 11/19/10	100%	163	A/E,NAVY
168	DRAFT FINAL LUC RD	0 days	Thu 8/4/11	Thu 8/4/11	0%	167	A/E,NAVY
171	FINAL LUC RD	0 days	Mon 8/29/11	Mon 8/29/11	0%	170	A/E,NAVY
173	INTERNAL DRAFT SEDIMENT PDI WORK PLAN	0 days	Tue 8/17/10	Tue 8/17/10	100%	172	A/E,NAVY
177	DRAFT SEDIMENT PDI WORK PLAN	0 days	Thu 10/7/10	Thu 10/7/10	100%	176	A/E,NAVY
181	DRAFT FINAL SEDIMENT PDI WORK PLAN	0 days	Fri 1/28/11	Fri 1/28/11	100%	180	A/E,NAVY
184	FINAL SEDIMENT PDI WORK PLAN	0 days	Fri 3/25/11	Fri 3/25/11	100%	183	A/E,NAVY
191	INTERNAL DRAFT PDI COMPLETION REPORT	0 days	Wed 8/10/11	Wed 8/10/11	0%	190	A/E,NAVY
195	DRAFT PDI COMPLETION REPORT	0 days	Wed 9/21/11	Wed 9/21/11	0%	194	A/E,NAVY
199	DRAFT FINAL PDI COMPLETION REPORT	0 days	Tue 12/6/11	Tue 12/6/11	0%	198	A/E,NAVY
202	FINAL PDI COMPLETION REPORT	0 days	Tue 1/3/12	Tue 1/3/12	0%	201	A/E,NAVY
204	INTERNAL DRAFT 30% DESIGN	0 days	Sat 11/19/11	Sat 11/19/11	0%	203	A/E,NAVY
208	DRAFT 30% DESIGN	0 days	Sun 1/1/12	Sun 1/1/12	0%	207	A/E,NAVY
212	DRAFT FINAL 30% DESIGN	0 days	Wed 3/14/12	Wed 3/14/12	0%	211	A/E,NAVY
216	FINAL 30% DESIGN	0 days	Wed 4/25/12	Wed 4/25/12	0%	215	A/E,NAVY
218	INTERNAL DRAFT RD WORK PLAN	0 days	Wed 2/29/12	Wed 2/29/12	0%	217	A/E,NAVY
222	DRAFT RD WORK PLAN	0 days	Wed 4/18/12	Wed 4/18/12	0%	221	A/E,NAVY
226	DRAFT FINAL RD WORK PLAN	0 days	Mon 7/2/12	Mon 7/2/12	0%	225	A/E,NAVY
230	FINAL RD WORK PLAN	0 days	Wed 8/15/12	Wed 8/15/12	0%	229	A/E,NAVY
231	**RA**	**365 days**	**Tue 7/17/12**	**Wed 7/17/13**	**0%**		
232	Award Construction	0 days	Tue 7/17/12	Tue 7/17/12	0%	227	NAVY
233	Start of Construction	0 days	Wed 8/15/12	Wed 8/15/12	0%	230	A/E,NAVY
235	End of Construction	0 days	Mon 12/3/12	Mon 12/3/12	0%	234	A/E,NAVY
237	INTERNAL DRAFT COMPLETION REPORT	0 days	Sat 2/2/13	Sat 2/2/13	0%	236	A/E,NAVY
241	DRAFT COMPLETION REPORT	0 days	Tue 3/19/13	Tue 3/19/13	0%	240	A/E,NAVY
243	Receive Regulator Comments	0 days	Sat 4/20/13	Sat 4/20/13	0%	242	A/E,NAVY
246	DRAFT FINAL COMPLETION REPORT	0 days	Wed 6/5/13	Wed 6/5/13	0%	245	A/E,NAVY
250	FINAL COMPLETION REPORT	0 days	Wed 7/17/13	Wed 7/17/13	0%	249	A/E,NAVY
251	**SITE 3 - AREA A DOWNSTREAM AND OBDA**	**5294 days**	**Tue 6/24/97**	**Wed 12/21/11**	**60%**		
252	**SITE 3 - SOIL AND SEDIMENT (OU3)**	**5294 days**	**Tue 6/24/97**	**Wed 12/21/11**	**56%**		
253	**PROPOSED PLAN/ROD**	**281 days**	**Tue 6/24/97**	**Tue 3/31/98**	**100%**		
255	FINAL PROPOSED PLAN	0 days	Wed 7/23/97	Wed 7/23/97	100%	254	A/E,NAVY
256	Public Meeting	0 days	Wed 8/6/97	Wed 8/6/97	100%		PUBLIC
258	FINAL ROD	0 days	Tue 3/31/98	Tue 3/31/98	100%	257	A/E,NAVY
259	**RD**	**29 days**	**Fri 4/16/99**	**Fri 5/14/99**	**100%**		
261	FINAL RD WORK PLAN	0 days	Fri 5/14/99	Fri 5/14/99	100%	260	A/E,NAVY
262	**RA**	**1986 days**	**Fri 5/14/99**	**Wed 10/20/04**	**100%**		
263	Start of Construction	0 days	Fri 5/14/99	Fri 5/14/99	100%	261	NAVY
265	End of Construction	0 days	Fri 5/12/00	Fri 5/12/00	100%	264	NAVY
267	FINAL RA COMPLETION REPORT	0 days	Tue 2/13/01	Tue 2/13/01	100%	266	A/E,NAVY
269	YEAR 1 SITE RESTORATION MONITORING	0 days	Thu 11/21/02	Thu 11/21/02	100%	268	A/E,NAVY
271	YEAR 2 SITE RESTORATION MONITORING	0 days	Fri 6/27/03	Fri 6/27/03	100%	270	A/E,NAVY
273	YEAR 3 SITE RESTORATION MONITORING	0 days	Wed 10/20/04	Wed 10/20/04	100%	272	A/E,NAVY
274	**LONG-TERM MANAGEMENT**	**766 days**	**Mon 11/16/09**	**Wed 12/21/11**	**11%**		



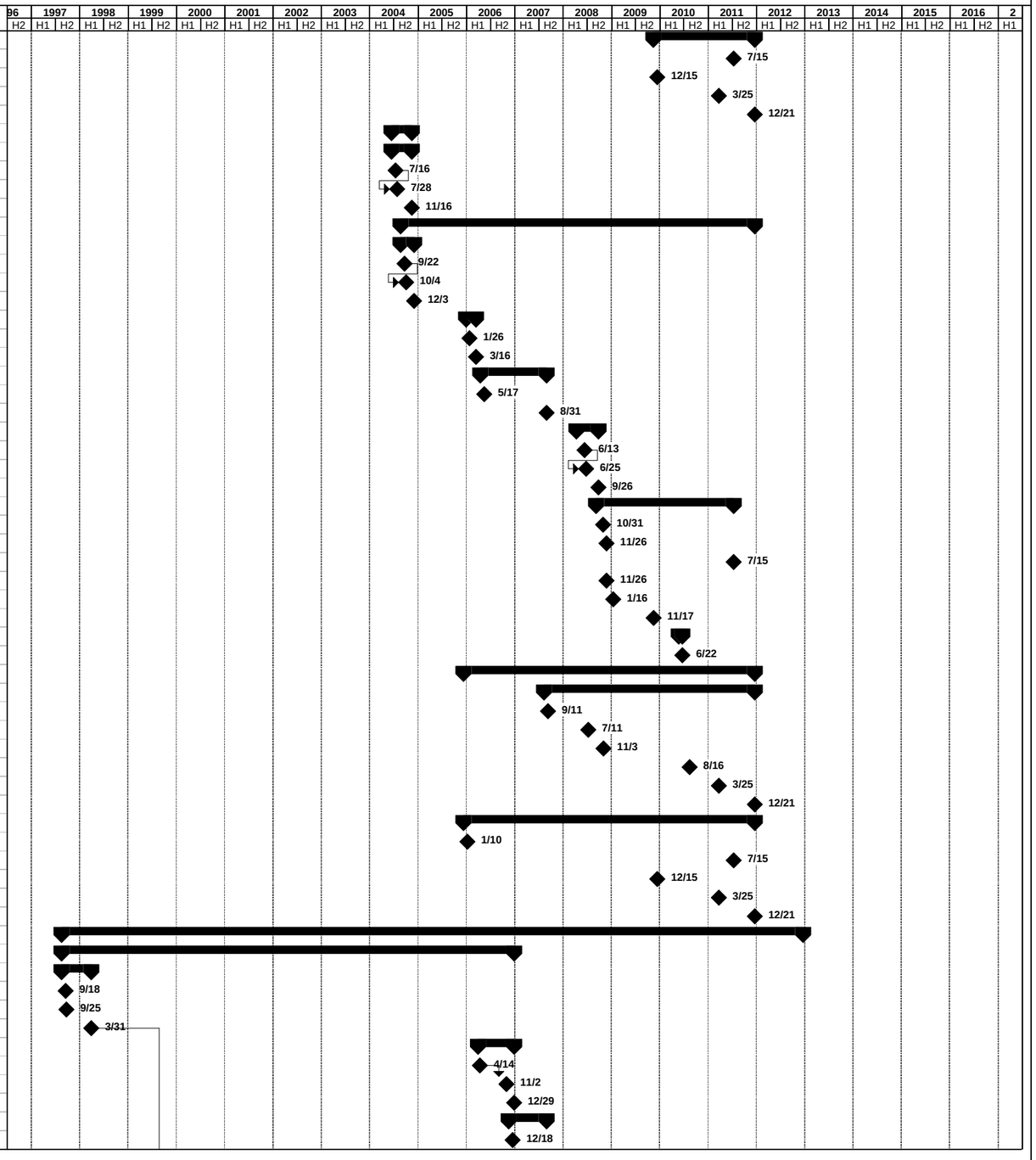
Project: SMP_2011Rev0_Mlstn_06231
Date: Thu 6/23/11

Task | Milestone | Rolled Up Task | Rolled Up Progress | Project Summary | Rolled Up Split | Deadline
Progress | Summary | Rolled Up Milestone | External Tasks | Split | External Milestone

2011 SMP SCHEDULE - MILESTONES
NSB-NLON, GROTON, CONNECTICUT

Rev. 0 June 2011

ID	Task Name	Duration	Start	Finish	% Complete	Predecessors	Resource Names
275	**OPERATION AND MAINTENANCE**	**766 days**	**Mon 11/16/09**	**Wed 12/21/11**	**11%**		
277	O&M MANUAL UPDATE NO. 2	0 days	Fri 7/15/11	Fri 7/15/11	0%	276	A/E,NAVY
279	YEAR 1 O&M/LUC INSPECTION REPORT	0 days	Tue 12/15/09	Tue 12/15/09	100%	278	A/E,NAVY
281	YEAR 2 O&M/LUC INSPECTION REPORT	0 days	Fri 3/25/11	Fri 3/25/11	100%	280	A/E,NAVY
283	YEAR 3 O&M/LUC INSPECTION REPORT (2011)	0 days	Wed 12/21/11	Wed 12/21/11	0%	282	A/E,NAVY
284	**SITE 3 - NSA SOIL (OU3)**	**154 days**	**Wed 6/16/04**	**Tue 11/16/04**	**100%**		
285	**PROPOSED PLAN/ROD**	**154 days**	**Wed 6/16/04**	**Tue 11/16/04**	**100%**		
287	FINAL PROPOSED PLAN	0 days	Fri 7/16/04	Fri 7/16/04	100%	286	A/E,NAVY
288	Public Meeting	0 days	Wed 7/28/04	Wed 7/28/04	100%	287FS+12 days	PUBLIC
290	FINAL ROD	0 days	Tue 11/16/04	Tue 11/16/04	100%	289	A/E,NAVY
291	**SITE 3 - GROUNDWATER (OU9)**	**2676 days**	**Tue 8/24/04**	**Wed 12/21/11**	**60%**		
292	**INTERIM PROPOSED PLAN/ROD**	**102 days**	**Tue 8/24/04**	**Fri 12/3/04**	**100%**		
294	FINAL INTERIM PROPOSED PLAN	0 days	Wed 9/22/04	Wed 9/22/04	100%	293	A/E,NAVY
295	PUBLIC MEETING	0 days	Mon 10/4/04	Mon 10/4/04	100%	294FS+12 days	PUBLIC
297	FINAL INTERIM ROD	0 days	Fri 12/3/04	Fri 12/3/04	100%	296	A/E,NAVY
298	**INTERIM RD**	**75 days**	**Sun 1/1/06**	**Thu 3/16/06**	**100%**		
300	FINAL GMP	0 days	Thu 1/26/06	Thu 1/26/06	100%	299	A/E,NAVY
302	FINAL RD WORK PLAN	0 days	Thu 3/16/06	Thu 3/16/06	100%	301	A/E,NAVY
303	**INTERIM RA**	**501 days**	**Tue 4/18/06**	**Fri 8/31/07**	**100%**		
305	REMEDIAL ACTION	0 days	Wed 5/17/06	Wed 5/17/06	100%	304	NAVY
307	FINAL RA COMPLETION REPORT	0 days	Fri 8/31/07	Fri 8/31/07	100%	306	A/E,NAVY
308	**FINAL PROPOSED PLAN/ROD**	**167 days**	**Sun 4/13/08**	**Fri 9/26/08**	**100%**		
310	FINAL PROPOSED PLAN	0 days	Fri 6/13/08	Fri 6/13/08	100%	309	A/E,NAVY
311	PUBLIC MEETING	0 days	Wed 6/25/08	Wed 6/25/08	100%	310FS+12 days	PUBLIC
313	FINAL ROD	0 days	Fri 9/26/08	Fri 9/26/08	100%	312	A/E,NAVY
314	**FINAL RD**	**1040 days**	**Tue 9/9/08**	**Fri 7/15/11**	**68%**		
316	ROUGH DRAFT GMP	0 days	Fri 10/31/08	Fri 10/31/08	100%	315	A/E,NAVY
320	DRAFT GMP	0 days	Wed 11/26/08	Wed 11/26/08	100%	319	A/E,NAVY
324	FINAL GMP	0 days	Fri 7/15/11	Fri 7/15/11	0%	323	A/E,NAVY
326	ROUGH DRAFT LUC RD	0 days	Wed 11/26/08	Wed 11/26/08	100%	325	A/E,NAVY
330	DRAFT LUC RD	0 days	Fri 1/16/09	Fri 1/16/09	100%	329	A/E,NAVY
334	FINAL LUC RD	0 days	Tue 11/17/09	Tue 11/17/09	100%	333	A/E,NAVY
335	**FINAL RA**	**27 days**	**Thu 5/27/10**	**Tue 6/22/10**	**100%**		
337	FINAL RA COMPLETION REPORT	0 days	Tue 6/22/10	Tue 6/22/10	100%	336	A/E,NAVY
338	**LONG-TERM MANAGEMENT**	**2201 days**	**Mon 12/12/05**	**Wed 12/21/11**	**31%**		
339	**GROUNDWATER MONITORING**	**1592 days**	**Mon 8/13/07**	**Wed 12/21/11**	**84%**		
341	YEAR 1 FINAL GMR	0 days	Tue 9/11/07	Tue 9/11/07	100%	340	A/E,NAVY
343	YEAR 2 FINAL GMR	0 days	Fri 7/11/08	Fri 7/11/08	100%	342	A/E,NAVY
345	ROUND 9 FINAL GMR	0 days	Mon 11/3/08	Mon 11/3/08	100%	344	A/E,NAVY
347	YEAR 4 FINAL GMR	0 days	Mon 8/16/10	Mon 8/16/10	100%	346	A/E,NAVY
349	YEAR 5 FINAL GMR	0 days	Fri 3/25/11	Fri 3/25/11	100%	348	A/E,NAVY
351	YEAR 6 FINAL GMR (2011)	0 days	Wed 12/21/11	Wed 12/21/11	0%	350	A/E,NAVY
352	**O&M**	**2201 days**	**Mon 12/12/05**	**Wed 12/21/11**	**15%**		
354	O&M MANUAL UPDATE NO. 1	0 days	Tue 1/10/06	Tue 1/10/06	100%	67	A/E,NAVY
356	O&M MANUAL UPDATE No. 2	0 days	Fri 7/15/11	Fri 7/15/11	0%	355	A/E,NAVY
358	YEAR 1 O&M/LUC INSPECTION REPORT	0 days	Tue 12/15/09	Tue 12/15/09	100%	357	A/E,NAVY
360	YEAR 2 O&M/LUC INSPECTION REPORT	0 days	Fri 3/25/11	Fri 3/25/11	100%	359	A/E,NAVY
362	YEAR 3 O&M/LUC INSPECTION REPORT (2011)	0 days	Wed 12/21/11	Wed 12/21/11	0%	361	A/E,NAVY
363	**SITE 6 - DRMO (OU2)**	**5603 days**	**Wed 8/20/97**	**Fri 12/21/12**	**44%**		
364	**PROPOSED PLAN/ROD**	**3419 days**	**Wed 8/20/97**	**Fri 12/29/06**	**100%**		
365	**Interim Proposed Plan/ROD (Soil and GW)**	**224 days**	**Wed 8/20/97**	**Tue 3/31/98**	**100%**		
367	FINAL PROPOSED PLAN	0 days	Thu 9/18/97	Thu 9/18/97	100%	366	A/E,NAVY
368	PUBLIC MEETING	0 days	Thu 9/25/97	Thu 9/25/97	100%		PUBLIC
370	FINAL INTERIM ROD	0 days	Tue 3/31/98	Tue 3/31/98	100%	369	A/E,NAVY
371	**Final Proposed Plan/ROD (Soil and GW)**	**273 days**	**Sat 4/1/06**	**Fri 12/29/06**	**100%**		
373	FINAL PROPOSED PLAN	0 days	Fri 4/14/06	Fri 4/14/06	100%	372	A/E,NAVY
374	PUBLIC MEETING	0 days	Thu 11/2/06	Thu 11/2/06	100%	373FS+14 days	PUBLIC
376	FINAL ROD	0 days	Fri 12/29/06	Fri 12/29/06	100%	375	A/E,NAVY
377	**RA**	**286 days**	**Sun 11/19/06**	**Fri 8/31/07**	**100%**		
379	REMEDIAL ACTION	0 days	Mon 12/18/06	Mon 12/18/06	100%	378	NAVY



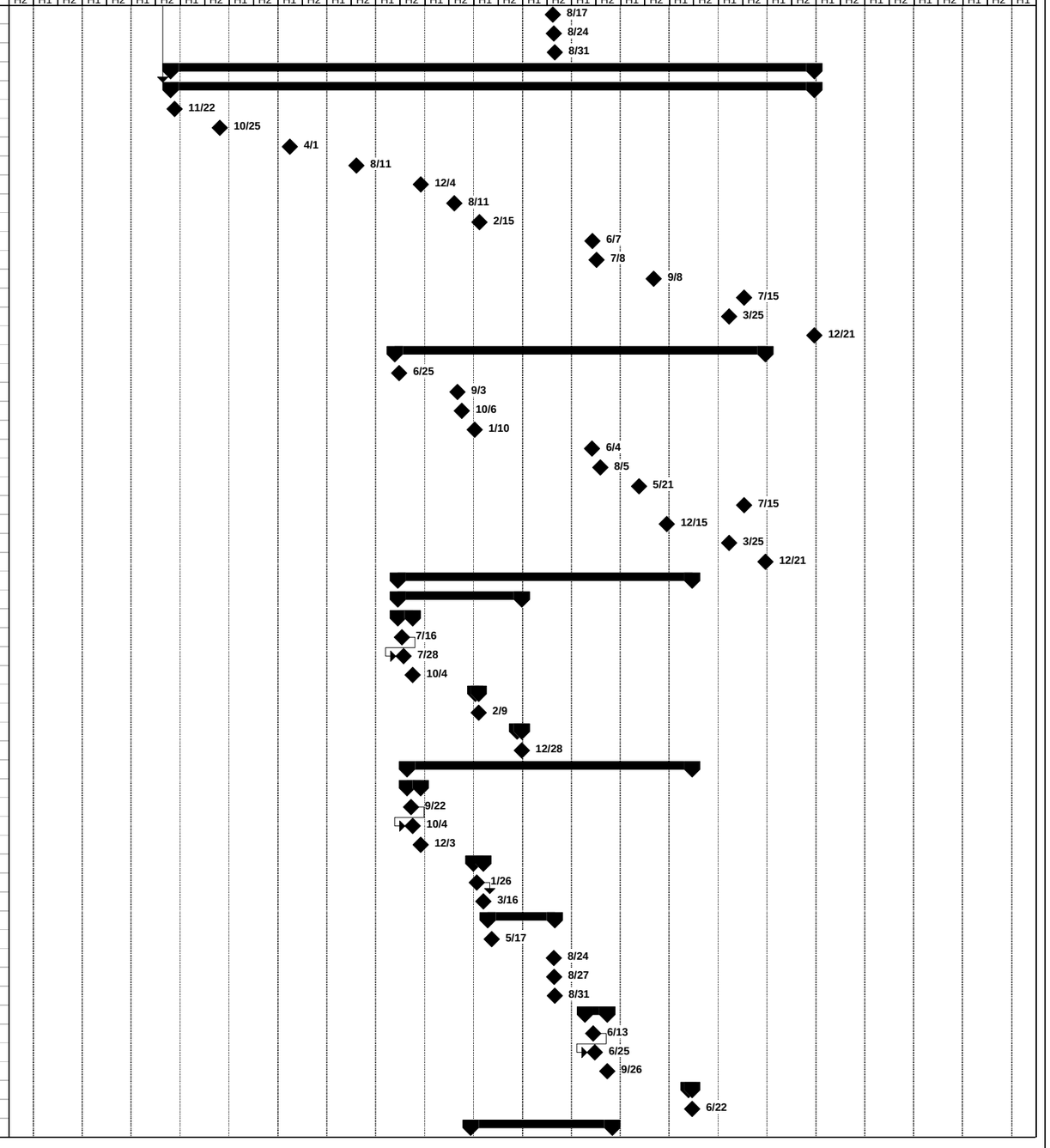
Project: SMP_2011Rev0_Mlstn_06231
Date: Thu 6/23/11

Task | Milestone | Rolled Up Task | Rolled Up Progress | Project Summary | Rolled Up Split | Deadline
Progress | Summary | Rolled Up Milestone | External Tasks | Split | External Milestone

2011 SMP SCHEDULE - MILESTONES
NSB-NLON, GROTON, CONNECTICUT

Rev. 0 June 2011

ID	Task Name	Duration	Start	Finish	% Complete	Predecessors	Resource Names
381	ROUGH DRAFT RA COMPLETION REPORT	0 days	Fri 8/17/07	Fri 8/17/07	100%	380	A/E,NAVY
385	DRAFT RA COMPLETION REPORT	0 days	Fri 8/24/07	Fri 8/24/07	100%	384	A/E,NAVY
389	FINAL RA COMPLETION REPORT	0 days	Fri 8/31/07	Fri 8/31/07	100%	388	A/E,NAVY
390	**LONG-TERM MANAGEMENT**	**4808 days**	**Sun 10/24/99**	**Fri 12/21/12**	**38%**		
391	**GROUNDWATER MONITORING**	**4808 days**	**Sun 10/24/99**	**Fri 12/21/12**	**40%**	**370**	
393	YEAR 1 FINAL GMR	0 days	Mon 11/22/99	Mon 11/22/99	100%	392	A/E,NAVY
395	YEAR 2 FINAL GMR	0 days	Wed 10/25/00	Wed 10/25/00	100%	394	A/E,NAVY
397	YEAR 3 FINAL GMR	0 days	Mon 4/1/02	Mon 4/1/02	100%	396	A/E,NAVY
399	YEAR 4 FINAL GMR	0 days	Mon 8/11/03	Mon 8/11/03	100%	398	A/E,NAVY
401	YEAR 5 FINAL GMR	0 days	Sat 12/4/04	Sat 12/4/04	100%	400	A/E,NAVY
403	YEAR 6 FINAL GMR	0 days	Thu 8/11/05	Thu 8/11/05	100%	402	A/E,NAVY
405	YEAR 7 FINAL GMR	0 days	Wed 2/15/06	Wed 2/15/06	100%	404	A/E,NAVY
407	YEARS 8 FINAL GMR	0 days	Sat 6/7/08	Sat 6/7/08	100%	406	A/E,NAVY
409	YEAR 9 FINAL GMR	0 days	Tue 7/8/08	Tue 7/8/08	100%	408	A/E,NAVY
411	YEAR 11 FINAL GMR	0 days	Tue 9/8/09	Tue 9/8/09	100%	410	A/E,NAVY
413	FINAL GMP	0 days	Fri 7/15/11	Fri 7/15/11	0%	412	A/E,NAVY
415	YEAR 12 FINAL GMR (2010)	0 days	Fri 3/25/11	Fri 3/25/11	100%	414	A/E,NAVY
417	YEAR 14 FINAL GMR (2012)	0 days	Fri 12/21/12	Fri 12/21/12	0%	416	A/E,NAVY
418	**O&M**	**2767 days**	**Tue 5/25/04**	**Wed 12/21/11**	**35%**		
420	YEAR 1 O&M INSPECTION REPORT	0 days	Fri 6/25/04	Fri 6/25/04	100%	419	A/E,NAVY
422	YEAR 2 O&M INSPECTION REPORT	0 days	Sat 9/3/05	Sat 9/3/05	100%	421	A/E,NAVY
424	YEAR 3 O&M INSPECTION REPORT	0 days	Thu 10/6/05	Thu 10/6/05	100%	423	A/E,NAVY
426	O&M MANUAL UPDATE NO. 1	0 days	Tue 1/10/06	Tue 1/10/06	100%	67	A/E,NAVY
428	YEAR 4 O&M/LUC INSPECTION REPORT	0 days	Wed 6/4/08	Wed 6/4/08	100%	427	A/E,NAVY
430	YEAR 5 O&M/LUC INSPECTION REPORT	0 days	Tue 8/5/08	Tue 8/5/08	100%	429	A/E,NAVY
432	YEAR 6 O&M/LUC INSPECTION REPORT	0 days	Thu 5/21/09	Thu 5/21/09	100%	431	A/E,NAVY
434	O&M MANUAL UPDATE NO. 2	0 days	Fri 7/15/11	Fri 7/15/11	0%	433	A/E,NAVY
436	YEAR 7 O&M/LUC INSPECTION REPORT	0 days	Tue 12/15/09	Tue 12/15/09	100%	435	A/E,NAVY
438	YEAR 8 O&M/LUC INSPECTION REPORT	0 days	Fri 3/25/11	Fri 3/25/11	100%	437	A/E,NAVY
440	YEAR 9 O&M/LUC INSPECTION REPORT (2011)	0 days	Wed 12/21/11	Wed 12/21/11	0%	439	A/E,NAVY
441	**SITE 7 - TORPEDO SHOPS**	**2198 days**	**Wed 6/16/04**	**Tue 6/22/10**	**100%**		
442	**SITE 7 - SOIL (OU8)**	**926 days**	**Wed 6/16/04**	**Thu 12/28/06**	**100%**		
443	**PROPOSED PLAN/ROD**	**111 days**	**Wed 6/16/04**	**Mon 10/4/04**	**100%**		
445	FINAL PROPOSED PLAN	0 days	Fri 7/16/04	Fri 7/16/04	100%	444	A/E,NAVY
446	PUBLIC MEETING	0 days	Wed 7/28/04	Wed 7/28/04	100%	445FS+12 days	PUBLIC
448	FINAL ROD	0 days	Mon 10/4/04	Mon 10/4/04	100%	447	A/E,NAVY
449	**RD**	**25 days**	**Mon 1/16/06**	**Thu 2/9/06**	**100%**		
451	FINAL RD WORK PLAN	0 days	Thu 2/9/06	Thu 2/9/06	100%	450	A/E,NAVY
452	**RA**	**35 days**	**Fri 11/24/06**	**Thu 12/28/06**	**100%**		
454	FINAL RA COMPLETION REPORT	0 days	Thu 12/28/06	Thu 12/28/06	100%	453	A/E,NAVY
455	**SITE 7 - GROUNDWATER (OU9)**	**2129 days**	**Tue 8/24/04**	**Tue 6/22/10**	**100%**		
456	**INTERIM PROPOSED PLAN/ROD**	**102 days**	**Tue 8/24/04**	**Fri 12/3/04**	**100%**		
458	FINAL INTERIM PROPOSED PLAN	0 days	Wed 9/22/04	Wed 9/22/04	100%	457	A/E,NAVY
459	PUBLIC MEETING	0 days	Mon 10/4/04	Mon 10/4/04	100%	458FS+12 days	A/E,NAVY
461	FINAL INTERIM ROD	0 days	Fri 12/3/04	Fri 12/3/04	100%	460	A/E,NAVY
462	**RD**	**75 days**	**Sun 1/1/06**	**Thu 3/16/06**	**100%**		
464	FINAL INTERIM GMP	0 days	Thu 1/26/06	Thu 1/26/06	100%	463	A/E,NAVY
466	FINAL INTERIM RD WORK PLAN	0 days	Thu 3/16/06	Thu 3/16/06	100%	464	A/E,NAVY
467	**RA**	**501 days**	**Tue 4/18/06**	**Fri 8/31/07**	**100%**		
469	INTERIM REMEDIAL ACTION	0 days	Wed 5/17/06	Wed 5/17/06	100%	468	NAVY
471	ROUGH DRAFT INTERIM RA COMPLETION REPORT	0 days	Fri 8/24/07	Fri 8/24/07	100%	470	A/E,NAVY
475	DRAFT INTERIM RA COMPLETION REPORT	0 days	Mon 8/27/07	Mon 8/27/07	100%	474	A/E,NAVY
479	FINAL INTERIM RA COMPLETION REPORT	0 days	Fri 8/31/07	Fri 8/31/07	100%	478	A/E,NAVY
480	**FINAL PROPOSED PLAN/ROD**	**167 days**	**Sun 4/13/08**	**Fri 9/26/08**	**100%**		
482	FINAL PROPOSED PLAN	0 days	Fri 6/13/08	Fri 6/13/08	100%	481	A/E,NAVY
483	PUBLIC MEETING	0 days	Wed 6/25/08	Wed 6/25/08	100%	482FS+12 days	A/E,NAVY
485	FINAL ROD	0 days	Fri 9/26/08	Fri 9/26/08	100%	484	A/E,NAVY
486	**FINAL RA**	**27 days**	**Thu 5/27/10**	**Tue 6/22/10**	**100%**		
488	FINAL RA COMPLETION REPORT	0 days	Tue 6/22/10	Tue 6/22/10	100%	487	A/E,NAVY
489	**LONG-TERM MANAGEMENT**	**1058 days**	**Mon 12/12/05**	**Mon 11/3/08**	**100%**		



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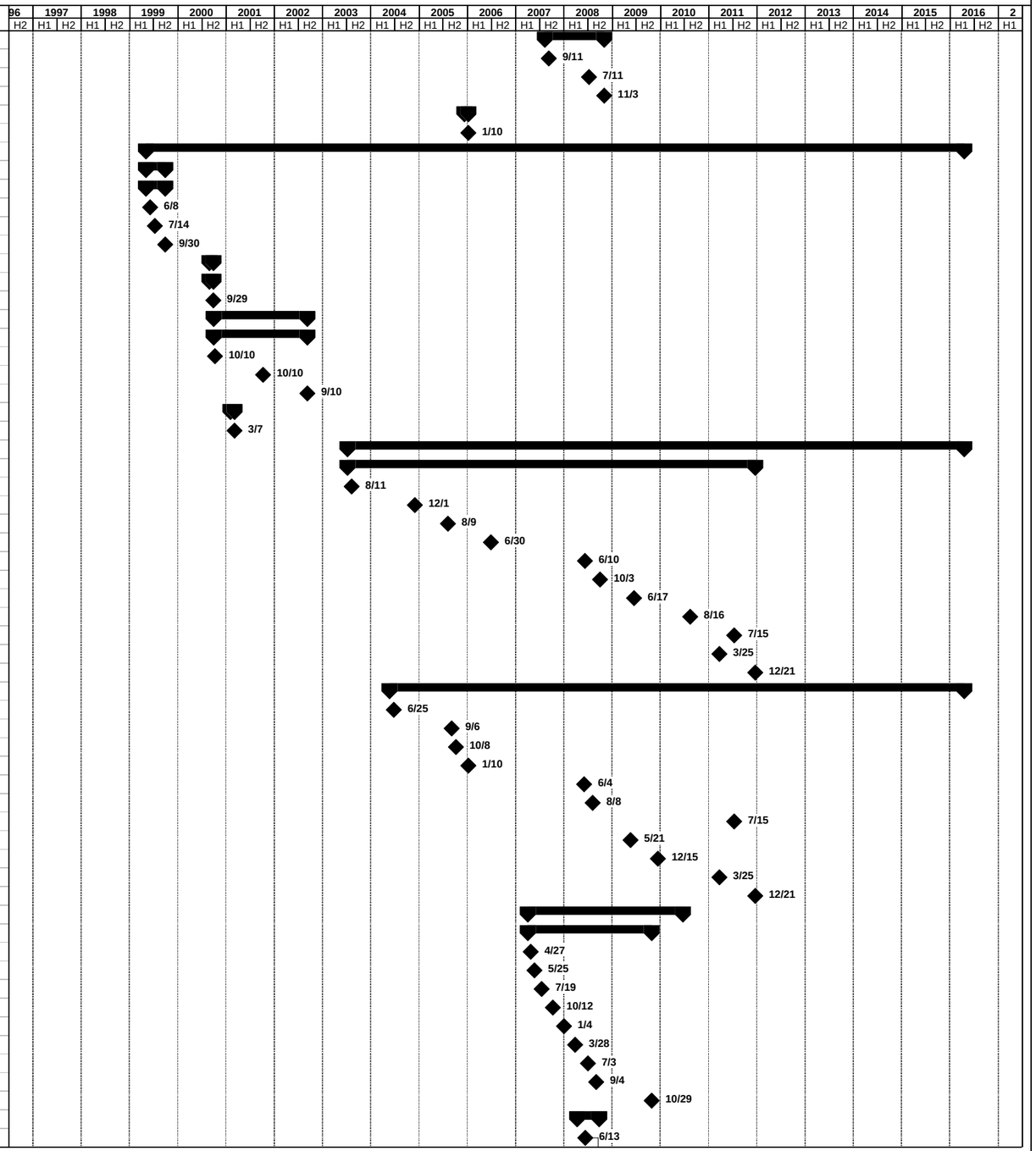
Task | Milestone | Rolled Up Task | Rolled Up Progress | Project Summary | Rolled Up Split | Deadline
Progress | Summary | Rolled Up Milestone | External Tasks | Split | External Milestone

2011 SMP SCHEDULE - MILESTONES
NSB-NLON, GROTON, CONNECTICUT

Rev. 0 June 2011

ID	Task Name	Duration	Start	Finish	% Complete	Predecessors	Resource Names
490	**GROUNDWATER MONITORING**	**449 days**	**Mon 8/13/07**	**Mon 11/3/08**	**100%**		
492	YEAR 1 FINAL GMR	0 days	Tue 9/11/07	Tue 9/11/07	100%	491	A/E,NAVY
494	YEAR 2 FINAL GMR	0 days	Fri 7/11/08	Fri 7/11/08	100%	493	A/E,NAVY
496	ROUND 9 FINAL GMR	0 days	Mon 11/3/08	Mon 11/3/08	100%	495	A/E,NAVY
497	**O&M**	**30 days**	**Mon 12/12/05**	**Tue 1/10/06**	**100%**		
499	O&M MANUAL UPDATE NO. 1	0 days	Tue 1/10/06	Tue 1/10/06	100%	498	A/E,NAVY
500	**SITE 8 - GOSS COVE LANDFILL (OU5)**	**6193 days**	**Sat 5/8/99**	**Wed 4/20/16**	**49%**		
501	**PROPOSED PLAN/ROD**	**146 days**	**Sat 5/8/99**	**Thu 9/30/99**	**100%**		
502	**Soil, Sediment, Groundwater, and Surface Water**	**146 days**	**Sat 5/8/99**	**Thu 9/30/99**	**100%**		
504	FINAL PROPOSED PLAN	0 days	Tue 6/8/99	Tue 6/8/99	100%	503	A/E,NAVY
505	Public Meeting	0 days	Wed 7/14/99	Wed 7/14/99	100%		PUBLIC
507	FINAL ROD	0 days	Thu 9/30/99	Thu 9/30/99	100%	506	A/E,NAVY
508	**RD**	**31 days**	**Wed 8/30/00**	**Fri 9/29/00**	**100%**		
509	**Soil**	**31 days**	**Wed 8/30/00**	**Fri 9/29/00**	**100%**		
511	FINAL RD	0 days	Fri 9/29/00	Fri 9/29/00	100%	510	A/E,NAVY
512	**RA**	**710 days**	**Sun 10/1/00**	**Tue 9/10/02**	**100%**		
513	**Soil**	**710 days**	**Sun 10/1/00**	**Tue 9/10/02**	**100%**		
515	Start of Construction	0 days	Tue 10/10/00	Tue 10/10/00	100%	514	NAVY
517	End of Construction	0 days	Wed 10/10/01	Wed 10/10/01	100%	516	NAVY
519	FINAL RA COMPLETION REPORT	0 days	Tue 9/10/02	Tue 9/10/02	100%	518	A/E,NAVY
520	**Groundwater**	**30 days**	**Tue 2/6/01**	**Wed 3/7/01**	**100%**		
522	FINAL GROUNDWATER MONITORING PLAN	0 days	Wed 3/7/01	Wed 3/7/01	100%	521	A/E,NAVY
523	**LONG-TERM MANAGEMENT**	**4668 days**	**Fri 7/11/03**	**Wed 4/20/16**	**31%**		
524	**GROUNDWATER MONITORING**	**3086 days**	**Fri 7/11/03**	**Wed 12/21/11**	**32%**		
526	YEAR 1 FINAL GMR	0 days	Mon 8/11/03	Mon 8/11/03	100%	525	A/E,NAVY
528	YEAR 2 FINAL GMR	0 days	Wed 12/1/04	Wed 12/1/04	100%	527	A/E,NAVY
530	YEAR 3 FINAL GMR	0 days	Tue 8/9/05	Tue 8/9/05	100%	529	A/E,NAVY
532	YEAR 4 FINAL GMR	0 days	Fri 6/30/06	Fri 6/30/06	100%	531	A/E,NAVY
534	YEAR 5 FINAL GMR	0 days	Tue 6/10/08	Tue 6/10/08	100%	533	A/E,NAVY
536	YEAR 6 FINAL GMR	0 days	Fri 10/3/08	Fri 10/3/08	100%	535	A/E,NAVY
538	YEAR 7 FINAL GMR	0 days	Wed 6/17/09	Wed 6/17/09	100%	537	A/E,NAVY
540	YEAR 8 FINAL GMR	0 days	Mon 8/16/10	Mon 8/16/10	100%	539	A/E,NAVY
542	FINAL GMP	0 days	Fri 7/15/11	Fri 7/15/11	0%	541	A/E,NAVY
544	YEAR 9 FINAL GMR	0 days	Fri 3/25/11	Fri 3/25/11	0%	543	A/E,NAVY
546	YEAR 10 FINAL GMR (2011)	0 days	Wed 12/21/11	Wed 12/21/11	0%	545	A/E,NAVY
547	**O&M**	**4350 days**	**Mon 5/24/04**	**Wed 4/20/16**	**31%**		
549	YEAR 1 O&M INSPECTION REPORT	0 days	Fri 6/25/04	Fri 6/25/04	100%	548	A/E,NAVY
551	YEAR 2 O&M INSPECTION REPORT	0 days	Tue 9/6/05	Tue 9/6/05	100%	550	A/E,NAVY
553	YEAR 3 O&M INSPECTION REPORT	0 days	Sat 10/8/05	Sat 10/8/05	100%	552	A/E,NAVY
555	O&M MANUAL UPDATE NO. 1	0 days	Tue 1/10/06	Tue 1/10/06	100%	554	A/E,NAVY
557	YEAR 4 O&M/LUC INSPECTION REPORT	0 days	Wed 6/4/08	Wed 6/4/08	100%	556	A/E,NAVY
559	YEAR 5 O&M/LUC INSPECTION REPORT	0 days	Fri 8/8/08	Fri 8/8/08	100%	558	A/E,NAVY
561	O&M MANUAL UPDATE No. 2	0 days	Fri 7/15/11	Fri 7/15/11	0%	560	A/E,NAVY
563	YEAR 6 O&M/LUC INSPECTION REPORT	0 days	Thu 5/21/09	Thu 5/21/09	100%	562	A/E,NAVY
565	YEAR 7 O&M/LUC INSPECTION REPORT	0 days	Tue 12/15/09	Tue 12/15/09	100%	564	A/E,NAVY
567	YEAR 8 O&M/LUC INSPECTION REPORT	0 days	Fri 3/25/11	Fri 3/25/11	0%	566	A/E,NAVY
570	YEAR 9 O&M/LUC INSPECTION REPORT (2011)	0 days	Wed 12/21/11	Wed 12/21/11	0%	569	A/E,NAVY
572	**SITE 23 GROUNDWATER (OU9)**	**1174 days**	**Fri 4/6/07**	**Tue 6/22/10**	**100%**		
573	**RI/FS**	**938 days**	**Fri 4/6/07**	**Thu 10/29/09**	**100%**		
575	DRAFT SITE 23 METERING PIT WORK PLAN	0 days	Fri 4/27/07	Fri 4/27/07	100%	574	A/E,NAVY
579	FINAL SITE 23 METERING PIT WORK PLAN	0 days	Fri 5/25/07	Fri 5/25/07	100%	578	A/E,NAVY
581	ROUND 1 FIELD WORK	0 days	Thu 7/19/07	Thu 7/19/07	100%	580	A/E,NAVY
583	ROUND 2 FIELD WORK	0 days	Fri 10/12/07	Fri 10/12/07	100%	582	A/E,NAVY
585	ROUND 3 FIELD WORK	0 days	Fri 1/4/08	Fri 1/4/08	100%	584	A/E,NAVY
587	ROUND 4 FIELD WORK	0 days	Fri 3/28/08	Fri 3/28/08	100%	586	A/E,NAVY
589	DRAFT Year 1 Monitoring REPORT	0 days	Thu 7/3/08	Thu 7/3/08	100%	588	A/E,NAVY
593	FINAL Year 1 Monitoring REPORT	0 days	Thu 9/4/08	Thu 9/4/08	100%	592	A/E,NAVY
595	FINAL YEAR 2 MONITORING REPORT	0 days	Thu 10/29/09	Thu 10/29/09	100%	594	A/E,NAVY
596	**PROPOSED PLAN/ROD**	**167 days**	**Sun 4/13/08**	**Fri 9/26/08**	**100%**		
598	FINAL PROPOSED PLAN	0 days	Fri 6/13/08	Fri 6/13/08	100%	597	A/E,NAVY



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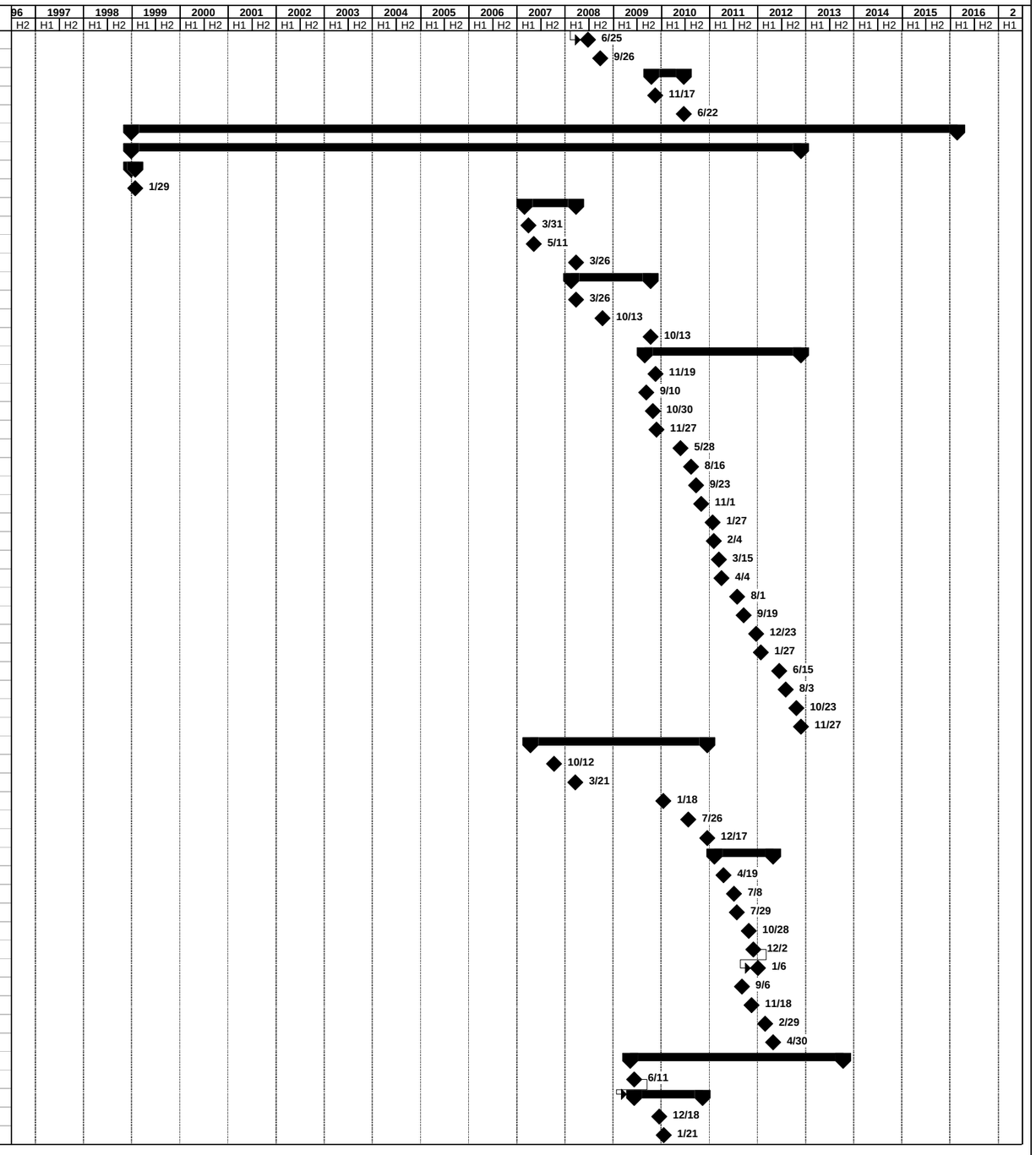
Date: Thu 6/23/11

Task | Progress | Milestone | Summary | Rolled Up Task | Rolled Up Milestone | Rolled Up Progress | External Tasks | Project Summary | Split | Rolled Up Split | External Milestone | Deadline

2011 SMP SCHEDULE - MILESTONES
NSB-NLON, GROTON, CONNECTICUT

Rev. 0 June 2011

ID	Task Name	Duration	Start	Finish	% Complete	Predecessors	Resource Names
599	PUBLIC MEETING	0 days	Wed 6/25/08	Wed 6/25/08	100%	598FS+12 days	PUBLIC
601	FINAL ROD	0 days	Fri 9/26/08	Fri 9/26/08	100%	600	A/E,NAVY
602	**RD**	**246 days**	**Tue 10/20/09**	**Tue 6/22/10**	**100%**		
604	FINAL LUC RD	0 days	Tue 11/17/09	Tue 11/17/09	100%	603	A/E,NAVY
606	FINAL RA COMPLETION REPORT	0 days	Tue 6/22/10	Tue 6/22/10	100%	605	A/E,NAVY
607	**LOWER SUBASE SITES 10,11,13,17,19,21,22,24,25,&TR (OU4)**	**6266 days**	**Thu 12/31/98**	**Thu 2/25/16**	**50%**		
608	**RI/FS**	**5081 days**	**Thu 12/31/98**	**Tue 11/27/12**	**81%**		
609	**Remedial Investigation**	**30 days**	**Thu 12/31/98**	**Fri 1/29/99**	**100%**		
611	FINAL RI REPORT	0 days	Fri 1/29/99	Fri 1/29/99	100%	610	A/E,NAVY
612	**Thames River Ecological Investigation Report**	**391 days**	**Fri 3/2/07**	**Wed 3/26/08**	**100%**		
614	FINAL WORK PLAN ADDENDUM	0 days	Sat 3/31/07	Sat 3/31/07	100%	613	A/E,NAVY
617	DRAFT SURVEY REPORT	0 days	Fri 5/11/07	Fri 5/11/07	100%	616	A/E,NAVY
621	FINAL VALIDATION STUDY REPORT	0 days	Wed 3/26/08	Wed 3/26/08	100%	620	A/E,NAVY
622	**Inner Pier 1 Sediment EE/CA**	**602 days**	**Wed 2/20/08**	**Tue 10/13/09**	**100%**		
624	FINAL INNER PIER 1 EE/CA	0 days	Wed 3/26/08	Wed 3/26/08	100%	623	A/E,NAVY
626	FINAL OUTER PIER 1 SEDIMENT WORK PLAN	0 days	Mon 10/13/08	Mon 10/13/08	100%	625	A/E,NAVY
631	FINAL INNER/OUTER PIER 1 EE/CA	0 days	Tue 10/13/09	Tue 10/13/09	100%	630	A/E,NAVY
632	**Inner Pier 1 Sediment Action Memo and NTCRA**	**1185 days**	**Mon 8/31/09**	**Tue 11/27/12**	**53%**		
634	FINAL ACTION MEMO	0 days	Thu 11/19/09	Thu 11/19/09	100%	633	A/E,NAVY
636	FINAL INNER PIER 1 SEDIMENT PDI WORK PLAN	0 days	Thu 9/10/09	Thu 9/10/09	100%	635	A/E,NAVY
641	DATA MEMORANDUM	0 days	Fri 10/30/09	Fri 10/30/09	100%	640	A/E,NAVY
643	FINAL NTCRA WORK PLAN	0 days	Fri 11/27/09	Fri 11/27/09	100%	642	A/E,NAVY
646	INTERNAL DRAFT COMPLETION REPORT	0 days	Fri 5/28/10	Fri 5/28/10	100%	645	A/E,NAVY
648	DRAFT SEDIMENT SURVEY WORK PLAN	0 days	Mon 8/16/10	Mon 8/16/10	100%	647	A/E,NAVY
652	FINAL SEDIMENT SURVEY WORK PLAN	0 days	Thu 9/23/10	Thu 9/23/10	100%	651	A/E,NAVY
656	DRAFT SEDIMENT SURVEY REPORT	0 days	Mon 11/1/10	Mon 11/1/10	100%	655	A/E,NAVY
659	FINAL SEDIMENT SURVEY REPORT	0 days	Thu 1/27/11	Thu 1/27/11	100%	658	A/E,NAVY
661	DRAFT 30% DESIGN	0 days	Fri 2/4/11	Fri 2/4/11	100%	660	A/E,NAVY
665	DRAFT FINAL 30% DESIGN	0 days	Tue 3/15/11	Tue 3/15/11	100%	664	A/E,NAVY
669	FINAL 30% DESIGN	0 days	Mon 4/4/11	Mon 4/4/11	100%	668	A/E,NAVY
671	INTERNAL DRAFT NTCRA WORK PLAN ADDENDUM	0 days	Mon 8/1/11	Mon 8/1/11	0%	670	A/E,NAVY
675	DRAFT NTCRA WORK PLAN ADDENDUM	0 days	Mon 9/19/11	Mon 9/19/11	0%	674	A/E,NAVY
679	DRAFT FINAL NTCRA WORK PLAN ADDENDUM	0 days	Fri 12/23/11	Fri 12/23/11	0%	678	A/E,NAVY
682	FINAL NTCRA WORK PLAN ADDENDUM	0 days	Fri 1/27/12	Fri 1/27/12	0%	681	A/E,NAVY
685	INTERNAL DRAFT NTCRA COMPLETION REPORT	0 days	Fri 6/15/12	Fri 6/15/12	0%	684	A/E,NAVY
689	DRAFT NTCRA COMPLETION REPORT	0 days	Fri 8/3/12	Fri 8/3/12	0%	688	A/E,NAVY
693	DRAFT FINAL NTCRA COMPLETION REPORT	0 days	Tue 10/23/12	Tue 10/23/12	0%	692	A/E,NAVY
696	FINAL NTCRA COMPLETION REPORT	0 days	Tue 11/27/12	Tue 11/27/12	0%	695	A/E,NAVY
697	**Feasibility Study (SO, GW, and TR SD)**	**1341 days**	**Tue 4/17/07**	**Fri 12/17/10**	**100%**		
699	ROUGH DRAFT FS	0 days	Fri 10/12/07	Fri 10/12/07	100%	698	A/E,NAVY
703	DRAFT FS REPORT	0 days	Fri 3/21/08	Fri 3/21/08	100%	702	A/E,NAVY
707	DRAFT FINAL FS REPORT	0 days	Mon 1/18/10	Mon 1/18/10	100%	706	A/E,NAVY
711	REVISED DRAFT FINAL FS REPORT	0 days	Mon 7/26/10	Mon 7/26/10	100%	710	A/E,NAVY
715	FINAL FS REPORT	0 days	Fri 12/17/10	Fri 12/17/10	100%	714	A/E,NAVY
716	**PROPOSED PLAN/ROD (SO, GW, and TR SD)**	**446 days**	**Thu 2/10/11**	**Mon 4/30/12**	**14%**		
718	ROUGH DRAFT PROPOSED PLAN	0 days	Tue 4/19/11	Tue 4/19/11	100%	717	A/E,NAVY
722	ROUGH DRAFT PROPOSED PLAN - REVISION 1	0 days	Fri 7/8/11	Fri 7/8/11	0%	721	A/E,NAVY
726	DRAFT PROPOSED PLAN	0 days	Fri 7/29/11	Fri 7/29/11	0%	725	A/E,NAVY
730	DRAFT FINAL PROPOSED PLAN	0 days	Fri 10/28/11	Fri 10/28/11	0%	729	A/E,NAVY
733	FINAL PROPOSED PLAN	0 days	Fri 12/2/11	Fri 12/2/11	0%	732	A/E,NAVY
734	PUBLIC MEETING	0 days	Fri 1/6/12	Fri 1/6/12	0%	733FS+35 days	PUBLIC
736	INTERNAL DRAFT ROD	0 days	Tue 9/6/11	Tue 9/6/11	0%	735	A/E,NAVY
740	DRAFT ROD	0 days	Fri 11/18/11	Fri 11/18/11	0%	739	A/E,NAVY
744	DRAFT FINAL ROD	0 days	Wed 2/29/12	Wed 2/29/12	0%	743	A/E,NAVY
747	FINAL ROD	0 days	Mon 4/30/12	Mon 4/30/12	0%	746	A/E,NAVY
748	**RD (SO, GW, and TR SD)**	**1615 days**	**Wed 5/13/09**	**Sun 10/13/13**	**42%**		
750	SCOPE OF WORK FOR RD/RA	0 days	Thu 6/11/09	Thu 6/11/09	100%	749	A/E,NAVY
751	**GW PDI WP AND FIELD WORK**	**519 days**	**Fri 6/12/09**	**Fri 11/12/10**	**100%**	**750**	
753	DRAFT PDI GW WORK PLAN	0 days	Fri 12/18/09	Fri 12/18/09	100%	752	A/E,NAVY
757	DRAFT FINAL PDI GW WP	0 days	Thu 1/21/10	Thu 1/21/10	100%	756	A/E,NAVY



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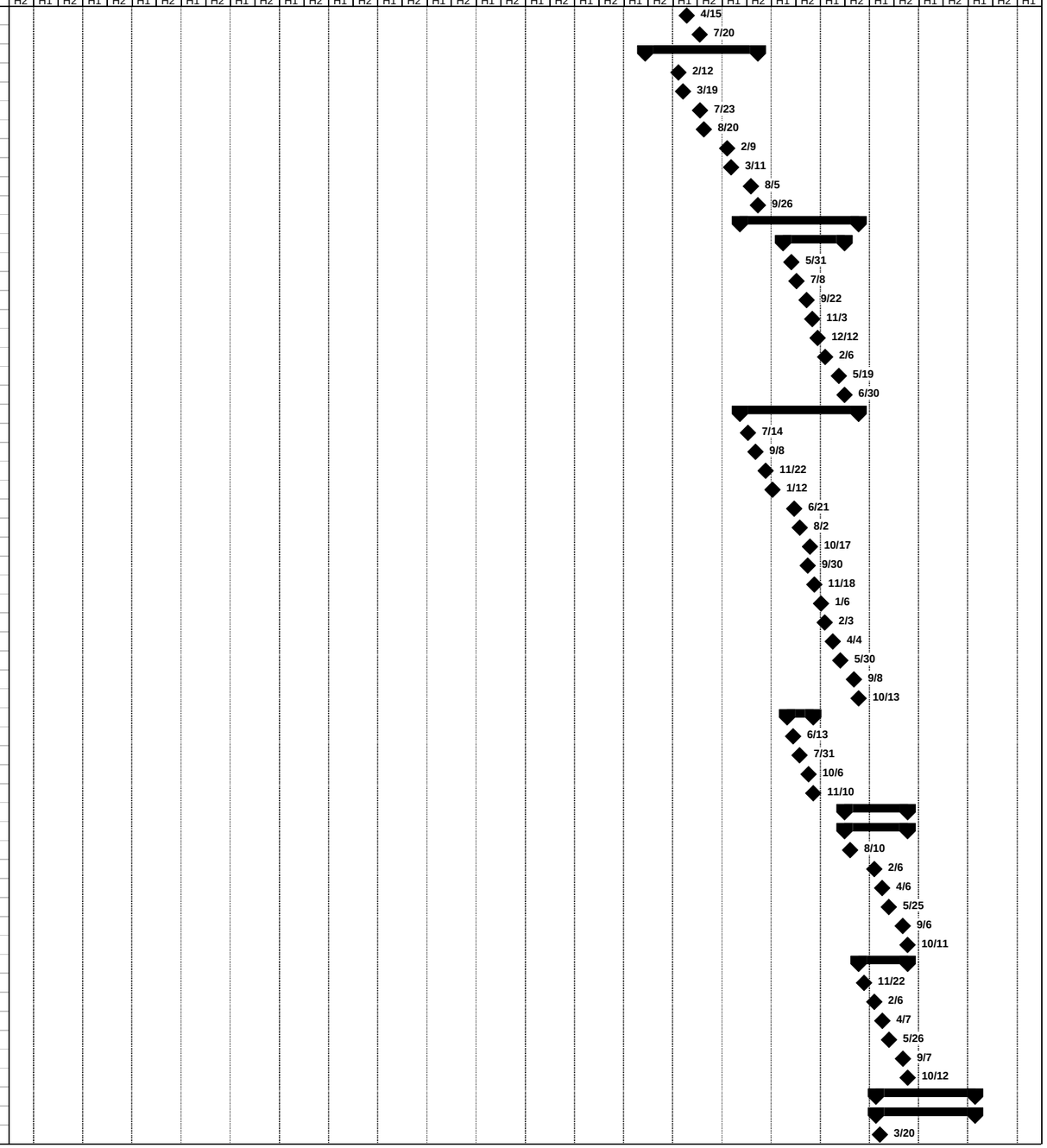
Date: Thu 6/23/11

Task | Milestone | Rolled Up Task | Rolled Up Progress | Project Summary | Rolled Up Split | Deadline
Progress | Summary | Rolled Up Milestone | External Tasks | Split | External Milestone

2011 SMP SCHEDULE - MILESTONES
NSB-NLON, GROTON, CONNECTICUT

Rev. 0 June 2011

ID	Task Name	Duration	Start	Finish	% Complete	Predecessors	Resource Names
761	FINAL PDI GW WORK PLAN	0 days	Thu 4/15/10	Thu 4/15/10	100%	760	A/E,NAVY
767	ROUND 1 FINAL GW TECH MEMO	0 days	Tue 7/20/10	Tue 7/20/10	100%	766	A/E,NAVY
769	**SOIL PDI WP, FIELD WORK, AND REPORTING**	**837 days**	**Fri 6/12/09**	**Mon 9/26/11**	**86%**		
771	INTERNAL DRAFT PDI SOIL WORK PLAN	0 days	Fri 2/12/10	Fri 2/12/10	100%	770	A/E,NAVY
775	DRAFT PDI SOIL WORK PLAN	0 days	Fri 3/19/10	Fri 3/19/10	100%	774	A/E,NAVY
779	DRAFT FINAL PDI SOIL WORK PLAN	0 days	Fri 7/23/10	Fri 7/23/10	100%	778	A/E,NAVY
782	FINAL PDI SOIL WORK PLAN	0 days	Fri 8/20/10	Fri 8/20/10	100%	781	A/E,NAVY
785	INTERNAL DRAFT SO/GW PDI COMP RPT AND FS ADNM	0 days	Wed 2/9/11	Wed 2/9/11	100%	784	A/E,NAVY
789	DRAFT SO/GW PDI COMP RPT AND FS ADNM	0 days	Fri 3/11/11	Fri 3/11/11	100%	788	A/E,NAVY
793	DRAFT FINAL SO/GW PDI COMP RPT AND FS ADNM	0 days	Fri 8/5/11	Fri 8/5/11	0%	792	A/E,NAVY
796	FINAL SO/GW PDI COMP RPT AND FS ADNM	0 days	Mon 9/26/11	Mon 9/26/11	0%	795	A/E,NAVY
797	**RD AND WORK PLAN**	**882 days**	**Mon 5/16/11**	**Sun 10/13/13**	**0%**		
798	**SOIL 30% DESIGN AND WORK PLAN**	**456 days**	**Sun 4/1/12**	**Sun 6/30/13**	**0%**	**743**	
800	INTERNAL DRAFT SOIL 30% Design	0 days	Thu 5/31/12	Thu 5/31/12	0%	799	A/E,NAVY
804	DRAFT SOIL 30% DESIGN	0 days	Sun 7/8/12	Sun 7/8/12	0%	803	A/E,NAVY
808	DRAFT FINAL SOIL 30% DESIGN	0 days	Sat 9/22/12	Sat 9/22/12	0%	807	A/E,NAVY
811	FINAL SOIL 30% DESIGN	0 days	Sat 11/3/12	Sat 11/3/12	0%	810	A/E,NAVY
813	INTERNAL DRAFT SOIL RD WORK PLAN	0 days	Wed 12/12/12	Wed 12/12/12	0%	812	A/E,NAVY
817	DRAFT SOIL RD WORK PLAN	0 days	Wed 2/6/13	Wed 2/6/13	0%	816	A/E,NAVY
821	DRAFT FINAL SOIL RD WORK PLAN	0 days	Sun 5/19/13	Sun 5/19/13	0%	820	A/E,NAVY
824	FINAL SOIL RD WORK PLAN	0 days	Sun 6/30/13	Sun 6/30/13	0%	823	A/E,NAVY
825	**SEDIMENT 30% DESIGN AND WORK PLAN**	**882 days**	**Mon 5/16/11**	**Sun 10/13/13**	**0%**		
827	INTERNAL DRAFT SEDIMENT PDI WP	0 days	Thu 7/14/11	Thu 7/14/11	0%	826	A/E,NAVY
831	DRAFT SEDIMENT PDI WP	0 days	Thu 9/8/11	Thu 9/8/11	0%	830	A/E,NAVY
835	DRAFT FINAL SEDIMENT PDI WP	0 days	Tue 11/22/11	Tue 11/22/11	0%	834	A/E,NAVY
838	FINAL SEDIMENT PDI WP	0 days	Thu 1/12/12	Thu 1/12/12	0%	837	A/E,NAVY
842	INT DRAFT SEDIMENT PDI TECH MEMO	0 days	Thu 6/21/12	Thu 6/21/12	0%	841	A/E,NAVY
846	DRAFT SEDIMENT PDI TECH MEMO	0 days	Thu 8/2/12	Thu 8/2/12	0%	845	A/E,NAVY
850	FINAL SEDIMENT PDI TECH MEMO	0 days	Wed 10/17/12	Wed 10/17/12	0%	849	A/E,NAVY
852	INT DRAFT SEDIMENT 30% DESIGN	0 days	Sun 9/30/12	Sun 9/30/12	0%	851	A/E,NAVY
856	DRAFT SEDIMENT 30% DESIGN	0 days	Sun 11/18/12	Sun 11/18/12	0%	855	A/E,NAVY
860	DRAFT FINAL SEDIMENT 30% DESIGN	0 days	Sun 1/6/13	Sun 1/6/13	0%	859	A/E,NAVY
863	FINAL SEDIMENT 30% DESIGN	0 days	Sun 2/3/13	Sun 2/3/13	0%	862	A/E,NAVY
865	INTERNAL DRAFT SEDIMENT RD WORK PLAN	0 days	Thu 4/4/13	Thu 4/4/13	0%	864	A/E,NAVY
869	DRAFT SEDIMENT RD WORK PLAN	0 days	Thu 5/30/13	Thu 5/30/13	0%	868	A/E,NAVY
873	DRAFT FINAL SEDIMENT RD WORK PLAN	0 days	Sun 9/8/13	Sun 9/8/13	0%	872	A/E,NAVY
876	FINAL SEDIMENT RD WORK PLAN	0 days	Sun 10/13/13	Sun 10/13/13	0%	875	A/E,NAVY
877	**LAND USE CONTROL REMEDIAL DESIGN**	**194 days**	**Tue 5/1/12**	**Sat 11/10/12**	**0%**		
879	INTERNAL DRAFT LUC RD	0 days	Wed 6/13/12	Wed 6/13/12	0%	878	A/E,NAVY
883	DRAFT LUC RD	0 days	Tue 7/31/12	Tue 7/31/12	0%	882	A/E,NAVY
887	DRAFT FINAL LUC RD	0 days	Sat 10/6/12	Sat 10/6/12	0%	886	A/E,NAVY
890	FINAL LUC RD	0 days	Sat 11/10/12	Sat 11/10/12	0%	889	A/E,NAVY
891	**RA (SO and TR SD)**	**469 days**	**Mon 7/1/13**	**Sun 10/12/14**	**0%**		
892	**SOIL REMEDIAL ACTION**	**468 days**	**Mon 7/1/13**	**Sat 10/11/14**	**0%**		
895	Start of Construction	0 days	Sat 8/10/13	Sat 8/10/13	0%	894	A/E,NAVY
897	Remedy In Place	0 days	Thu 2/6/14	Thu 2/6/14	0%	896	A/E,NAVY
899	INTERNAL DRAFT RA COMPLETION REPORT	0 days	Sun 4/6/14	Sun 4/6/14	0%	898	A/E,NAVY
903	DRAFT RA COMPLETION REPORT	0 days	Sun 5/25/14	Sun 5/25/14	0%	902	A/E,NAVY
907	DRAFT FINAL RA COMPLETION REPORT	0 days	Sat 9/6/14	Sat 9/6/14	0%	906	A/E,NAVY
910	FINAL RA COMPLETION REPORT	0 days	Sat 10/11/14	Sat 10/11/14	0%	909	A/E,NAVY
911	**SEDIMENT REMEDIAL ACTION**	**364 days**	**Mon 10/14/13**	**Sun 10/12/14**	**0%**		
914	Start of Construction	0 days	Fri 11/22/13	Fri 11/22/13	0%	913	A/E,NAVY
916	Remedy In Place	0 days	Thu 2/6/14	Thu 2/6/14	0%	915	A/E,NAVY
918	INTERNAL DRAFT RA COMPLETION REPORT	0 days	Mon 4/7/14	Mon 4/7/14	0%	917	A/E,NAVY
922	DRAFT RA COMPLETION REPORT	0 days	Mon 5/26/14	Mon 5/26/14	0%	921	A/E,NAVY
926	DRAFT FINAL RA COMPLETION REPORT	0 days	Sun 9/7/14	Sun 9/7/14	0%	925	A/E,NAVY
929	FINAL RA COMPLETION REPORT	0 days	Sun 10/12/14	Sun 10/12/14	0%	928	A/E,NAVY
930	**LONG-TERM MANAGEMENT (SO, GW, and TR SD)**	**736 days**	**Thu 2/20/14**	**Thu 2/25/16**	**0%**		
931	**O&M**	**736 days**	**Thu 2/20/14**	**Thu 2/25/16**	**0%**		
933	O&M MANUAL UPDATE NO. 4	0 days	Thu 3/20/14	Thu 3/20/14	0%	932	A/E,NAVY



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Task | Milestone | Rolled Up Task | Rolled Up Progress | Project Summary | Rolled Up Split | Deadline
Progress | Summary | Rolled Up Milestone | External Tasks | Split | External Milestone

2011 SMP SCHEDULE - MILESTONES
NSB-NLON, GROTON, CONNECTICUT

ID	Task Name	Duration	Start	Finish	% Complete	Predecessors	Resource Names	Gantt
935	YEAR 1 O&M/LUC INSPECTION REPORT	0 days	Wed 2/25/15	Wed 2/25/15	0%	934	A/E,NAVY	2/25
937	YEAR 2 O&M/LUC INSPECTION REPORT	0 days	Thu 2/25/16	Thu 2/25/16	0%	936	A/E,NAVY	2/25

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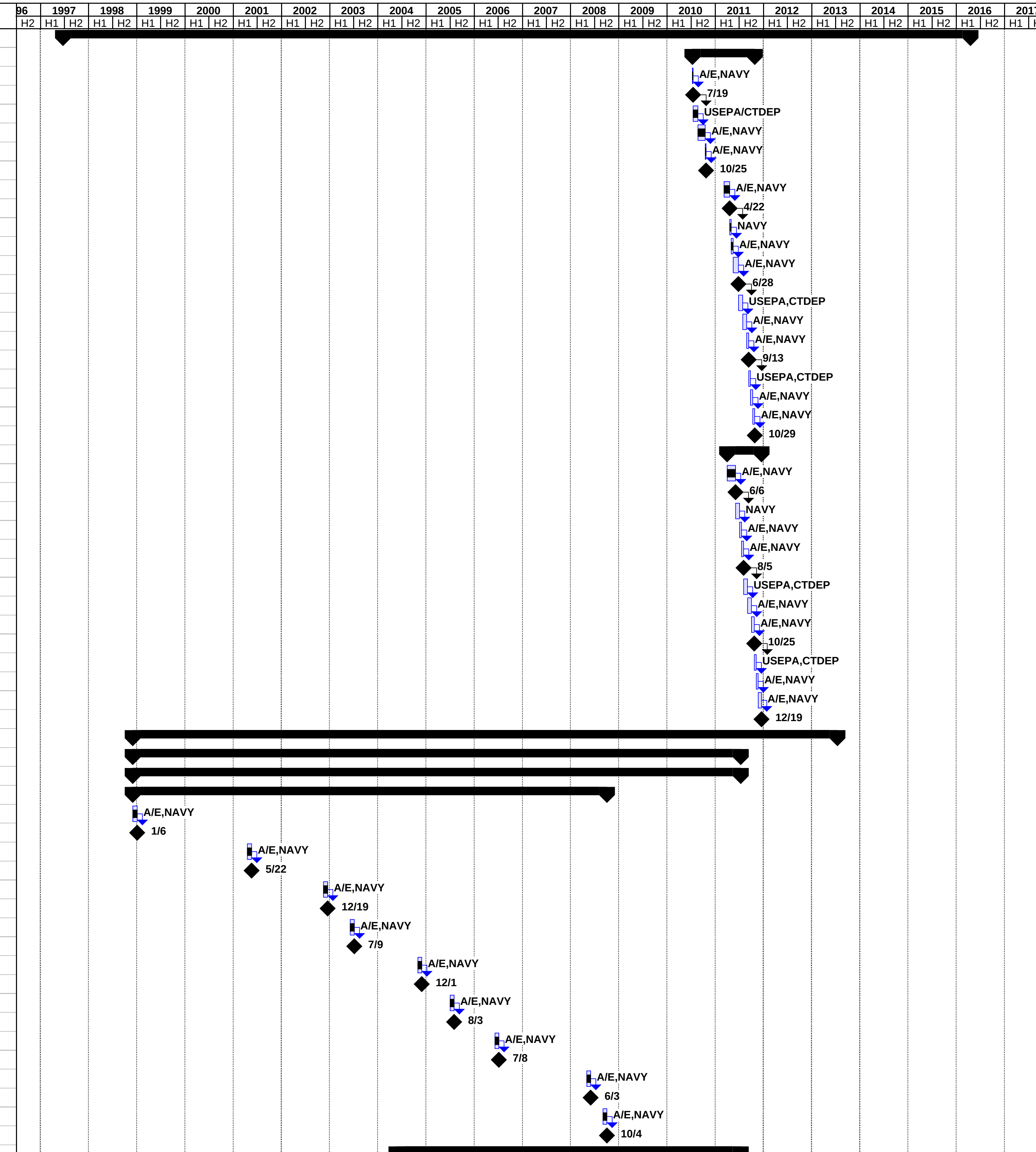
Task | Progress | Milestone | Summary | Rolled Up Task | Rolled Up Milestone | Rolled Up Progress | External Tasks | Project Summary | Split | Rolled Up Split | External Milestone | Deadline

DETAILED SCHEDULE

2011 SMP SCHEDULE
NSB-NLON, GROTON, CONNECTICUT

ID		Task Name	Duration	Start	Finish	% Complete	Predecessors	Resource Names
1		**NSB-NLON IRP**	**6876 days**	**Tue 6/24/97**	**Wed 4/20/16**	**55%**		
2		**ANNUAL SITE MANAGEMENT PLAN UPDATE**	**472 days**	**Thu 7/15/10**	**Sat 10/29/11**	**51%**		
3	✓	Draft 2010 SMP	5 days	Thu 7/15/10	Mon 7/19/10	100%		A/E,NAVY
4	✓	DRAFT 2010 SMP	0 days	Mon 7/19/10	Mon 7/19/10	100%	3	A/E,NAVY
5	✓	Regulator Review	37 days	Tue 7/20/10	Wed 8/25/10	100%	4	USEPA/CTDEP
6	✓	Resolution of Comments	55 days	Thu 8/26/10	Tue 10/19/10	100%	5	A/E,NAVY
7	✓	Final 2010 SMP	6 days	Wed 10/20/10	Mon 10/25/10	100%	6	A/E,NAVY
8	✓	FINAL 2010 SMP	0 days	Mon 10/25/10	Mon 10/25/10	100%	7	A/E,NAVY
9	✓	Rough Draft 2011 SMP	43 days	Fri 3/11/11	Fri 4/22/11	100%		A/E,NAVY
10	✓	ROUGH DRAFT 2011 SMP	0 days	Fri 4/22/11	Fri 4/22/11	100%	9	A/E,NAVY
11	✓	Navy Review	12 days	Sat 4/23/11	Wed 5/4/11	100%	10	NAVY
12	✓	Resolution of Comments	14 days	Thu 5/5/11	Wed 5/18/11	100%	11	A/E,NAVY
13		Draft 2011 SMP	41 days	Thu 5/19/11	Tue 6/28/11	0%	12	A/E,NAVY
14		DRAFT 2011 SMP	0 days	Tue 6/28/11	Tue 6/28/11	0%	13	A/E,NAVY
15		Regulator Review	32 days	Wed 6/29/11	Sat 7/30/11	0%	14	USEPA,CTDEP
16		Resolution of Comments	30 days	Sun 7/31/11	Mon 8/29/11	0%	15	A/E,NAVY
17		Draft Final 2011 SMP	15 days	Tue 8/30/11	Tue 9/13/11	0%	16	A/E,NAVY
18		DRAFT FINAL 2011 SMP	0 days	Tue 9/13/11	Tue 9/13/11	0%	17	A/E,NAVY
19		Regulator Concurrence	14 days	Wed 9/14/11	Tue 9/27/11	0%	18	USEPA,CTDEP
20		Resolution of Issues	17 days	Wed 9/28/11	Fri 10/14/11	0%	19	A/E,NAVY
21		Final 2011 SMP	15 days	Sat 10/15/11	Sat 10/29/11	0%	20	A/E,NAVY
22		FINAL 2011 SMP	0 days	Sat 10/29/11	Sat 10/29/11	0%	21	A/E,NAVY
23		**THIRD 5-YEAR REVIEW REPORT**	**260 days**	**Mon 4/4/11**	**Mon 12/19/11**	**25%**		
24	✓	Rough Draft Third 5-Year Review Report	64 days	Mon 4/4/11	Mon 6/6/11	100%		A/E,NAVY
25	✓	ROUGH DRAFT THIRD 5-YEAR REVIEW REPORT	0 days	Mon 6/6/11	Mon 6/6/11	100%	24	A/E,NAVY
26		Navy Review	30 days	Tue 6/7/11	Wed 7/6/11	0%	25	NAVY
27		Resolution of Comments	15 days	Thu 7/7/11	Thu 7/21/11	0%	26	A/E,NAVY
28		Draft Third 5-Year Review Report	15 days	Fri 7/22/11	Fri 8/5/11	0%	27	A/E,NAVY
29		DRAFT THIRD 5-YEAR REVIEW REPORT	0 days	Fri 8/5/11	Fri 8/5/11	0%	28	A/E,NAVY
30		Regulator Review	30 days	Sat 8/6/11	Sun 9/4/11	0%	29	USEPA,CTDEP
31		Resolution of Comments	30 days	Mon 9/5/11	Tue 10/4/11	0%	30	A/E,NAVY
32		Draft Final Third 5-Year Review Report	21 days	Wed 10/5/11	Tue 10/25/11	0%	31	A/E,NAVY
33		DRAFT FINAL THIRD 5-YEAR REVIEW REPORT	0 days	Tue 10/25/11	Tue 10/25/11	0%	32	A/E,NAVY
34		Regulator Concurrence	15 days	Wed 10/26/11	Wed 11/9/11	0%	33	USEPA,CTDEP
35		Resolution of Issues	15 days	Thu 11/10/11	Thu 11/24/11	0%	34	A/E,NAVY
36		Final Third 5-Year Review Report	25 days	Fri 11/25/11	Mon 12/19/11	0%	35	A/E,NAVY
37		FINAL THIRD 5-YEAR REVIEW REPORT	0 days	Mon 12/19/11	Mon 12/19/11	0%	36	A/E,NAVY
38		**SITE 2 - AREA A LANDFILL (A) AND WETLAND (B)**	**5340 days**	**Fri 12/4/98**	**Wed 7/17/13**	**59%**		
39		**SITE 2A - AREA A LANDFILL (Soil - OU1)**	**4607 days**	**Fri 12/4/98**	**Fri 7/15/11**	**51%**		
40		**LONG-TERM MANAGEMENT**	**4607 days**	**Fri 12/4/98**	**Fri 7/15/11**	**51%**		
41	✓	**GROUNDWATER MONITORING**	**3593 days**	**Fri 12/4/98**	**Sat 10/4/08**	**100%**		
42	✓	Final Groundwater Monitoring Plan	34 days	Fri 12/4/98	Wed 1/6/99	100%		A/E,NAVY
43	✓	FINAL GROUNDWATER MONITORING PLAN	0 days	Wed 1/6/99	Wed 1/6/99	100%	42	A/E,NAVY
44	✓	Year 1 Final GMR	33 days	Fri 4/20/01	Tue 5/22/01	100%		A/E,NAVY
45	✓	YEAR 1 FINAL GMR	0 days	Tue 5/22/01	Tue 5/22/01	100%	44	A/E,NAVY
46	✓	Year 2 Final GMR	32 days	Mon 11/18/02	Thu 12/19/02	100%		A/E,NAVY
47	✓	YEAR 2 FINAL GMR	0 days	Thu 12/19/02	Thu 12/19/02	100%	46	A/E,NAVY
48	✓	Year 3 Final GMR	31 days	Mon 6/9/03	Wed 7/9/03	100%		A/E,NAVY
49	✓	YEAR 3 FINAL GMR	0 days	Wed 7/9/03	Wed 7/9/03	100%	48	A/E,NAVY
50	✓	Year 4 Final GMR	30 days	Tue 11/2/04	Wed 12/1/04	100%		A/E,NAVY
51	✓	YEAR 4 FINAL GMR	0 days	Wed 12/1/04	Wed 12/1/04	100%	50	A/E,NAVY
52	✓	Year 5 Final GMR	30 days	Tue 7/5/05	Wed 8/3/05	100%		A/E,NAVY
53	✓	YEAR 5 FINAL GMR	0 days	Wed 8/3/05	Wed 8/3/05	100%	52	A/E,NAVY
54	✓	Year 6 Final GMR	30 days	Fri 6/9/06	Sat 7/8/06	100%		A/E,NAVY
55	✓	YEAR 6 FINAL GMR	0 days	Sat 7/8/06	Sat 7/8/06	100%	54	A/E,NAVY
56	✓	Year 7 Final GMR	30 days	Mon 5/5/08	Tue 6/3/08	100%		A/E,NAVY
57	✓	YEAR 7 FINAL GMR	0 days	Tue 6/3/08	Tue 6/3/08	100%	56	A/E,NAVY
58	✓	Year 8 Final GMR	30 days	Fri 9/5/08	Sat 10/4/08	100%		A/E,NAVY
59	✓	YEAR 8 FINAL GMR	0 days	Sat 10/4/08	Sat 10/4/08	100%	58	A/E,NAVY
60		**OPERATION AND MAINTENANCE**	**2608 days**	**Tue 5/25/04**	**Fri 7/15/11**	**31%**		



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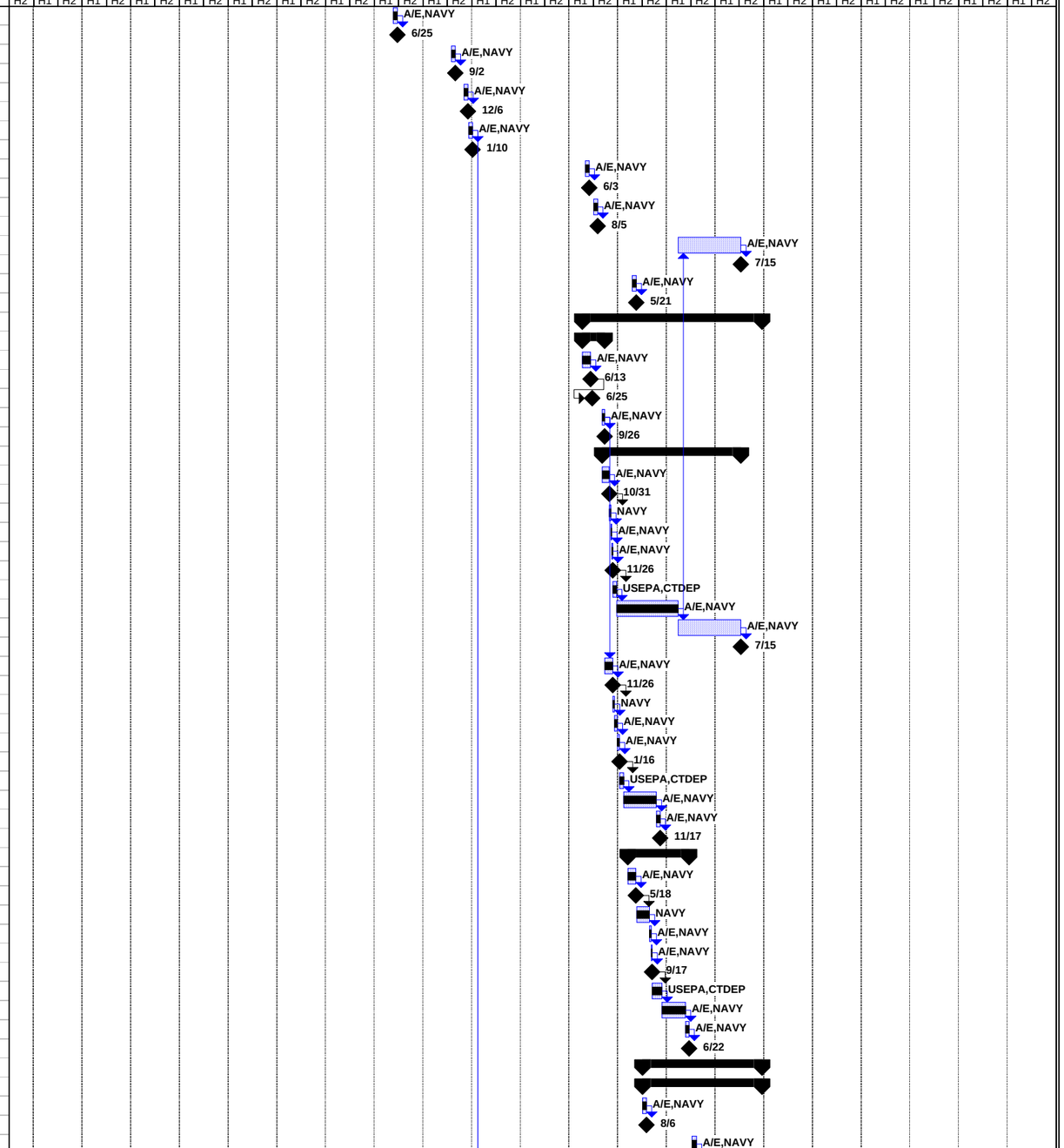
Task		Milestone		Rolled Up Task		Rolled Up Progress		Project Summary	
Progress		Summary		Rolled Up Milestone		External Tasks		Split	

Rolled Up Split; External Milestone; Deadline

2011 SMP SCHEDULE
NSB-NLON, GROTON, CONNECTICUT

Rev. 0 June 2011

ID	Task Name	Duration	Start	Finish	% Complete	Predecessors	Resource Names
61	Year 1 O&M Inspection Report	32 days	Tue 5/25/04	Fri 6/25/04	100%		A/E,NAVY
62	YEAR 1 O&M INSPECTION REPORT	0 days	Fri 6/25/04	Fri 6/25/04	100%	61	A/E,NAVY
63	Year 2 O&M Inspection Report	30 days	Thu 8/4/05	Fri 9/2/05	100%		A/E,NAVY
64	YEAR 2 O&M INSPECTION REPORT	0 days	Fri 9/2/05	Fri 9/2/05	100%	63	A/E,NAVY
65	Year 3 O&M Inspection Report	30 days	Mon 11/7/05	Tue 12/6/05	100%		A/E,NAVY
66	YEAR 3 O&M INSPECTION REPORT	0 days	Tue 12/6/05	Tue 12/6/05	100%	65	A/E,NAVY
67	O&M Manual Update No. 1	30 days	Mon 12/12/05	Tue 1/10/06	100%		A/E,NAVY
68	O&M MANUAL UPDATE NO. 1	0 days	Tue 1/10/06	Tue 1/10/06	100%	67	A/E,NAVY
69	Year 4 O&M Inspection Report	30 days	Mon 5/5/08	Tue 6/3/08	100%		A/E,NAVY
70	YEAR 4 O&M INSPECTION REPORT	0 days	Tue 6/3/08	Tue 6/3/08	100%	69	A/E,NAVY
71	Year 5 O&M/LUC Inspection Report	30 days	Mon 7/7/08	Tue 8/5/08	100%		A/E,NAVY
72	YEAR 5 O&M/LUC INSPECTION REPORT	0 days	Tue 8/5/08	Tue 8/5/08	100%	71	A/E,NAVY
73	O&M Manual Update No. 2	471 days	Thu 4/1/10	Fri 7/15/11	0%	92	A/E,NAVY
74	O&M MANUAL UPDATE NO. 2	0 days	Fri 7/15/11	Fri 7/15/11	0%	73	A/E,NAVY
75	Year 6 O&M/LUC Inspection Report	30 days	Wed 4/22/09	Thu 5/21/09	100%		A/E,NAVY
76	YEAR 6 O&M/LUC INSPECTION REPORT	0 days	Thu 5/21/09	Thu 5/21/09	100%	75	A/E,NAVY
77	**SITE 2A - AREA A LANDFILL (Groundwater - OU9)**	**1348 days**	**Sun 4/13/08**	**Wed 12/21/11**	**76%**		
78	**PROPOSED PLAN/ROD**	**167 days**	**Sun 4/13/08**	**Fri 9/26/08**	**100%**		
79	Final Proposed Plan	62 days	Sun 4/13/08	Fri 6/13/08	100%		A/E,NAVY
80	FINAL PROPOSED PLAN	0 days	Fri 6/13/08	Fri 6/13/08	100%	79	A/E,NAVY
81	PUBLIC MEETING	0 days	Wed 6/25/08	Wed 6/25/08	100%	80FS+12 days	PUBLIC
82	Final ROD	18 days	Tue 9/9/08	Fri 9/26/08	100%		A/E,NAVY
83	FINAL ROD	0 days	Fri 9/26/08	Fri 9/26/08	100%	82	A/E,NAVY
84	**RD**	**1040 days**	**Tue 9/9/08**	**Fri 7/15/11**	**68%**		
85	Rough Draft GMP	53 days	Tue 9/9/08	Fri 10/31/08	100%		A/E,NAVY
86	ROUGH DRAFT GMP	0 days	Fri 10/31/08	Fri 10/31/08	100%	85	A/E,NAVY
87	Navy Review	12 days	Sat 11/1/08	Wed 11/12/08	100%	86	NAVY
88	Resolution of Comments	7 days	Thu 11/13/08	Wed 11/19/08	100%	87	A/E,NAVY
89	Draft GMP	7 days	Thu 11/20/08	Wed 11/26/08	100%	88	A/E,NAVY
90	DRAFT GMP	0 days	Wed 11/26/08	Wed 11/26/08	100%	89	A/E,NAVY
91	Regulator Review	30 days	Thu 11/27/08	Fri 12/26/08	100%	90	USEPA,CTDEP
92	Resolution of Comments	460 days	Sat 12/27/08	Wed 3/31/10	100%	91	A/E,NAVY
93	Final GMP	471 days	Thu 4/1/10	Fri 7/15/11	0%	92	A/E,NAVY
94	FINAL GMP	0 days	Fri 7/15/11	Fri 7/15/11	0%	93	A/E,NAVY
95	Rough Draft LUC RD	61 days	Sat 9/27/08	Wed 11/26/08	100%	82	A/E,NAVY
96	ROUGH DRAFT LUC RD	0 days	Wed 11/26/08	Wed 11/26/08	100%	95	A/E,NAVY
97	Navy Review	14 days	Thu 11/27/08	Wed 12/10/08	100%	96	NAVY
98	Resolution of Comments	21 days	Thu 12/11/08	Wed 12/31/08	100%	97	A/E,NAVY
99	Draft LUC RD	16 days	Thu 1/1/09	Fri 1/16/09	100%	98	A/E,NAVY
100	DRAFT LUC RD	0 days	Fri 1/16/09	Fri 1/16/09	100%	99	A/E,NAVY
101	Regulator Review	31 days	Sat 1/17/09	Mon 2/16/09	100%	100	USEPA,CTDEP
102	Resolution of Comments	245 days	Tue 2/17/09	Mon 10/19/09	100%	101	A/E,NAVY
103	Final LUC RD	29 days	Tue 10/20/09	Tue 11/17/09	100%	102	A/E,NAVY
104	FINAL LUC RD	0 days	Tue 11/17/09	Tue 11/17/09	100%	103	A/E,NAVY
105	**RA**	**460 days**	**Fri 3/20/09**	**Tue 6/22/10**	**100%**		
106	Rough Draft RA Completion Report	60 days	Fri 3/20/09	Mon 5/18/09	100%		A/E,NAVY
107	ROUGH DRAFT RA COMPLETION REPORT	0 days	Mon 5/18/09	Mon 5/18/09	100%	106	A/E,NAVY
108	Navy Review	95 days	Tue 5/26/09	Fri 8/28/09	100%	107	NAVY
109	Resolution of Comments	14 days	Sat 8/29/09	Fri 9/11/09	100%	108	A/E,NAVY
110	Draft RA Completion Report	6 days	Sat 9/12/09	Thu 9/17/09	100%	109	A/E,NAVY
111	DRAFT RA COMPLETION REPORT	0 days	Thu 9/17/09	Thu 9/17/09	100%	110	A/E,NAVY
112	Regulator Review	74 days	Fri 9/18/09	Mon 11/30/09	100%	111	USEPA,CTDEP
113	Resolution of Comments	177 days	Tue 12/1/09	Wed 5/26/10	100%	112	A/E,NAVY
114	Final RA Completion Report	27 days	Thu 5/27/10	Tue 6/22/10	100%	113	A/E,NAVY
115	FINAL RA COMPLETION REPORT	0 days	Tue 6/22/10	Tue 6/22/10	100%	114	A/E,NAVY
116	**LONG-TERM MANAGEMENT**	**897 days**	**Wed 7/8/09**	**Wed 12/21/11**	**72%**		
117	**GROUNDWATER MONITORING**	**897 days**	**Wed 7/8/09**	**Wed 12/21/11**	**76%**		
118	Year 9 Final GMR	30 days	Wed 7/8/09	Thu 8/6/09	100%		A/E,NAVY
119	YEAR 9 FINAL GMR	0 days	Thu 8/6/09	Thu 8/6/09	100%	118	A/E,NAVY
120	Year 10 Final GMR	34 days	Wed 7/14/10	Mon 8/16/10	100%		A/E,NAVY



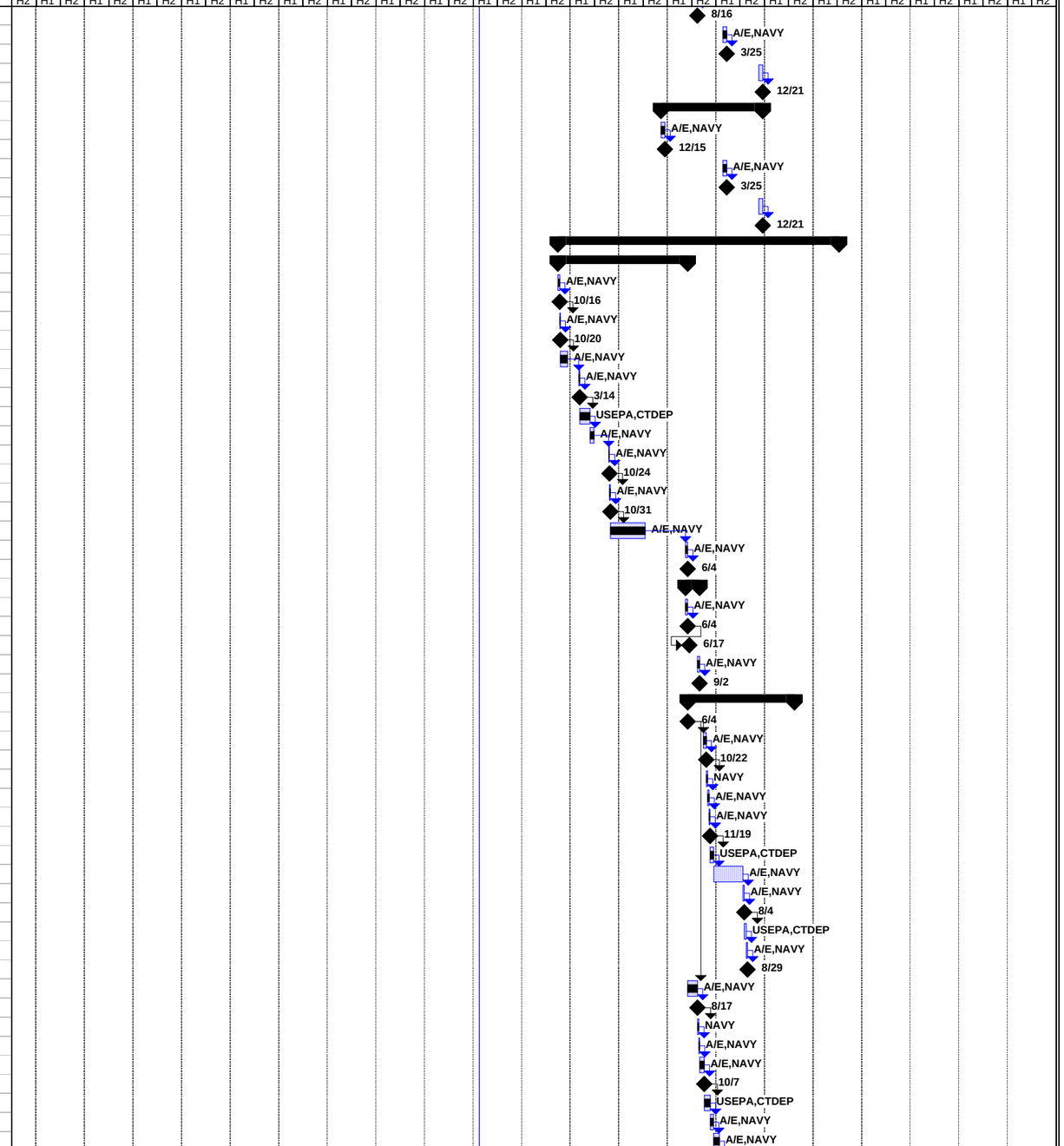
Project: SMP_2011Rev0_062311
Date: Thu 6/23/11

Task | Milestone | Rolled Up Task | Rolled Up Progress | Project Summary | Rolled Up Split | Deadline
Progress | Summary | Rolled Up Milestone | External Tasks | Split | External Milestone

2011 SMP SCHEDULE
NSB-NLON, GROTON, CONNECTICUT

Rev. 0 June 2011

ID	Task Name	Duration	Start	Finish	% Complete	Predecessors	Resource Names
121	YEAR 10 FINAL GMR	0 days	Mon 8/16/10	Mon 8/16/10	100%	120	A/E,NAVY
122	Year 11 Final GMR	30 days	Thu 2/24/11	Fri 3/25/11	100%		A/E,NAVY
123	YEAR 11 FINAL GMR	0 days	Fri 3/25/11	Fri 3/25/11	100%	122	A/E,NAVY
124	Year 12 Final GMR	30 days	Tue 11/22/11	Wed 12/21/11	0%		
125	YEAR 12 FINAL GMR (2011)	0 days	Wed 12/21/11	Wed 12/21/11	0%	124	
126	**OPERATION AND MAINTENANCE**	**766 days**	**Mon 11/16/09**	**Wed 12/21/11**	**67%**		
127	Year 7 O&M/LUC Inspection Report	30 days	Mon 11/16/09	Tue 12/15/09	100%		A/E,NAVY
128	YEAR 7 O&M/LUC INSPECTION REPORT	0 days	Tue 12/15/09	Tue 12/15/09	100%	127	A/E,NAVY
129	Year 8 O&M/LUC Inspection Report	30 days	Thu 2/24/11	Fri 3/25/11	100%		A/E,NAVY
130	YEAR 8 O&M/LUC INSPECTION REPORT	0 days	Fri 3/25/11	Fri 3/25/11	100%	129	A/E,NAVY
131	Year 9 O&M/LUC Inpection Report	30 days	Tue 11/22/11	Wed 12/21/11	0%		
132	YEAR 9 O&M/LUC INSPECTION REPORT (2011)	0 days	Wed 12/21/11	Wed 12/21/11	0%	131	
133	**SITE 2B - AREA A WETLAND (Sediment - OU12)**	**2115 days**	**Wed 10/3/07**	**Wed 7/17/13**	**45%**		
134	**RI/FS**	**976 days**	**Wed 10/3/07**	**Fri 6/4/10**	**100%**		
135	Final Phase III Work Plan	14 days	Wed 10/3/07	Tue 10/16/07	100%		A/E,NAVY
136	FINAL PHASE III WORK PLAN	0 days	Tue 10/16/07	Tue 10/16/07	100%	135	A/E,NAVY
137	Phase III Field Work	4 days	Wed 10/17/07	Sat 10/20/07	100%	136	A/E,NAVY
138	PHASE III FIELD WORK	0 days	Sat 10/20/07	Sat 10/20/07	100%	137	A/E,NAVY
139	Data Analysis and Evaluation	55 days	Sun 10/21/07	Fri 12/14/07	100%	138	A/E,NAVY
140	Draft Phase III ERA	7 days	Sat 3/8/08	Fri 3/14/08	100%	139	A/E,NAVY
141	DRAFT PHASE III ERA	0 days	Fri 3/14/08	Fri 3/14/08	100%	140	A/E,NAVY
142	Regulator Review	77 days	Sat 3/15/08	Fri 5/30/08	100%	141	USEPA,CTDEP
143	Resolution of Comments	31 days	Sat 5/31/08	Mon 6/30/08	100%	142	A/E,NAVY
144	Final Phase IV Work Plan	6 days	Sun 10/19/08	Fri 10/24/08	100%	143	A/E,NAVY
145	FINAL PHASE IV WORK PLAN	0 days	Fri 10/24/08	Fri 10/24/08	100%	144	A/E,NAVY
146	Phase IV Field Work	7 days	Sat 10/25/08	Fri 10/31/08	100%	145	A/E,NAVY
147	PHASE IV FIELD WORK	0 days	Fri 10/31/08	Fri 10/31/08	100%	146	A/E,NAVY
148	Data Analysis and Evaluation	262 days	Sat 11/1/08	Mon 7/20/09	100%	147	A/E,NAVY
149	Final RI Update/FS Report	16 days	Thu 5/20/10	Fri 6/4/10	100%	148	A/E,NAVY
150	FINAL RI UPDATE/FS REPORT	0 days	Fri 6/4/10	Fri 6/4/10	100%	149	A/E,NAVY
151	**PROPOSED PLAN/ROD**	**106 days**	**Thu 5/20/10**	**Thu 9/2/10**	**100%**		
152	Final Proposed Plan	16 days	Thu 5/20/10	Fri 6/4/10	100%		A/E,NAVY
153	FINAL PROPOSED PLAN	0 days	Fri 6/4/10	Fri 6/4/10	100%	152	A/E,NAVY
154	PUBLIC MEETING	0 days	Thu 6/17/10	Thu 6/17/10	100%	153FS+13 days	PUBLIC
155	Final ROD	17 days	Tue 8/17/10	Thu 9/2/10	100%		A/E,NAVY
156	FINAL ROD	0 days	Thu 9/2/10	Thu 9/2/10	100%	155	A/E,NAVY
157	**RD**	**803 days**	**Fri 6/4/10**	**Wed 8/15/12**	**35%**		
158	Award RD	0 days	Fri 6/4/10	Fri 6/4/10	100%		NAVY
159	Internal Draft LUC RD	22 days	Fri 10/1/10	Fri 10/22/10	100%	158FS+118 days	A/E,NAVY
160	INTERNAL DRAFT LUC RD	0 days	Fri 10/22/10	Fri 10/22/10	100%	159	A/E,NAVY
161	Navy Review	10 days	Sat 10/23/10	Mon 11/1/10	100%	160	NAVY
162	Resolution of Comments	11 days	Tue 11/2/10	Fri 11/12/10	100%	161	A/E,NAVY
163	Draft LUC RD	7 days	Sat 11/13/10	Fri 11/19/10	100%	162	A/E,NAVY
164	DRAFT LUC RD	0 days	Fri 11/19/10	Fri 11/19/10	100%	163	A/E,NAVY
165	Regulator Review	28 days	Sat 11/20/10	Fri 12/17/10	100%	164	USEPA,CTDEP
166	Resolution of Comments	220 days	Sat 12/18/10	Mon 7/25/11	0%	165	A/E,NAVY
167	Draft Final LUC RD	10 days	Tue 7/26/11	Thu 8/4/11	0%	166	A/E,NAVY
168	DRAFT FINAL LUC RD	0 days	Thu 8/4/11	Thu 8/4/11	0%	167	A/E,NAVY
169	Regulator Concurrence	15 days	Fri 8/5/11	Fri 8/19/11	0%	168	USEPA,CTDEP
170	Final LUC RD	10 days	Sat 8/20/11	Mon 8/29/11	0%	169	A/E,NAVY
171	FINAL LUC RD	0 days	Mon 8/29/11	Mon 8/29/11	0%	170	A/E,NAVY
172	Internal Draft Sediment PDI Work Plan	74 days	Sat 6/5/10	Tue 8/17/10	100%	158	A/E,NAVY
173	INTERNAL DRAFT SEDIMENT PDI WORK PLAN	0 days	Tue 8/17/10	Tue 8/17/10	100%	172	A/E,NAVY
174	Navy Review	10 days	Wed 8/18/10	Fri 8/27/10	100%	173	NAVY
175	Resolution of Comments	6 days	Sat 8/28/10	Thu 9/2/10	100%	174	A/E,NAVY
176	Draft Sediment PDI Work Plan	35 days	Fri 9/3/10	Thu 10/7/10	100%	175	A/E,NAVY
177	DRAFT SEDIMENT PDI WORK PLAN	0 days	Thu 10/7/10	Thu 10/7/10	100%	176	A/E,NAVY
178	Regulator Review	46 days	Fri 10/8/10	Mon 11/22/10	100%	177	USEPA,CTDEP
179	Resolution of Comments	24 days	Tue 11/23/10	Thu 12/16/10	100%	178	A/E,NAVY
180	Draft Final Sediment PDI Work Plan	43 days	Fri 12/17/10	Fri 1/28/11	100%	179	A/E,NAVY



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Task | Milestone | Rolled Up Task | Rolled Up Progress | Project Summary | Rolled Up Split | Deadline
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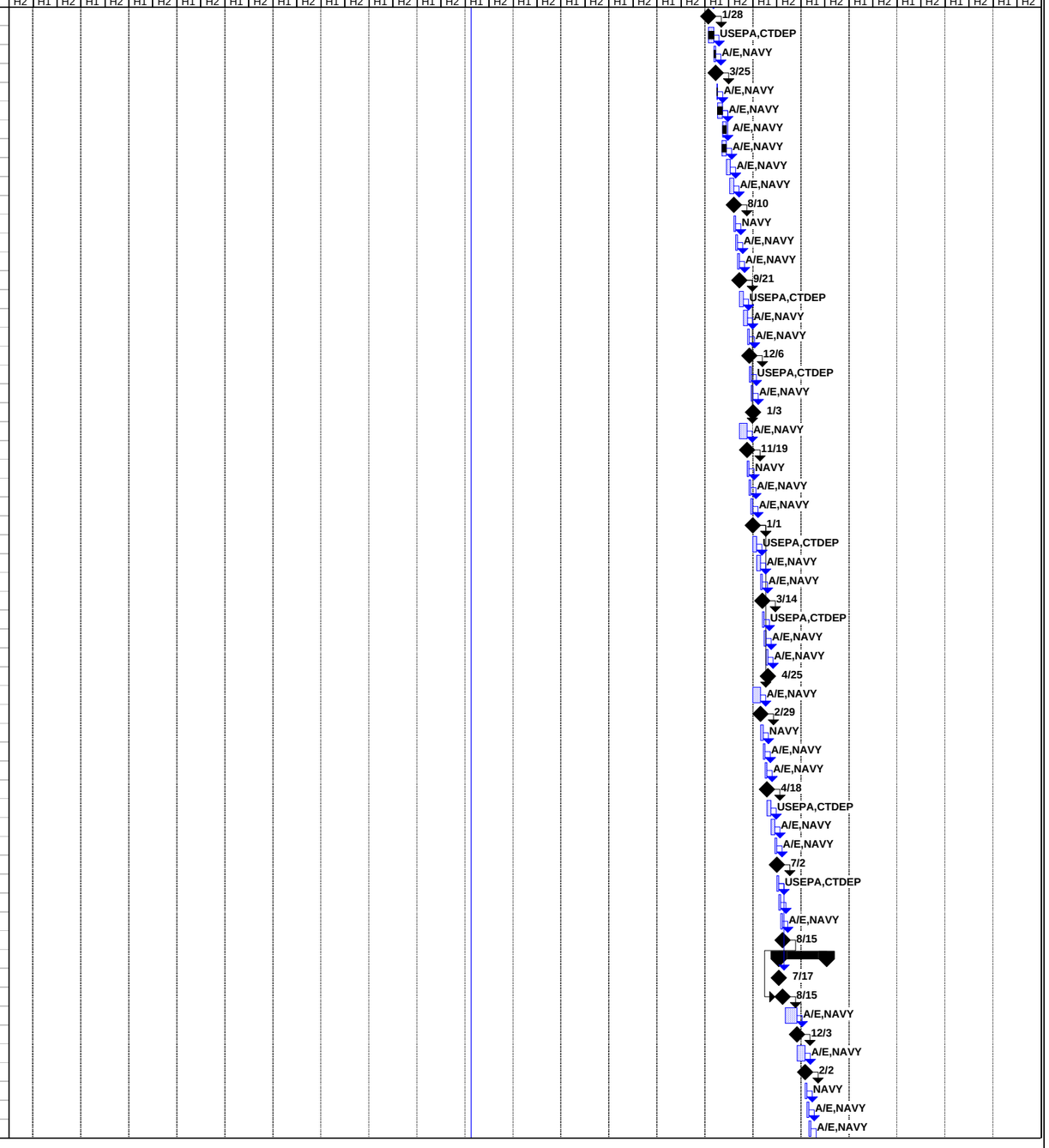
2011 SMP SCHEDULE
NSB-NLON, GROTON, CONNECTICUT

ID	Task Name	Duration	Start	Finish	% Complete	Predecessors	Resource Names
181	DRAFT FINAL SEDIMENT PDI WORK PLAN	0 days	Fri 1/28/11	Fri 1/28/11	100%	180	A/E,NAVY
182	Regulator Concurrence	42 days	Sat 1/29/11	Fri 3/11/11	100%	181	USEPA,CTDEP
183	Final Sediment PDI Work Plan	14 days	Sat 3/12/11	Fri 3/25/11	100%	182	A/E,NAVY
184	FINAL SEDIMENT PDI WORK PLAN	0 days	Fri 3/25/11	Fri 3/25/11	100%	183	A/E,NAVY
185	Field Work - Phase I and II samples	5 days	Mon 4/4/11	Fri 4/8/11	100%	184FS+9 days	A/E,NAVY
186	Laboratory Analysis - Phase I samples	38 days	Sat 4/9/11	Mon 5/16/11	100%	185	A/E,NAVY
187	Data Validation/Team Concensus - Phase I samples	30 days	Tue 5/17/11	Wed 6/15/11	100%	186	A/E,NAVY
188	Laboratory Analysis - Phase II samples	35 days	Thu 5/12/11	Wed 6/15/11	100%	186FS-5 days	A/E,NAVY
189	Data Validation/Team Concensus - Phase II samples	30 days	Thu 6/16/11	Fri 7/15/11	0%	188	A/E,NAVY
190	Internal Draft PDI Completion Report	31 days	Mon 7/11/11	Wed 8/10/11	0%	189FS-5 days	A/E,NAVY
191	INTERNAL DRAFT PDI COMPLETION REPORT	0 days	Wed 8/10/11	Wed 8/10/11	0%	190	A/E,NAVY
192	Navy Review	14 days	Thu 8/11/11	Wed 8/24/11	0%	191	NAVY
193	Resolution of Comments	14 days	Thu 8/25/11	Wed 9/7/11	0%	192	A/E,NAVY
194	Draft PDI Completion Report	14 days	Thu 9/8/11	Wed 9/21/11	0%	193	A/E,NAVY
195	DRAFT PDI COMPLETION REPORT	0 days	Wed 9/21/11	Wed 9/21/11	0%	194	A/E,NAVY
196	Regulator Review	31 days	Thu 9/22/11	Sat 10/22/11	0%	195	USEPA,CTDEP
197	Resolution of Comments	31 days	Sun 10/23/11	Tue 11/22/11	0%	196	A/E,NAVY
198	Draft Final PDI Completion Report	14 days	Wed 11/23/11	Tue 12/6/11	0%	197	A/E,NAVY
199	DRAFT FINAL PDI COMPLETION REPORT	0 days	Tue 12/6/11	Tue 12/6/11	0%	198	A/E,NAVY
200	Regulator Concurrence	14 days	Wed 12/7/11	Tue 12/20/11	0%	199	USEPA,CTDEP
201	Final PDI Completion Report	14 days	Wed 12/21/11	Tue 1/3/12	0%	200	A/E,NAVY
202	FINAL PDI COMPLETION REPORT	0 days	Tue 1/3/12	Tue 1/3/12	0%	201	A/E,NAVY
203	Internal Draft 30% Design	59 days	Thu 9/22/11	Sat 11/19/11	0%	195	A/E,NAVY
204	INTERNAL DRAFT 30% DESIGN	0 days	Sat 11/19/11	Sat 11/19/11	0%	203	A/E,NAVY
205	Navy Review	14 days	Sun 11/20/11	Sat 12/3/11	0%	204	NAVY
206	Resolution of Comments	14 days	Sun 12/4/11	Sat 12/17/11	0%	205	A/E,NAVY
207	Draft 30% Design	15 days	Sun 12/18/11	Sun 1/1/12	0%	206	A/E,NAVY
208	DRAFT 30% DESIGN	0 days	Sun 1/1/12	Sun 1/1/12	0%	207	A/E,NAVY
209	Regulator Review	30 days	Mon 1/2/12	Tue 1/31/12	0%	208	USEPA,CTDEP
210	Resolution of Comments	29 days	Wed 2/1/12	Wed 2/29/12	0%	209	A/E,NAVY
211	Draft Final 30% Design	14 days	Thu 3/1/12	Wed 3/14/12	0%	210	A/E,NAVY
212	DRAFT FINAL 30% DESIGN	0 days	Wed 3/14/12	Wed 3/14/12	0%	211	A/E,NAVY
213	Regulator Concurrence	14 days	Thu 3/15/12	Wed 3/28/12	0%	212	USEPA,CTDEP
214	Resolution of Issues	14 days	Thu 3/29/12	Wed 4/11/12	0%	213	A/E,NAVY
215	Final 30% Design	14 days	Thu 4/12/12	Wed 4/25/12	0%	214	A/E,NAVY
216	FINAL 30% DESIGN	0 days	Wed 4/25/12	Wed 4/25/12	0%	215	A/E,NAVY
217	Internal Draft RD Work Plan	59 days	Mon 1/2/12	Wed 2/29/12	0%	208	A/E,NAVY
218	INTERNAL DRAFT RD WORK PLAN	0 days	Wed 2/29/12	Wed 2/29/12	0%	217	A/E,NAVY
219	Navy Review	21 days	Thu 3/1/12	Wed 3/21/12	0%	218	NAVY
220	Resolution of Comments	14 days	Thu 3/22/12	Wed 4/4/12	0%	219	A/E,NAVY
221	Draft RD Work Plan	14 days	Thu 4/5/12	Wed 4/18/12	0%	220	A/E,NAVY
222	DRAFT RD WORK PLAN	0 days	Wed 4/18/12	Wed 4/18/12	0%	221	A/E,NAVY
223	Regulator Review	31 days	Thu 4/19/12	Sat 5/19/12	0%	222	USEPA,CTDEP
224	Resolution of Comments	29 days	Sun 5/20/12	Sun 6/17/12	0%	223	A/E,NAVY
225	Draft Final RD Work Plan	15 days	Mon 6/18/12	Mon 7/2/12	0%	224	A/E,NAVY
226	DRAFT FINAL RD WORK PLAN	0 days	Mon 7/2/12	Mon 7/2/12	0%	225	A/E,NAVY
227	Regulator Concurrence	15 days	Tue 7/3/12	Tue 7/17/12	0%	226	USEPA,CTDEP
228	Resolution of Issues	15 days	Wed 7/18/12	Wed 8/1/12	0%	227	
229	Final RD Work Plan	14 days	Thu 8/2/12	Wed 8/15/12	0%	228	A/E,NAVY
230	FINAL RD WORK PLAN	0 days	Wed 8/15/12	Wed 8/15/12	0%	229	A/E,NAVY
231	**RA**	**365 days**	**Tue 7/17/12**	**Wed 7/17/13**	**0%**		
232	Award Construction	0 days	Tue 7/17/12	Tue 7/17/12	0%	227	NAVY
233	Start of Construction	0 days	Wed 8/15/12	Wed 8/15/12	0%	230	A/E,NAVY
234	Construction	90 days	Wed 9/5/12	Mon 12/3/12	0%	233FS+20 days	A/E,NAVY
235	End of Construction	0 days	Mon 12/3/12	Mon 12/3/12	0%	234	A/E,NAVY
236	Internal Draft Completion Report	61 days	Tue 12/4/12	Sat 2/2/13	0%	235	A/E,NAVY
237	INTERNAL DRAFT COMPLETION REPORT	0 days	Sat 2/2/13	Sat 2/2/13	0%	236	A/E,NAVY
238	Navy Review	15 days	Sun 2/3/13	Sun 2/17/13	0%	237	NAVY
239	Resolution of Comments	15 days	Mon 2/18/13	Mon 3/4/13	0%	238	A/E,NAVY
240	Draft Completion Report	15 days	Tue 3/5/13	Tue 3/19/13	0%	239	A/E,NAVY



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Task | Milestone | Rolled Up Task | Rolled Up Progress | Project Summary | Rolled Up Split | Deadline
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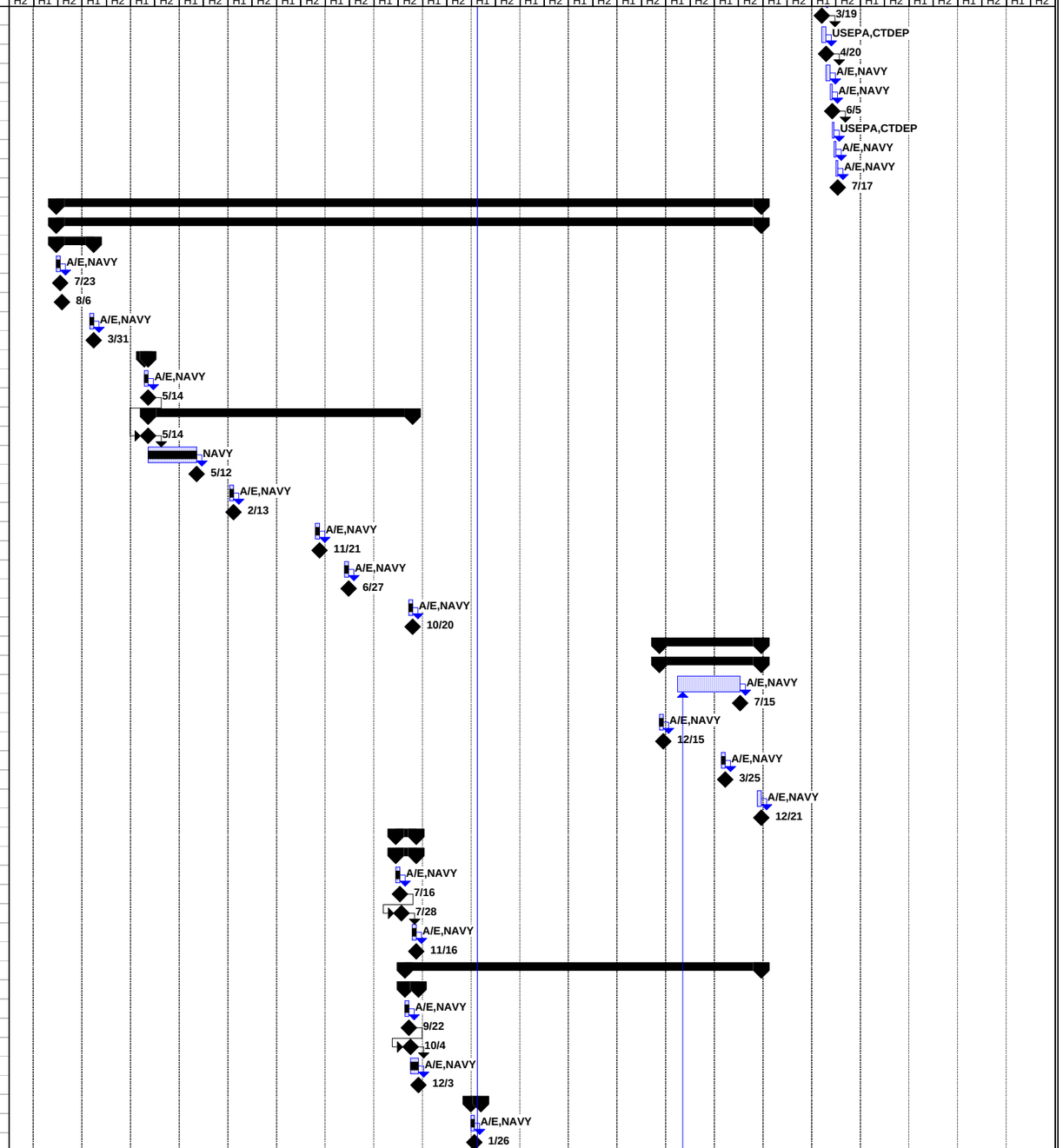
2011 SMP SCHEDULE
NSB-NLON, GROTON, CONNECTICUT

Rev. 0 June 2011

ID	Task Name	Duration	Start	Finish	% Complete	Predecessors	Resource Names
241	DRAFT COMPLETION REPORT	0 days	Tue 3/19/13	Tue 3/19/13	0%	240	A/E,NAVY
242	Regulator Review	32 days	Wed 3/20/13	Sat 4/20/13	0%	241	USEPA,CTDEP
243	Receive Regulator Comments	0 days	Sat 4/20/13	Sat 4/20/13	0%	242	A/E,NAVY
244	Resolution of Comments	31 days	Sun 4/21/13	Tue 5/21/13	0%	243	A/E,NAVY
245	Draft Final Completion Report	15 days	Wed 5/22/13	Wed 6/5/13	0%	244	A/E,NAVY
246	DRAFT FINAL COMPLETION REPORT	0 days	Wed 6/5/13	Wed 6/5/13	0%	245	A/E,NAVY
247	Regulator Concurrence	14 days	Thu 6/6/13	Wed 6/19/13	0%	246	USEPA,CTDEP
248	Resolution of Issues	14 days	Thu 6/20/13	Wed 7/3/13	0%	247	A/E,NAVY
249	Final Completion Report	14 days	Thu 7/4/13	Wed 7/17/13	0%	248	A/E,NAVY
250	FINAL COMPLETION REPORT	0 days	Wed 7/17/13	Wed 7/17/13	0%	249	A/E,NAVY
251	**SITE 3 - AREA A DOWNSTREAM AND OBDA**	**5294 days**	**Tue 6/24/97**	**Wed 12/21/11**	**60%**		
252	**SITE 3 - SOIL AND SEDIMENT (OU3)**	**5294 days**	**Tue 6/24/97**	**Wed 12/21/11**	**56%**		
253	**PROPOSED PLAN/ROD**	**281 days**	**Tue 6/24/97**	**Tue 3/31/98**	**100%**		
254	Final Proposed Plan	30 days	Tue 6/24/97	Wed 7/23/97	100%		A/E,NAVY
255	FINAL PROPOSED PLAN	0 days	Wed 7/23/97	Wed 7/23/97	100%	254	A/E,NAVY
256	Public Meeting	0 days	Wed 8/6/97	Wed 8/6/97	100%		PUBLIC
257	Final ROD	30 days	Mon 3/2/98	Tue 3/31/98	100%		A/E,NAVY
258	FINAL ROD	0 days	Tue 3/31/98	Tue 3/31/98	100%	257	A/E,NAVY
259	**RD**	**29 days**	**Fri 4/16/99**	**Fri 5/14/99**	**100%**		
260	Final RD Work Plan	29 days	Fri 4/16/99	Fri 5/14/99	100%		A/E,NAVY
261	FINAL RD WORK PLAN	0 days	Fri 5/14/99	Fri 5/14/99	100%	260	A/E,NAVY
262	**RA**	**1986 days**	**Fri 5/14/99**	**Wed 10/20/04**	**100%**		
263	Start of Construction	0 days	Fri 5/14/99	Fri 5/14/99	100%	261	NAVY
264	Construction	364 days	Sat 5/15/99	Fri 5/12/00	100%	263	NAVY
265	End of Construction	0 days	Fri 5/12/00	Fri 5/12/00	100%	264	NAVY
266	Final RA Completion Report	30 days	Mon 1/15/01	Tue 2/13/01	100%		A/E,NAVY
267	FINAL RA COMPLETION REPORT	0 days	Tue 2/13/01	Tue 2/13/01	100%	266	A/E,NAVY
268	Year 1 Site Restoration Monitoring	32 days	Mon 10/21/02	Thu 11/21/02	100%		A/E,NAVY
269	YEAR 1 SITE RESTORATION MONITORING	0 days	Thu 11/21/02	Thu 11/21/02	100%	268	A/E,NAVY
270	Year 2 Site Restoration Monitoring	31 days	Wed 5/28/03	Fri 6/27/03	100%		A/E,NAVY
271	YEAR 2 SITE RESTORATION MONITORING	0 days	Fri 6/27/03	Fri 6/27/03	100%	270	A/E,NAVY
272	Year 3 Site Restoration Monitoring	30 days	Tue 9/21/04	Wed 10/20/04	100%		A/E,NAVY
273	YEAR 3 SITE RESTORATION MONITORING	0 days	Wed 10/20/04	Wed 10/20/04	100%	272	A/E,NAVY
274	**LONG-TERM MANAGEMENT**	**766 days**	**Mon 11/16/09**	**Wed 12/21/11**	**11%**		
275	**OPERATION AND MAINTENANCE**	**766 days**	**Mon 11/16/09**	**Wed 12/21/11**	**11%**		
276	O&M Manual Update No. 2	471 days	Thu 4/1/10	Fri 7/15/11	0%	322	A/E,NAVY
277	O&M MANUAL UPDATE NO. 2	0 days	Fri 7/15/11	Fri 7/15/11	0%	276	A/E,NAVY
278	Year 1 O&M/LUC Inspection Report	30 days	Mon 11/16/09	Tue 12/15/09	100%		A/E,NAVY
279	YEAR 1 O&M/LUC INSPECTION REPORT	0 days	Tue 12/15/09	Tue 12/15/09	100%	278	A/E,NAVY
280	Year 2 O&M/LUC Inspection Report	30 days	Thu 2/24/11	Fri 3/25/11	100%		A/E,NAVY
281	YEAR 2 O&M/LUC INSPECTION REPORT	0 days	Fri 3/25/11	Fri 3/25/11	100%	280	A/E,NAVY
282	Year 3 O&M/LUC Inspection Report	30 days	Tue 11/22/11	Wed 12/21/11	0%		A/E,NAVY
283	YEAR 3 O&M/LUC INSPECTION REPORT (2011)	0 days	Wed 12/21/11	Wed 12/21/11	0%	282	A/E,NAVY
284	**SITE 3 - NSA SOIL (OU3)**	**154 days**	**Wed 6/16/04**	**Tue 11/16/04**	**100%**		
285	**PROPOSED PLAN/ROD**	**154 days**	**Wed 6/16/04**	**Tue 11/16/04**	**100%**		
286	Final Proposed Plan	31 days	Wed 6/16/04	Fri 7/16/04	100%		A/E,NAVY
287	FINAL PROPOSED PLAN	0 days	Fri 7/16/04	Fri 7/16/04	100%	286	A/E,NAVY
288	Public Meeting	0 days	Wed 7/28/04	Wed 7/28/04	100%	287FS+12 days	PUBLIC
289	Final ROD	30 days	Mon 10/18/04	Tue 11/16/04	100%	288FS+45 days	A/E,NAVY
290	FINAL ROD	0 days	Tue 11/16/04	Tue 11/16/04	100%	289	A/E,NAVY
291	**SITE 3 - GROUNDWATER (OU9)**	**2676 days**	**Tue 8/24/04**	**Wed 12/21/11**	**60%**		
292	**INTERIM PROPOSED PLAN/ROD**	**102 days**	**Tue 8/24/04**	**Fri 12/3/04**	**100%**		
293	Final Interim Proposed Plan	30 days	Tue 8/24/04	Wed 9/22/04	100%		A/E,NAVY
294	FINAL INTERIM PROPOSED PLAN	0 days	Wed 9/22/04	Wed 9/22/04	100%	293	A/E,NAVY
295	PUBLIC MEETING	0 days	Mon 10/4/04	Mon 10/4/04	100%	294FS+12 days	PUBLIC
296	Final Interim ROD	60 days	Tue 10/5/04	Fri 12/3/04	100%	295	A/E,NAVY
297	FINAL INTERIM ROD	0 days	Fri 12/3/04	Fri 12/3/04	100%	296	A/E,NAVY
298	**INTERIM RD**	**75 days**	**Sun 1/1/06**	**Thu 3/16/06**	**100%**		
299	Final GMP	26 days	Sun 1/1/06	Thu 1/26/06	100%		A/E,NAVY
300	FINAL GMP	0 days	Thu 1/26/06	Thu 1/26/06	100%	299	A/E,NAVY



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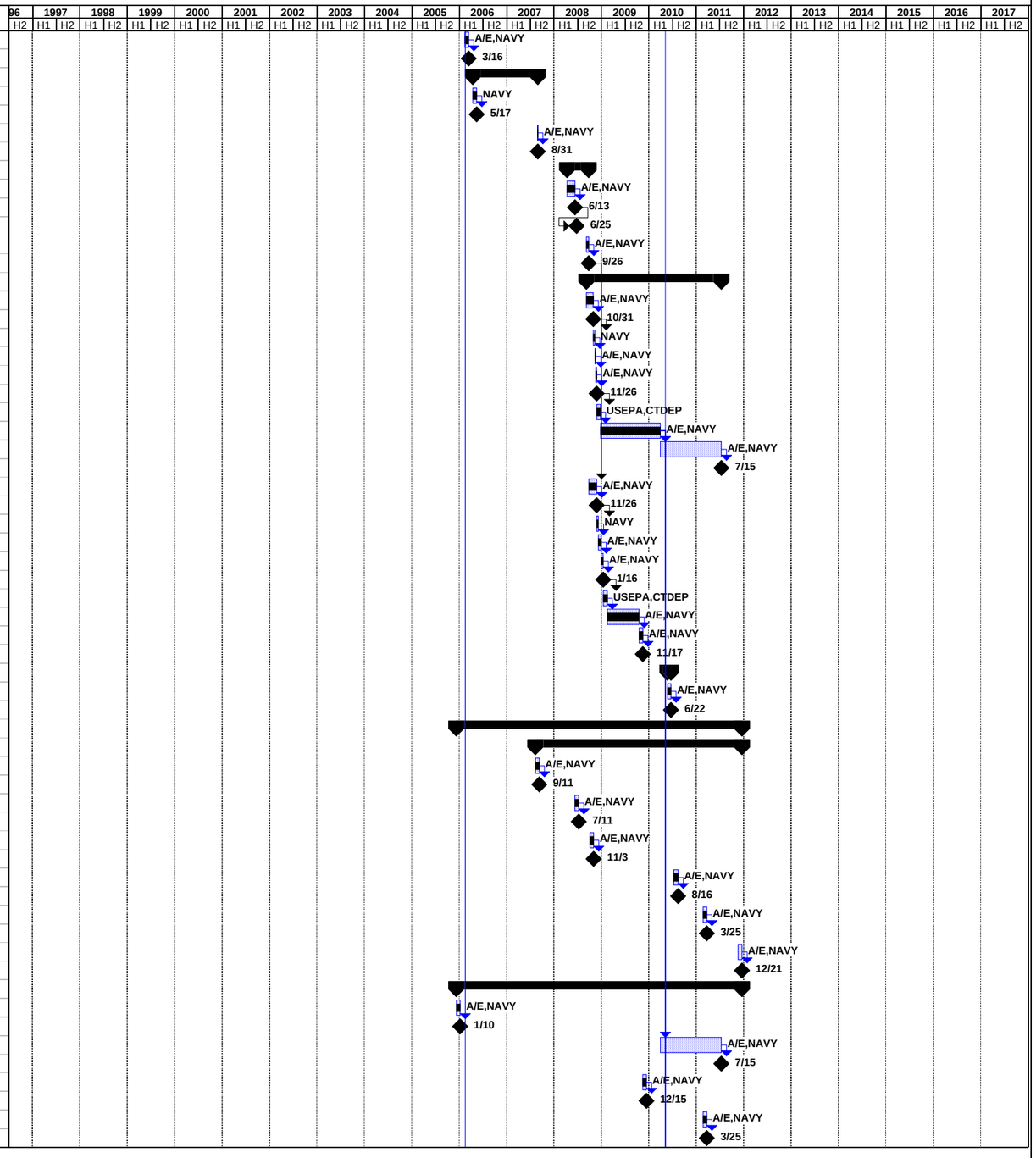
Task | Progress | Milestone | Summary | Rolled Up Task | Rolled Up Milestone | Rolled Up Progress | External Tasks | Project Summary | Split | Rolled Up Split | External Milestone | Deadline

2011 SMP SCHEDULE
NSB-NLON, GROTON, CONNECTICUT

Rev. 0 June 2011

ID	Task Name	Duration	Start	Finish	% Complete	Predecessors	Resource Names
301	Final RD Work Plan	30 days	Wed 2/15/06	Thu 3/16/06	100%		A/E,NAVY
302	FINAL RD WORK PLAN	0 days	Thu 3/16/06	Thu 3/16/06	100%	301	A/E,NAVY
303	**INTERIM RA**	**501 days**	**Tue 4/18/06**	**Fri 8/31/07**	**100%**		
304	Remedial Action	30 days	Tue 4/18/06	Wed 5/17/06	100%		NAVY
305	REMEDIAL ACTION	0 days	Wed 5/17/06	Wed 5/17/06	100%	304	NAVY
306	Final Interim RA Completion Report	2 days	Thu 8/30/07	Fri 8/31/07	100%		A/E,NAVY
307	FINAL RA COMPLETION REPORT	0 days	Fri 8/31/07	Fri 8/31/07	100%	306	A/E,NAVY
308	**FINAL PROPOSED PLAN/ROD**	**167 days**	**Sun 4/13/08**	**Fri 9/26/08**	**100%**		
309	Final Proposed Plan	62 days	Sun 4/13/08	Fri 6/13/08	100%		A/E,NAVY
310	FINAL PROPOSED PLAN	0 days	Fri 6/13/08	Fri 6/13/08	100%	309	A/E,NAVY
311	PUBLIC MEETING	0 days	Wed 6/25/08	Wed 6/25/08	100%	310FS+12 days	PUBLIC
312	Final ROD	18 days	Tue 9/9/08	Fri 9/26/08	100%		A/E,NAVY
313	FINAL ROD	0 days	Fri 9/26/08	Fri 9/26/08	100%	312	A/E,NAVY
314	**FINAL RD**	**1040 days**	**Tue 9/9/08**	**Fri 7/15/11**	**68%**		
315	Rough Draft GMP	53 days	Tue 9/9/08	Fri 10/31/08	100%		A/E,NAVY
316	ROUGH DRAFT GMP	0 days	Fri 10/31/08	Fri 10/31/08	100%	315	A/E,NAVY
317	Navy Review	12 days	Sat 11/1/08	Wed 11/12/08	100%	316	NAVY
318	Resolution of Comments	7 days	Thu 11/13/08	Wed 11/19/08	100%	317	A/E,NAVY
319	Draft GMP	7 days	Thu 11/20/08	Wed 11/26/08	100%	318	A/E,NAVY
320	DRAFT GMP	0 days	Wed 11/26/08	Wed 11/26/08	100%	319	A/E,NAVY
321	Regulator Review	30 days	Thu 11/27/08	Fri 12/26/08	100%	320	USEPA,CTDEP
322	Resolution of Comments	460 days	Sat 12/27/08	Wed 3/31/10	100%	321	A/E,NAVY
323	Final GMP	471 days	Thu 4/1/10	Fri 7/15/11	0%	322	A/E,NAVY
324	FINAL GMP	0 days	Fri 7/15/11	Fri 7/15/11	0%	323	A/E,NAVY
325	Rough Draft LUC RD	61 days	Sat 9/27/08	Wed 11/26/08	100%	313	A/E,NAVY
326	ROUGH DRAFT LUC RD	0 days	Wed 11/26/08	Wed 11/26/08	100%	325	A/E,NAVY
327	Navy Review	14 days	Thu 11/27/08	Wed 12/10/08	100%	326	NAVY
328	Resolution of Comments	21 days	Thu 12/11/08	Wed 12/31/08	100%	327	A/E,NAVY
329	Draft LUC RD	16 days	Thu 1/1/09	Fri 1/16/09	100%	328	A/E,NAVY
330	DRAFT LUC RD	0 days	Fri 1/16/09	Fri 1/16/09	100%	329	A/E,NAVY
331	Regulator Review	31 days	Sat 1/17/09	Mon 2/16/09	100%	330	USEPA,CTDEP
332	Resolution of Comments	245 days	Tue 2/17/09	Mon 10/19/09	100%	331	A/E,NAVY
333	Final LUC RD	29 days	Tue 10/20/09	Tue 11/17/09	100%	332	A/E,NAVY
334	FINAL LUC RD	0 days	Tue 11/17/09	Tue 11/17/09	100%	333	A/E,NAVY
335	**FINAL RA**	**27 days**	**Thu 5/27/10**	**Tue 6/22/10**	**100%**		
336	Final RA Completion Report	27 days	Thu 5/27/10	Tue 6/22/10	100%		A/E,NAVY
337	FINAL RA COMPLETION REPORT	0 days	Tue 6/22/10	Tue 6/22/10	100%	336	A/E,NAVY
338	**LONG-TERM MANAGEMENT**	**2201 days**	**Mon 12/12/05**	**Wed 12/21/11**	**31%**		
339	**GROUNDWATER MONITORING**	**1592 days**	**Mon 8/13/07**	**Wed 12/21/11**	**84%**		
340	Year 1 Final GMR	30 days	Mon 8/13/07	Tue 9/11/07	100%		A/E,NAVY
341	YEAR 1 FINAL GMR	0 days	Tue 9/11/07	Tue 9/11/07	100%	340	A/E,NAVY
342	Year 2 Final GMR	30 days	Thu 6/12/08	Fri 7/11/08	100%		A/E,NAVY
343	YEAR 2 FINAL GMR	0 days	Fri 7/11/08	Fri 7/11/08	100%	342	A/E,NAVY
344	Round 9 Final GMR	29 days	Mon 10/6/08	Mon 11/3/08	100%		A/E,NAVY
345	ROUND 9 FINAL GMR	0 days	Mon 11/3/08	Mon 11/3/08	100%	344	A/E,NAVY
346	Year 4 Final GMR	34 days	Wed 7/14/10	Mon 8/16/10	100%		A/E,NAVY
347	YEAR 4 FINAL GMR	0 days	Mon 8/16/10	Mon 8/16/10	100%	346	A/E,NAVY
348	Year 5 Final GMR	30 days	Thu 2/24/11	Fri 3/25/11	100%		A/E,NAVY
349	YEAR 5 FINAL GMR	0 days	Fri 3/25/11	Fri 3/25/11	100%	348	A/E,NAVY
350	Year 6 Final GMR	30 days	Tue 11/22/11	Wed 12/21/11	0%		A/E,NAVY
351	YEAR 6 FINAL GMR (2011)	0 days	Wed 12/21/11	Wed 12/21/11	0%	350	A/E,NAVY
352	**O&M**	**2201 days**	**Mon 12/12/05**	**Wed 12/21/11**	**15%**		
353	O&M Manual Update No. 1	30 days	Mon 12/12/05	Tue 1/10/06	100%		A/E,NAVY
354	O&M MANUAL UPDATE NO. 1	0 days	Tue 1/10/06	Tue 1/10/06	100%	67	A/E,NAVY
355	O&M Manual Update No. 2	471 days	Thu 4/1/10	Fri 7/15/11	0%	322	A/E,NAVY
356	O&M MANUAL UPDATE No. 2	0 days	Fri 7/15/11	Fri 7/15/11	0%	355	A/E,NAVY
357	Year 1 O&M/LUC Inspection Report	30 days	Mon 11/16/09	Tue 12/15/09	100%		A/E,NAVY
358	YEAR 1 O&M/LUC INSPECTION REPORT	0 days	Tue 12/15/09	Tue 12/15/09	100%	357	A/E,NAVY
359	Year 2 O&M/LUC Inspection Report	30 days	Thu 2/24/11	Fri 3/25/11	100%		A/E,NAVY
360	YEAR 2 O&M/LUC INSPECTION REPORT	0 days	Fri 3/25/11	Fri 3/25/11	100%	359	A/E,NAVY



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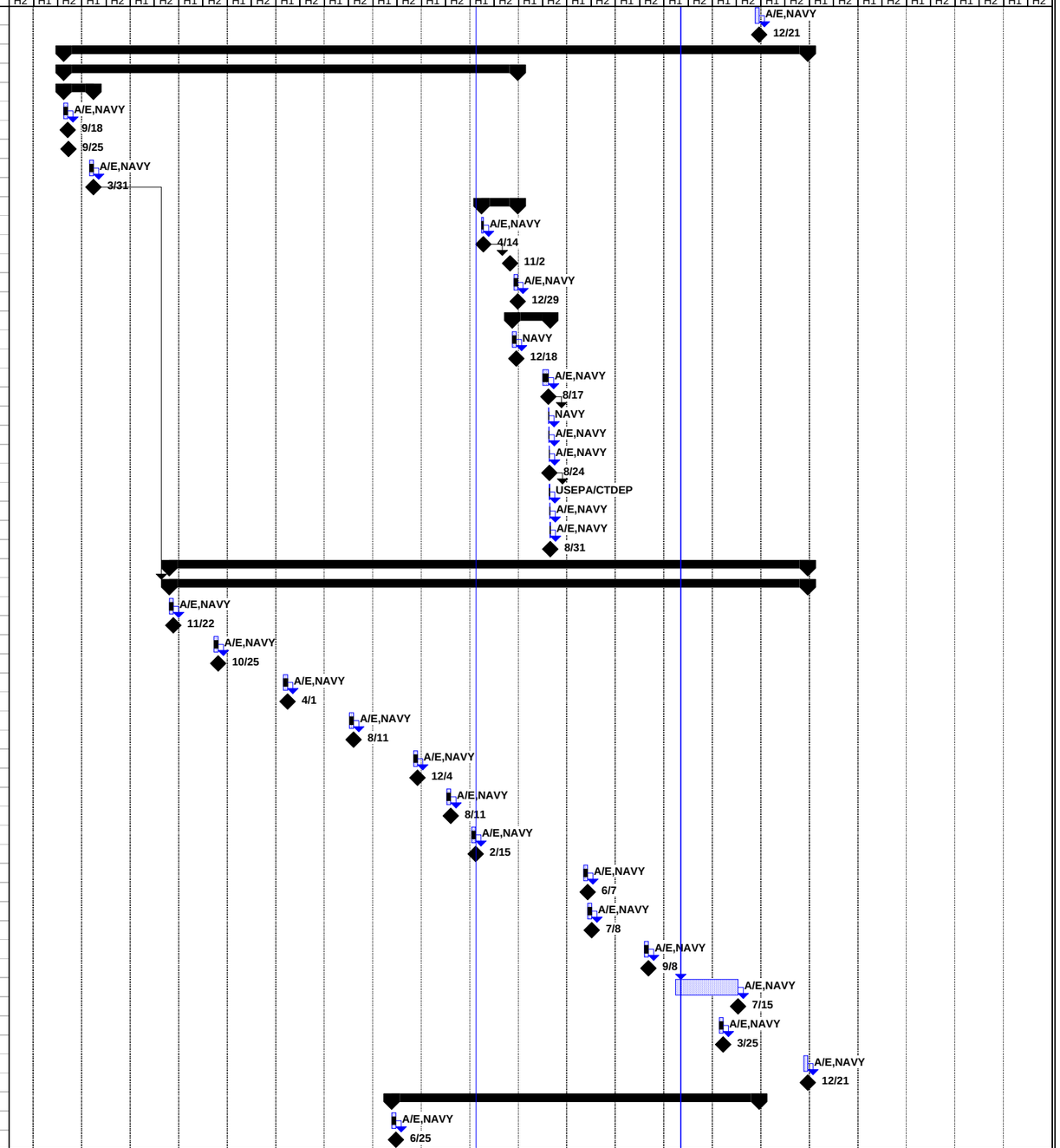
Task | Milestone | Rolled Up Task | Rolled Up Progress | Project Summary | Rolled Up Split | Deadline
Progress | Summary | Rolled Up Milestone | External Tasks | Split | External Milestone

2011 SMP SCHEDULE
NSB-NLON, GROTON, CONNECTICUT

Rev. 0 June 2011

ID	Task Name	Duration	Start	Finish	% Complete	Predecessors	Resource Names
361	Year 3 O&M/LUC Inspection Report	30 days	Tue 11/22/11	Wed 12/21/11	0%		A/E,NAVY
362	YEAR 3 O&M/LUC INSPECTION REPORT (2011)	0 days	Wed 12/21/11	Wed 12/21/11	0%	361	A/E,NAVY
363	**SITE 6 - DRMO (OU2)**	**5603 days**	**Wed 8/20/97**	**Fri 12/21/12**	**44%**		
364	**PROPOSED PLAN/ROD**	**3419 days**	**Wed 8/20/97**	**Fri 12/29/06**	**100%**		
365	**Interim Proposed Plan/ROD (Soil and GW)**	**224 days**	**Wed 8/20/97**	**Tue 3/31/98**	**100%**		
366	Final Proposed Plan	30 days	Wed 8/20/97	Thu 9/18/97	100%		A/E,NAVY
367	FINAL PROPOSED PLAN	0 days	Thu 9/18/97	Thu 9/18/97	100%	366	A/E,NAVY
368	PUBLIC MEETING	0 days	Thu 9/25/97	Thu 9/25/97	100%		PUBLIC
369	Final Interim ROD	30 days	Mon 3/2/98	Tue 3/31/98	100%		A/E,NAVY
370	FINAL INTERIM ROD	0 days	Tue 3/31/98	Tue 3/31/98	100%	369	A/E,NAVY
371	**Final Proposed Plan/ROD (Soil and GW)**	**273 days**	**Sat 4/1/06**	**Fri 12/29/06**	**100%**		
372	Final Proposed Plan	14 days	Sat 4/1/06	Fri 4/14/06	100%		A/E,NAVY
373	FINAL PROPOSED PLAN	0 days	Fri 4/14/06	Fri 4/14/06	100%	372	A/E,NAVY
374	PUBLIC MEETING	0 days	Thu 11/2/06	Thu 11/2/06	100%	373FS+14 days	PUBLIC
375	Final ROD	29 days	Fri 12/1/06	Fri 12/29/06	100%		A/E,NAVY
376	FINAL ROD	0 days	Fri 12/29/06	Fri 12/29/06	100%	375	A/E,NAVY
377	**RA**	**286 days**	**Sun 11/19/06**	**Fri 8/31/07**	**100%**		
378	Remedial Action	30 days	Sun 11/19/06	Mon 12/18/06	100%		NAVY
379	REMEDIAL ACTION	0 days	Mon 12/18/06	Mon 12/18/06	100%	378	NAVY
380	Rough Draft RA Completion Report	43 days	Fri 7/6/07	Fri 8/17/07	100%		A/E,NAVY
381	ROUGH DRAFT RA COMPLETION REPORT	0 days	Fri 8/17/07	Fri 8/17/07	100%	380	A/E,NAVY
382	Navy Review	3 days	Sat 8/18/07	Mon 8/20/07	100%	381	NAVY
383	Resolution of Comments	2 days	Tue 8/21/07	Wed 8/22/07	100%	382	A/E,NAVY
384	Draft RA Completion Report	2 days	Thu 8/23/07	Fri 8/24/07	100%	383	A/E,NAVY
385	DRAFT RA COMPLETION REPORT	0 days	Fri 8/24/07	Fri 8/24/07	100%	384	A/E,NAVY
386	Regulator Review	2 days	Sat 8/25/07	Sun 8/26/07	100%	385	USEPA/CTDEP
387	Resolution of Comments	3 days	Mon 8/27/07	Wed 8/29/07	100%	386	A/E,NAVY
388	Final RA Completion Report	2 days	Thu 8/30/07	Fri 8/31/07	100%	387	A/E,NAVY
389	FINAL RA COMPLETION REPORT	0 days	Fri 8/31/07	Fri 8/31/07	100%	388	A/E,NAVY
390	**LONG-TERM MANAGEMENT**	**4808 days**	**Sun 10/24/99**	**Fri 12/21/12**	**38%**		
391	**GROUNDWATER MONITORING**	**4808 days**	**Sun 10/24/99**	**Fri 12/21/12**	**40%**	**370**	
392	Year 1 Final GMR	30 days	Sun 10/24/99	Mon 11/22/99	100%		A/E,NAVY
393	YEAR 1 FINAL GMR	0 days	Mon 11/22/99	Mon 11/22/99	100%	392	A/E,NAVY
394	Year 2 Final GMR	31 days	Mon 9/25/00	Wed 10/25/00	100%		A/E,NAVY
395	YEAR 2 FINAL GMR	0 days	Wed 10/25/00	Wed 10/25/00	100%	394	A/E,NAVY
396	Year 3 Final GMR	32 days	Fri 3/1/02	Mon 4/1/02	100%		A/E,NAVY
397	YEAR 3 FINAL GMR	0 days	Mon 4/1/02	Mon 4/1/02	100%	396	A/E,NAVY
398	Year 4 Final GMR	32 days	Fri 7/11/03	Mon 8/11/03	100%		A/E,NAVY
399	YEAR 4 FINAL GMR	0 days	Mon 8/11/03	Mon 8/11/03	100%	398	A/E,NAVY
400	Year 5 Final GMR	30 days	Fri 11/5/04	Sat 12/4/04	100%		A/E,NAVY
401	YEAR 5 FINAL GMR	0 days	Sat 12/4/04	Sat 12/4/04	100%	400	A/E,NAVY
402	Year 6 Final GMR	30 days	Wed 7/13/05	Thu 8/11/05	100%		A/E,NAVY
403	YEAR 6 FINAL GMR	0 days	Thu 8/11/05	Thu 8/11/05	100%	402	A/E,NAVY
404	Year 7 Final GMR	31 days	Mon 1/16/06	Wed 2/15/06	100%		A/E,NAVY
405	YEAR 7 FINAL GMR	0 days	Wed 2/15/06	Wed 2/15/06	100%	404	A/E,NAVY
406	Years 8 Final GMR	30 days	Fri 5/9/08	Sat 6/7/08	100%		A/E,NAVY
407	YEARS 8 FINAL GMR	0 days	Sat 6/7/08	Sat 6/7/08	100%	406	A/E,NAVY
408	Year 9 Final GMR	30 days	Mon 6/9/08	Tue 7/8/08	100%		A/E,NAVY
409	YEAR 9 FINAL GMR	0 days	Tue 7/8/08	Tue 7/8/08	100%	408	A/E,NAVY
410	Year 11 Final GMR	30 days	Mon 8/10/09	Tue 9/8/09	100%		A/E,NAVY
411	YEAR 11 FINAL GMR	0 days	Tue 9/8/09	Tue 9/8/09	100%	410	A/E,NAVY
412	Final GMP	471 days	Thu 4/1/10	Fri 7/15/11	0%	322	A/E,NAVY
413	FINAL GMP	0 days	Fri 7/15/11	Fri 7/15/11	0%	412	A/E,NAVY
414	Year 12 Final GMR	30 days	Thu 2/24/11	Fri 3/25/11	100%		A/E,NAVY
415	YEAR 12 FINAL GMR (2010)	0 days	Fri 3/25/11	Fri 3/25/11	100%	414	A/E,NAVY
416	Year 14 Final GMR	30 days	Thu 11/22/12	Fri 12/21/12	0%		A/E,NAVY
417	YEAR 14 FINAL GMR (2012)	0 days	Fri 12/21/12	Fri 12/21/12	0%	416	A/E,NAVY
418	**O&M**	**2767 days**	**Tue 5/25/04**	**Wed 12/21/11**	**35%**		
419	Year 1 O&M Inspection Report	32 days	Tue 5/25/04	Fri 6/25/04	100%		A/E,NAVY
420	YEAR 1 O&M INSPECTION REPORT	0 days	Fri 6/25/04	Fri 6/25/04	100%	419	A/E,NAVY



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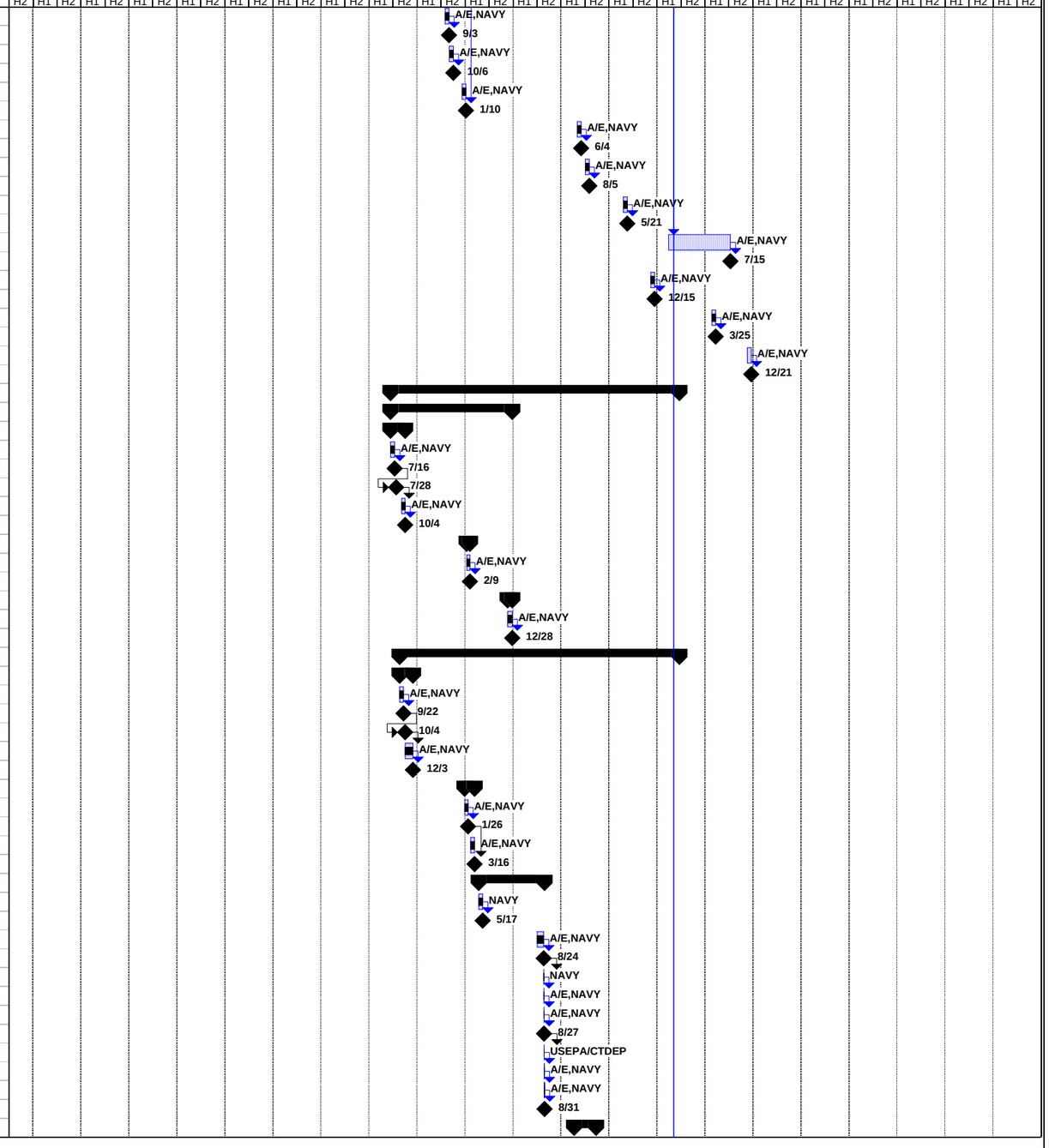
Task | Progress | Milestone | Summary | Rolled Up Task | Rolled Up Milestone | Rolled Up Progress | External Tasks | Project Summary | Split | Rolled Up Split | External Milestone | Deadline

2011 SMP SCHEDULE
NSB-NLON, GROTON, CONNECTICUT

ID	Task Name	Duration	Start	Finish	% Complete	Predecessors	Resource Names
421	Year 2 O&M Inspection Report	30 days	Fri 8/5/05	Sat 9/3/05	100%		A/E,NAVY
422	YEAR 2 O&M INSPECTION REPORT	0 days	Sat 9/3/05	Sat 9/3/05	100%	421	A/E,NAVY
423	Year 3 O&M Inspection Report	31 days	Tue 9/6/05	Thu 10/6/05	100%		A/E,NAVY
424	YEAR 3 O&M INSPECTION REPORT	0 days	Thu 10/6/05	Thu 10/6/05	100%	423	A/E,NAVY
425	O&M Manual Update No. 1	30 days	Mon 12/12/05	Tue 1/10/06	100%		A/E,NAVY
426	O&M MANUAL UPDATE NO. 1	0 days	Tue 1/10/06	Tue 1/10/06	100%	67	A/E,NAVY
427	Year 4 O&M/LUC Inspection Report	30 days	Tue 5/6/08	Wed 6/4/08	100%		A/E,NAVY
428	YEAR 4 O&M/LUC INSPECTION REPORT	0 days	Wed 6/4/08	Wed 6/4/08	100%	427	A/E,NAVY
429	Year 5 O&M/LUC Inspection Report	30 days	Mon 7/7/08	Tue 8/5/08	100%		A/E,NAVY
430	YEAR 5 O&M/LUC INSPECTION REPORT	0 days	Tue 8/5/08	Tue 8/5/08	100%	429	A/E,NAVY
431	Year 6 O&M/LUC Inspection Report	30 days	Wed 4/22/09	Thu 5/21/09	100%		A/E,NAVY
432	YEAR 6 O&M/LUC INSPECTION REPORT	0 days	Thu 5/21/09	Thu 5/21/09	100%	431	A/E,NAVY
433	O&M Manual Update No. 2	471 days	Thu 4/1/10	Fri 7/15/11	0%	322	A/E,NAVY
434	O&M MANUAL UPDATE NO. 2	0 days	Fri 7/15/11	Fri 7/15/11	0%	433	A/E,NAVY
435	Year 7 O&M/LUC Inspection Report	30 days	Mon 11/16/09	Tue 12/15/09	100%		A/E,NAVY
436	YEAR 7 O&M/LUC INSPECTION REPORT	0 days	Tue 12/15/09	Tue 12/15/09	100%	435	A/E,NAVY
437	Year 8 O&M/LUC Inspection Report	30 days	Thu 2/24/11	Fri 3/25/11	100%		A/E,NAVY
438	YEAR 8 O&M/LUC INSPECTION REPORT	0 days	Fri 3/25/11	Fri 3/25/11	100%	437	A/E,NAVY
439	Year 9 O&M/LUC Inspection Report	30 days	Tue 11/22/11	Wed 12/21/11	0%		A/E,NAVY
440	YEAR 9 O&M/LUC INSPECTION REPORT (2011)	0 days	Wed 12/21/11	Wed 12/21/11	0%	439	A/E,NAVY
441	**SITE 7 - TORPEDO SHOPS**	**2198 days**	**Wed 6/16/04**	**Tue 6/22/10**	**100%**		
442	**SITE 7 - SOIL (OU8)**	**926 days**	**Wed 6/16/04**	**Thu 12/28/06**	**100%**		
443	**PROPOSED PLAN/ROD**	**111 days**	**Wed 6/16/04**	**Mon 10/4/04**	**100%**		
444	Final Proposed Plan	31 days	Wed 6/16/04	Fri 7/16/04	100%		A/E,NAVY
445	FINAL PROPOSED PLAN	0 days	Fri 7/16/04	Fri 7/16/04	100%	444	A/E,NAVY
446	PUBLIC MEETING	0 days	Wed 7/28/04	Wed 7/28/04	100%	445FS+12 days	PUBLIC
447	Final ROD	27 days	Wed 9/8/04	Mon 10/4/04	100%	446FS+37 days	A/E,NAVY
448	FINAL ROD	0 days	Mon 10/4/04	Mon 10/4/04	100%	447	A/E,NAVY
449	**RD**	**25 days**	**Mon 1/16/06**	**Thu 2/9/06**	**100%**		
450	Final RD Work Plan	25 days	Mon 1/16/06	Thu 2/9/06	100%		A/E,NAVY
451	FINAL RD WORK PLAN	0 days	Thu 2/9/06	Thu 2/9/06	100%	450	A/E,NAVY
452	**RA**	**35 days**	**Fri 11/24/06**	**Thu 12/28/06**	**100%**		
453	Final RA Completion Report	35 days	Fri 11/24/06	Thu 12/28/06	100%		A/E,NAVY
454	FINAL RA COMPLETION REPORT	0 days	Thu 12/28/06	Thu 12/28/06	100%	453	A/E,NAVY
455	**SITE 7 - GROUNDWATER (OU9)**	**2129 days**	**Tue 8/24/04**	**Tue 6/22/10**	**100%**		
456	**INTERIM PROPOSED PLAN/ROD**	**102 days**	**Tue 8/24/04**	**Fri 12/3/04**	**100%**		
457	Final Interim Proposed Plan	30 days	Tue 8/24/04	Wed 9/22/04	100%		A/E,NAVY
458	FINAL INTERIM PROPOSED PLAN	0 days	Wed 9/22/04	Wed 9/22/04	100%	457	A/E,NAVY
459	PUBLIC MEETING	0 days	Mon 10/4/04	Mon 10/4/04	100%	458FS+12 days	A/E,NAVY
460	Final Interim ROD	60 days	Tue 10/5/04	Fri 12/3/04	100%	459	A/E,NAVY
461	FINAL INTERIM ROD	0 days	Fri 12/3/04	Fri 12/3/04	100%	460	A/E,NAVY
462	**RD**	**75 days**	**Sun 1/1/06**	**Thu 3/16/06**	**100%**		
463	Final Interim GMP	26 days	Sun 1/1/06	Thu 1/26/06	100%		A/E,NAVY
464	FINAL INTERIM GMP	0 days	Thu 1/26/06	Thu 1/26/06	100%	463	A/E,NAVY
465	Final Interim RD Work Plan	30 days	Wed 2/15/06	Thu 3/16/06	100%		A/E,NAVY
466	FINAL INTERIM RD WORK PLAN	0 days	Thu 3/16/06	Thu 3/16/06	100%	464	A/E,NAVY
467	**RA**	**501 days**	**Tue 4/18/06**	**Fri 8/31/07**	**100%**		
468	Interim Remedial Action	30 days	Tue 4/18/06	Wed 5/17/06	100%		NAVY
469	INTERIM REMEDIAL ACTION	0 days	Wed 5/17/06	Wed 5/17/06	100%	468	NAVY
470	Rough Draft Interim RA Completion Report	50 days	Fri 7/6/07	Fri 8/24/07	100%		A/E,NAVY
471	ROUGH DRAFT INTERIM RA COMPLETION REPORT	0 days	Fri 8/24/07	Fri 8/24/07	100%	470	A/E,NAVY
472	Navy Review	1 day	Sat 8/25/07	Sat 8/25/07	100%	471	NAVY
473	Resolution of Comments	1 day	Sun 8/26/07	Sun 8/26/07	100%	472	A/E,NAVY
474	Draft Interim RA Completion Report	1 day	Mon 8/27/07	Mon 8/27/07	100%	473	A/E,NAVY
475	DRAFT INTERIM RA COMPLETION REPORT	0 days	Mon 8/27/07	Mon 8/27/07	100%	474	A/E,NAVY
476	Regulator Review	1 day	Tue 8/28/07	Tue 8/28/07	100%	475	USEPA/CTDEP
477	Resolution of Comments	1 day	Wed 8/29/07	Wed 8/29/07	100%	476	A/E,NAVY
478	Final Interim RA Completion Report	2 days	Thu 8/30/07	Fri 8/31/07	100%	477	A/E,NAVY
479	FINAL INTERIM RA COMPLETION REPORT	0 days	Fri 8/31/07	Fri 8/31/07	100%	478	A/E,NAVY
480	**FINAL PROPOSED PLAN/ROD**	**167 days**	**Sun 4/13/08**	**Fri 9/26/08**	**100%**		



Project: SMP_2011Rev0_062311
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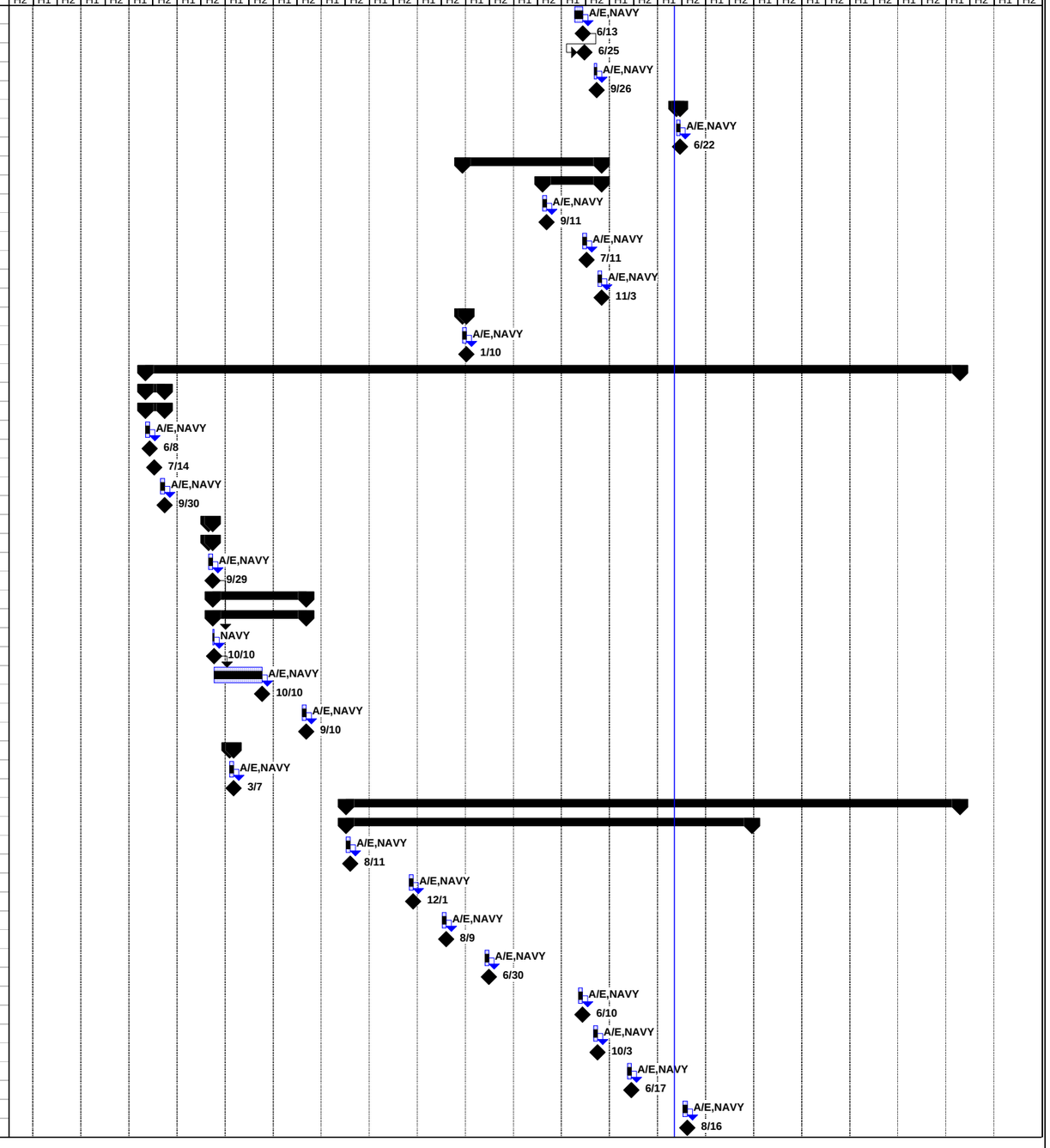
Task | Milestone | Rolled Up Task | Rolled Up Progress | Project Summary | Rolled Up Split | Deadline
Progress | Summary | Rolled Up Milestone | External Tasks | Split | External Milestone

2011 SMP SCHEDULE
NSB-NLON, GROTON, CONNECTICUT

Rev. 0 June 2011

ID	Task Name	Duration	Start	Finish	% Complete	Predecessors	Resource Names
481	Final Proposed Plan	62 days	Sun 4/13/08	Fri 6/13/08	100%		A/E,NAVY
482	FINAL PROPOSED PLAN	0 days	Fri 6/13/08	Fri 6/13/08	100%	481	A/E,NAVY
483	PUBLIC MEETING	0 days	Wed 6/25/08	Wed 6/25/08	100%	482FS+12 days	A/E,NAVY
484	Final ROD	18 days	Tue 9/9/08	Fri 9/26/08	100%		A/E,NAVY
485	FINAL ROD	0 days	Fri 9/26/08	Fri 9/26/08	100%	484	A/E,NAVY
486	**FINAL RA**	**27 days**	**Thu 5/27/10**	**Tue 6/22/10**	**100%**		
487	Final RA Completion Report	27 days	Thu 5/27/10	Tue 6/22/10	100%		A/E,NAVY
488	FINAL RA COMPLETION REPORT	0 days	Tue 6/22/10	Tue 6/22/10	100%	487	A/E,NAVY
489	**LONG-TERM MANAGEMENT**	**1058 days**	**Mon 12/12/05**	**Mon 11/3/08**	**100%**		
490	**GROUNDWATER MONITORING**	**449 days**	**Mon 8/13/07**	**Mon 11/3/08**	**100%**		
491	Year 1 Final GMR	30 days	Mon 8/13/07	Tue 9/11/07	100%		A/E,NAVY
492	YEAR 1 FINAL GMR	0 days	Tue 9/11/07	Tue 9/11/07	100%	491	A/E,NAVY
493	Year 2 Final GMR	30 days	Thu 6/12/08	Fri 7/11/08	100%		A/E,NAVY
494	YEAR 2 FINAL GMR	0 days	Fri 7/11/08	Fri 7/11/08	100%	493	A/E,NAVY
495	Round 9 Final GMR	29 days	Mon 10/6/08	Mon 11/3/08	100%		A/E,NAVY
496	ROUND 9 FINAL GMR	0 days	Mon 11/3/08	Mon 11/3/08	100%	495	A/E,NAVY
497	**O&M**	**30 days**	**Mon 12/12/05**	**Tue 1/10/06**	**100%**		
498	O&M Manual Update No. 1	30 days	Mon 12/12/05	Tue 1/10/06	100%		A/E,NAVY
499	O&M MANUAL UPDATE NO. 1	0 days	Tue 1/10/06	Tue 1/10/06	100%	498	A/E,NAVY
500	**SITE 8 - GOSS COVE LANDFILL (OU5)**	**6193 days**	**Sat 5/8/99**	**Wed 4/20/16**	**49%**		
501	**PROPOSED PLAN/ROD**	**146 days**	**Sat 5/8/99**	**Thu 9/30/99**	**100%**		
502	**Soil, Sediment, Groundwater, and Surface Water**	**146 days**	**Sat 5/8/99**	**Thu 9/30/99**	**100%**		
503	Final Proposed Plan	32 days	Sat 5/8/99	Tue 6/8/99	100%		A/E,NAVY
504	FINAL PROPOSED PLAN	0 days	Tue 6/8/99	Tue 6/8/99	100%	503	A/E,NAVY
505	Public Meeting	0 days	Wed 7/14/99	Wed 7/14/99	100%		PUBLIC
506	Final ROD	32 days	Mon 8/30/99	Thu 9/30/99	100%		A/E,NAVY
507	FINAL ROD	0 days	Thu 9/30/99	Thu 9/30/99	100%	506	A/E,NAVY
508	**RD**	**31 days**	**Wed 8/30/00**	**Fri 9/29/00**	**100%**		
509	**Soil**	**31 days**	**Wed 8/30/00**	**Fri 9/29/00**	**100%**		
510	Final RD	31 days	Wed 8/30/00	Fri 9/29/00	100%		A/E,NAVY
511	FINAL RD	0 days	Fri 9/29/00	Fri 9/29/00	100%	510	A/E,NAVY
512	**RA**	**710 days**	**Sun 10/1/00**	**Tue 9/10/02**	**100%**		
513	**Soil**	**710 days**	**Sun 10/1/00**	**Tue 9/10/02**	**100%**		
514	Award Construction	10 days	Sun 10/1/00	Tue 10/10/00	100%	511	NAVY
515	Start of Construction	0 days	Tue 10/10/00	Tue 10/10/00	100%	514	NAVY
516	Construction	365 days	Wed 10/11/00	Wed 10/10/01	100%	515	A/E,NAVY
517	End of Construction	0 days	Wed 10/10/01	Wed 10/10/01	100%	516	NAVY
518	Final RA Completion Report	30 days	Mon 8/12/02	Tue 9/10/02	100%		A/E,NAVY
519	FINAL RA COMPLETION REPORT	0 days	Tue 9/10/02	Tue 9/10/02	100%	518	A/E,NAVY
520	**Groundwater**	**30 days**	**Tue 2/6/01**	**Wed 3/7/01**	**100%**		
521	Final Groundwater Monitoring Plan	30 days	Tue 2/6/01	Wed 3/7/01	100%		A/E,NAVY
522	FINAL GROUNDWATER MONITORING PLAN	0 days	Wed 3/7/01	Wed 3/7/01	100%	521	A/E,NAVY
523	**LONG-TERM MANAGEMENT**	**4668 days**	**Fri 7/11/03**	**Wed 4/20/16**	**31%**		
524	**GROUNDWATER MONITORING**	**3086 days**	**Fri 7/11/03**	**Wed 12/21/11**	**32%**		
525	Year 1 Final GMR	32 days	Fri 7/11/03	Mon 8/11/03	100%		A/E,NAVY
526	YEAR 1 FINAL GMR	0 days	Mon 8/11/03	Mon 8/11/03	100%	525	A/E,NAVY
527	Year 2 Final GMR	30 days	Tue 11/2/04	Wed 12/1/04	100%		A/E,NAVY
528	YEAR 2 FINAL GMR	0 days	Wed 12/1/04	Wed 12/1/04	100%	527	A/E,NAVY
529	Year 3 Final GMR	30 days	Mon 7/11/05	Tue 8/9/05	100%		A/E,NAVY
530	YEAR 3 FINAL GMR	0 days	Tue 8/9/05	Tue 8/9/05	100%	529	A/E,NAVY
531	Year 4 Final GMR	30 days	Thu 6/1/06	Fri 6/30/06	100%		A/E,NAVY
532	YEAR 4 FINAL GMR	0 days	Fri 6/30/06	Fri 6/30/06	100%	531	A/E,NAVY
533	Year 5 Final GMR	30 days	Mon 5/12/08	Tue 6/10/08	100%		A/E,NAVY
534	YEAR 5 FINAL GMR	0 days	Tue 6/10/08	Tue 6/10/08	100%	533	A/E,NAVY
535	Year 6 Final GMR	30 days	Thu 9/4/08	Fri 10/3/08	100%		A/E,NAVY
536	YEAR 6 FINAL GMR	0 days	Fri 10/3/08	Fri 10/3/08	100%	535	A/E,NAVY
537	Year 7 Final GMR	30 days	Tue 5/19/09	Wed 6/17/09	100%		A/E,NAVY
538	YEAR 7 FINAL GMR	0 days	Wed 6/17/09	Wed 6/17/09	100%	537	A/E,NAVY
539	Year 8 Final GMR	34 days	Wed 7/14/10	Mon 8/16/10	100%		A/E,NAVY
540	YEAR 8 FINAL GMR	0 days	Mon 8/16/10	Mon 8/16/10	100%	539	A/E,NAVY



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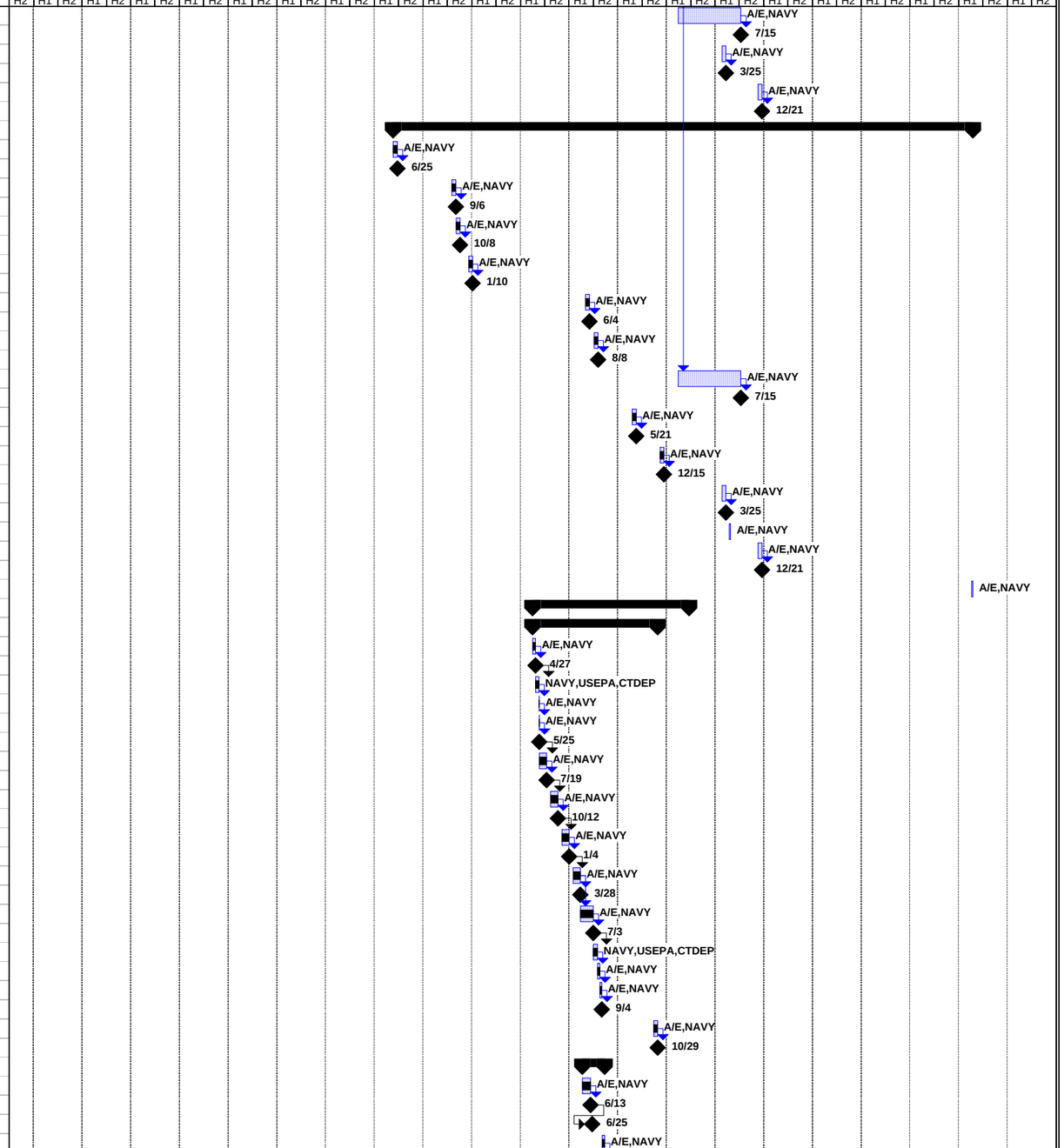
Task | Milestone | Rolled Up Task | Rolled Up Progress | Project Summary | Rolled Up Split | Deadline
Progress | Summary | Rolled Up Milestone | External Tasks | Split | External Milestone

2011 SMP SCHEDULE
NSB-NLON, GROTON, CONNECTICUT

Rev. 0 June 2011

ID	Task Name	Duration	Start	Finish	% Complete	Predecessors	Resource Names
541	Final GMP	471 days	Thu 4/1/10	Fri 7/15/11	0%	322	A/E,NAVY
542	FINAL GMP	0 days	Fri 7/15/11	Fri 7/15/11	0%	541	A/E,NAVY
543	Year 9 Final GMR	30 days	Thu 2/24/11	Fri 3/25/11	0%		A/E,NAVY
544	YEAR 9 FINAL GMR	0 days	Fri 3/25/11	Fri 3/25/11	0%	543	A/E,NAVY
545	Year 10 Final GMR	30 days	Tue 11/22/11	Wed 12/21/11	0%		A/E,NAVY
546	YEAR 10 FINAL GMR (2011)	0 days	Wed 12/21/11	Wed 12/21/11	0%	545	A/E,NAVY
547	**O&M**	**4350 days**	**Mon 5/24/04**	**Wed 4/20/16**	**31%**		
548	Year 1 O&M Inspection Report	33 days	Mon 5/24/04	Fri 6/25/04	100%		A/E,NAVY
549	YEAR 1 O&M INSPECTION REPORT	0 days	Fri 6/25/04	Fri 6/25/04	100%	548	A/E,NAVY
550	Year 2 O&M Inspection Report	30 days	Mon 8/8/05	Tue 9/6/05	100%		A/E,NAVY
551	YEAR 2 O&M INSPECTION REPORT	0 days	Tue 9/6/05	Tue 9/6/05	100%	550	A/E,NAVY
552	Year 3 O&M Inspection Report	30 days	Fri 9/9/05	Sat 10/8/05	100%		A/E,NAVY
553	YEAR 3 O&M INSPECTION REPORT	0 days	Sat 10/8/05	Sat 10/8/05	100%	552	A/E,NAVY
554	O&M Manual Update No. 1	30 days	Mon 12/12/05	Tue 1/10/06	100%		A/E,NAVY
555	O&M MANUAL UPDATE NO. 1	0 days	Tue 1/10/06	Tue 1/10/06	100%	554	A/E,NAVY
556	Year 4 O&M/LUC Inspection Report	30 days	Tue 5/6/08	Wed 6/4/08	100%		A/E,NAVY
557	YEAR 4 O&M/LUC INSPECTION REPORT	0 days	Wed 6/4/08	Wed 6/4/08	100%	556	A/E,NAVY
558	Year 5 O&M/LUC Inspection Report	30 days	Thu 7/10/08	Fri 8/8/08	100%		A/E,NAVY
559	YEAR 5 O&M/LUC INSPECTION REPORT	0 days	Fri 8/8/08	Fri 8/8/08	100%	558	A/E,NAVY
560	O&M Manual Update No. 2	471 days	Thu 4/1/10	Fri 7/15/11	0%	322	A/E,NAVY
561	O&M MANUAL UPDATE No. 2	0 days	Fri 7/15/11	Fri 7/15/11	0%	560	A/E,NAVY
562	Year 6 O&M/LUC Inspection Report	30 days	Wed 4/22/09	Thu 5/21/09	100%		A/E,NAVY
563	YEAR 6 O&M/LUC INSPECTION REPORT	0 days	Thu 5/21/09	Thu 5/21/09	100%	562	A/E,NAVY
564	Year 7 O&M/LUC Inspection Report	30 days	Mon 11/16/09	Tue 12/15/09	100%		A/E,NAVY
565	YEAR 7 O&M/LUC INSPECTION REPORT	0 days	Tue 12/15/09	Tue 12/15/09	100%	564	A/E,NAVY
566	Year 8 O&M/LUC Inspection Report	30 days	Thu 2/24/11	Fri 3/25/11	0%		A/E,NAVY
567	YEAR 8 O&M/LUC INSPECTION REPORT	0 days	Fri 3/25/11	Fri 3/25/11	0%	566	A/E,NAVY
568	Video Inspection of Box Culvert and Pipes	10 days	Wed 4/20/11	Fri 4/29/11	0%		A/E,NAVY
569	Year 9 O&M/LUC Inspection Report	30 days	Tue 11/22/11	Wed 12/21/11	0%		A/E,NAVY
570	YEAR 9 O&M/LUC INSPECTION REPORT (2011)	0 days	Wed 12/21/11	Wed 12/21/11	0%	569	A/E,NAVY
571	Video Inspection of Box Culvert and Pipes	10 days	Mon 4/11/16	Wed 4/20/16	0%		A/E,NAVY
572	**SITE 23 GROUNDWATER (OU9)**	**1174 days**	**Fri 4/6/07**	**Tue 6/22/10**	**100%**		
573	**RI/FS**	**938 days**	**Fri 4/6/07**	**Thu 10/29/09**	**100%**		
574	Draft Site 23 Metering Pit Work Plan	22 days	Fri 4/6/07	Fri 4/27/07	100%		A/E,NAVY
575	DRAFT SITE 23 METERING PIT WORK PLAN	0 days	Fri 4/27/07	Fri 4/27/07	100%	574	A/E,NAVY
576	Navy/Regulator Review	26 days	Sat 4/28/07	Wed 5/23/07	100%	575	NAVY,USEPA,CTDEP
577	Resolution of Comments	1 day	Thu 5/24/07	Thu 5/24/07	100%	576	A/E,NAVY
578	Final SITE 23 Metering Pit Work Plan	1 day	Fri 5/25/07	Fri 5/25/07	100%	577	A/E,NAVY
579	FINAL SITE 23 METERING PIT WORK PLAN	0 days	Fri 5/25/07	Fri 5/25/07	100%	578	A/E,NAVY
580	Round 1 Field Work	55 days	Sat 5/26/07	Thu 7/19/07	100%	579	A/E,NAVY
581	ROUND 1 FIELD WORK	0 days	Thu 7/19/07	Thu 7/19/07	100%	580	A/E,NAVY
582	Round 2 Field Work	55 days	Sun 8/19/07	Fri 10/12/07	100%	581FS+30 days	A/E,NAVY
583	ROUND 2 FIELD WORK	0 days	Fri 10/12/07	Fri 10/12/07	100%	582	A/E,NAVY
584	Round 3 Field Work	54 days	Mon 11/12/07	Fri 1/4/08	100%	583FS+30 days	A/E,NAVY
585	ROUND 3 FIELD WORK	0 days	Fri 1/4/08	Fri 1/4/08	100%	584	A/E,NAVY
586	Round 4 Field Work	54 days	Mon 2/4/08	Fri 3/28/08	100%	585FS+30 days	A/E,NAVY
587	ROUND 4 FIELD WORK	0 days	Fri 3/28/08	Fri 3/28/08	100%	586	A/E,NAVY
588	Draft Year 1 Monitoring Report	97 days	Sat 3/29/08	Thu 7/3/08	100%	586	A/E,NAVY
589	DRAFT Year 1 Monitoring REPORT	0 days	Thu 7/3/08	Thu 7/3/08	100%	588	A/E,NAVY
590	Navy/Regulator Review	32 days	Fri 7/4/08	Mon 8/4/08	100%	589	NAVY,USEPA,CTDEP
591	Resolution of Comments	17 days	Tue 8/5/08	Thu 8/21/08	100%	590	A/E,NAVY
592	Final Year 1 Monitoring Report	14 days	Fri 8/22/08	Thu 9/4/08	100%	591	A/E,NAVY
593	FINAL Year 1 Monitoring REPORT	0 days	Thu 9/4/08	Thu 9/4/08	100%	592	A/E,NAVY
594	Final Year 2 Monitoring Report	30 days	Wed 9/30/09	Thu 10/29/09	100%		A/E,NAVY
595	FINAL YEAR 2 MONITORING REPORT	0 days	Thu 10/29/09	Thu 10/29/09	100%	594	A/E,NAVY
596	**PROPOSED PLAN/ROD**	**167 days**	**Sun 4/13/08**	**Fri 9/26/08**	**100%**		
597	Final Proposed Plan	62 days	Sun 4/13/08	Fri 6/13/08	100%		A/E,NAVY
598	FINAL PROPOSED PLAN	0 days	Fri 6/13/08	Fri 6/13/08	100%	597	A/E,NAVY
599	PUBLIC MEETING	0 days	Wed 6/25/08	Wed 6/25/08	100%	598FS+12 days	PUBLIC
600	Final ROD	18 days	Tue 9/9/08	Fri 9/26/08	100%		A/E,NAVY



Project: SMP_2011Rev0_062311
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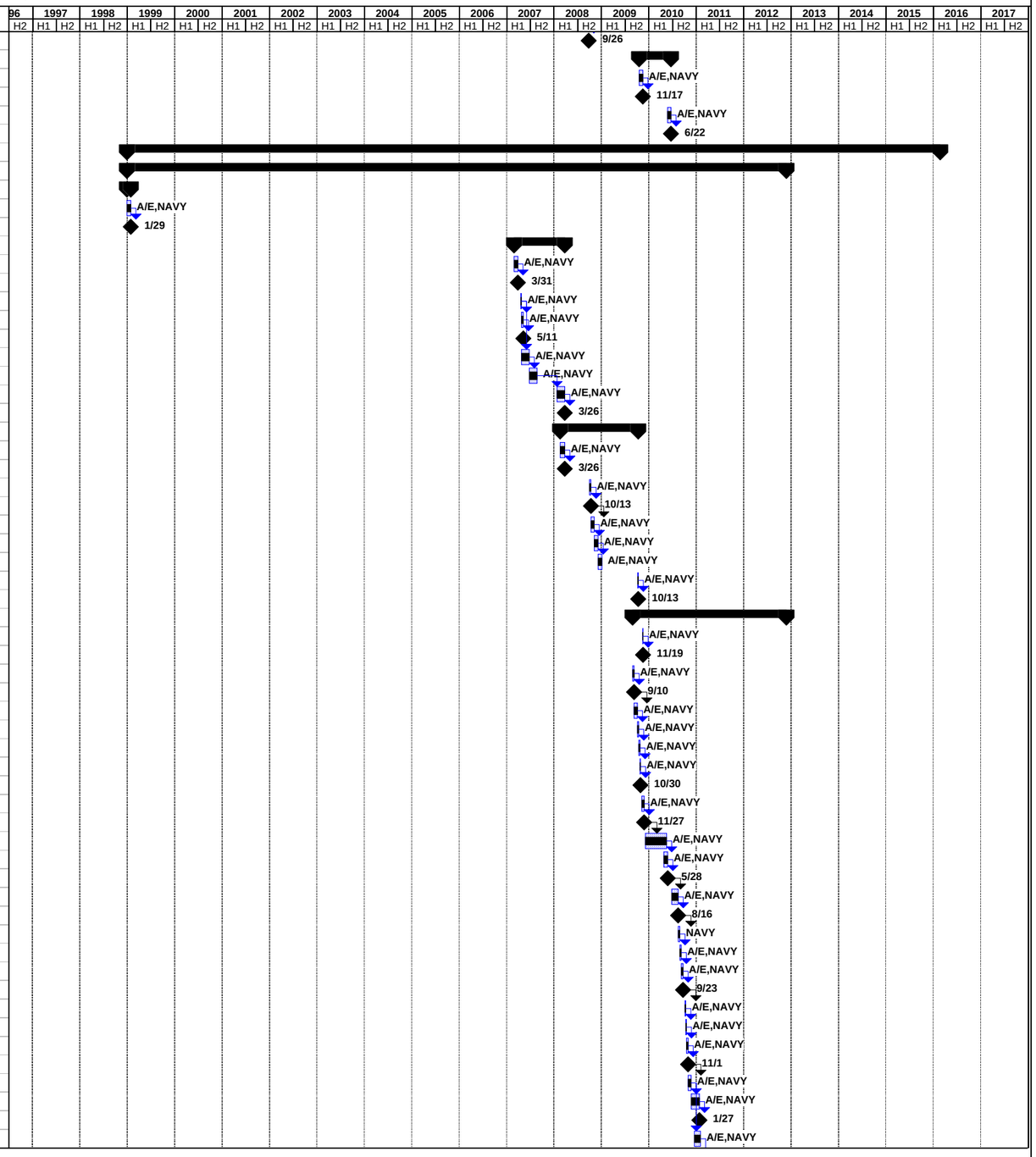
Task | Milestone | Rolled Up Task | Rolled Up Progress | Project Summary | Rolled Up Split | Deadline
Progress | Summary | Rolled Up Milestone | External Tasks | Split | External Milestone

2011 SMP SCHEDULE
NSB-NLON, GROTON, CONNECTICUT

ID	Task Name	Duration	Start	Finish	% Complete	Predecessors	Resource Names
601	FINAL ROD	0 days	Fri 9/26/08	Fri 9/26/08	100%	600	A/E,NAVY
602	**RD**	**246 days**	**Tue 10/20/09**	**Tue 6/22/10**	**100%**		
603	Final LUC RD	29 days	Tue 10/20/09	Tue 11/17/09	100%		A/E,NAVY
604	FINAL LUC RD	0 days	Tue 11/17/09	Tue 11/17/09	100%	603	A/E,NAVY
605	Final RA Completion Report	27 days	Thu 5/27/10	Tue 6/22/10	100%		A/E,NAVY
606	FINAL RA COMPLETION REPORT	0 days	Tue 6/22/10	Tue 6/22/10	100%	605	A/E,NAVY
607	**LOWER SUBASE SITES 10,11,13,17,19,21,22,24,25,&TR (OU4)**	**6266 days**	**Thu 12/31/98**	**Thu 2/25/16**	**50%**		
608	**RI/FS**	**5081 days**	**Thu 12/31/98**	**Tue 11/27/12**	**81%**		
609	**Remedial Investigation**	**30 days**	**Thu 12/31/98**	**Fri 1/29/99**	**100%**		
610	Final RI Report	30 days	Thu 12/31/98	Fri 1/29/99	100%		A/E,NAVY
611	FINAL RI REPORT	0 days	Fri 1/29/99	Fri 1/29/99	100%	610	A/E,NAVY
612	**Thames River Ecological Investigation Report**	**391 days**	**Fri 3/2/07**	**Wed 3/26/08**	**100%**		
613	Final Work Plan Addendum	30 days	Fri 3/2/07	Sat 3/31/07	100%		A/E,NAVY
614	FINAL WORK PLAN ADDENDUM	0 days	Sat 3/31/07	Sat 3/31/07	100%	613	A/E,NAVY
615	Field Work	5 days	Mon 4/23/07	Fri 4/27/07	100%		A/E,NAVY
616	Draft Survey Report	14 days	Sat 4/28/07	Fri 5/11/07	100%	615	A/E,NAVY
617	DRAFT SURVEY REPORT	0 days	Fri 5/11/07	Fri 5/11/07	100%	616	A/E,NAVY
618	Sample Analysis	60 days	Sat 4/28/07	Tue 6/26/07	100%	615	A/E,NAVY
619	Validation	60 days	Wed 6/27/07	Sat 8/25/07	100%	618	A/E,NAVY
620	Final Validation Study Report	60 days	Sun 1/27/08	Wed 3/26/08	100%	619	A/E,NAVY
621	FINAL VALIDATION STUDY REPORT	0 days	Wed 3/26/08	Wed 3/26/08	100%	620	A/E,NAVY
622	**Inner Pier 1 Sediment EE/CA**	**602 days**	**Wed 2/20/08**	**Tue 10/13/09**	**100%**		
623	Final Inner Pier 1 EE/CA	36 days	Wed 2/20/08	Wed 3/26/08	100%		A/E,NAVY
624	FINAL INNER PIER 1 EE/CA	0 days	Wed 3/26/08	Wed 3/26/08	100%	623	A/E,NAVY
625	Final Outer Pier 1 Sediment Work Plan	12 days	Thu 10/2/08	Mon 10/13/08	100%		A/E,NAVY
626	FINAL OUTER PIER 1 SEDIMENT WORK PLAN	0 days	Mon 10/13/08	Mon 10/13/08	100%	625	A/E,NAVY
627	Field Work	25 days	Tue 10/14/08	Fri 11/7/08	100%	626	A/E,NAVY
628	Laboratory Analysis	30 days	Sat 11/8/08	Sun 12/7/08	100%	627	A/E,NAVY
629	Data Validation	29 days	Mon 12/8/08	Mon 1/5/09	100%	628	A/E,NAVY
630	Final Inner/Outer Pier 1 EE/CA	5 days	Fri 10/9/09	Tue 10/13/09	100%		A/E,NAVY
631	FINAL INNER/OUTER PIER 1 EE/CA	0 days	Tue 10/13/09	Tue 10/13/09	100%	630	A/E,NAVY
632	**Inner Pier 1 Sediment Action Memo and NTCRA**	**1185 days**	**Mon 8/31/09**	**Tue 11/27/12**	**53%**		
633	Final Action Memo	3 days	Tue 11/17/09	Thu 11/19/09	100%		A/E,NAVY
634	FINAL ACTION MEMO	0 days	Thu 11/19/09	Thu 11/19/09	100%	633	A/E,NAVY
635	Final Inner Pier 1 Sediment PDI Work Plan	11 days	Mon 8/31/09	Thu 9/10/09	100%		A/E,NAVY
636	FINAL INNER PIER 1 SEDIMENT PDI WORK PLAN	0 days	Thu 9/10/09	Thu 9/10/09	100%	635	A/E,NAVY
637	Field Work	26 days	Fri 9/11/09	Tue 10/6/09	100%	636	A/E,NAVY
638	Laboratory Analysis	10 days	Wed 10/7/09	Fri 10/16/09	100%	637	A/E,NAVY
639	Data Validation	10 days	Sat 10/17/09	Mon 10/26/09	100%	638	A/E,NAVY
640	Data Memorandum	4 days	Tue 10/27/09	Fri 10/30/09	100%	639	A/E,NAVY
641	DATA MEMORANDUM	0 days	Fri 10/30/09	Fri 10/30/09	100%	640	A/E,NAVY
642	Final NTCRA Work Plan	18 days	Tue 11/10/09	Fri 11/27/09	100%		A/E,NAVY
643	FINAL NTCRA WORK PLAN	0 days	Fri 11/27/09	Fri 11/27/09	100%	642	A/E,NAVY
644	Phase 1 Removal Action Field Work	164 days	Mon 12/7/09	Wed 5/19/10	100%	643FS+9 days	A/E,NAVY
645	Internal Draft Completion Report	30 days	Thu 4/29/10	Fri 5/28/10	100%	644	A/E,NAVY
646	INTERNAL DRAFT COMPLETION REPORT	0 days	Fri 5/28/10	Fri 5/28/10	100%	645	A/E,NAVY
647	Draft Sediment Survey Work Plan	50 days	Mon 6/28/10	Mon 8/16/10	100%	646FS+30 days	A/E,NAVY
648	DRAFT SEDIMENT SURVEY WORK PLAN	0 days	Mon 8/16/10	Mon 8/16/10	100%	647	A/E,NAVY
649	Navy Review	14 days	Tue 8/17/10	Mon 8/30/10	100%	648	NAVY
650	Resolution of Comments	10 days	Tue 8/31/10	Thu 9/9/10	100%	649	A/E,NAVY
651	Final Sediment Survey Work Plan	14 days	Fri 9/10/10	Thu 9/23/10	100%	650	A/E,NAVY
652	FINAL SEDIMENT SURVEY WORK PLAN	0 days	Thu 9/23/10	Thu 9/23/10	100%	651	A/E,NAVY
653	Sediment Survey	7 days	Fri 10/8/10	Thu 10/14/10	100%	652FS+14 days	A/E,NAVY
654	Sediment Survey Data Evaluation	5 days	Fri 10/15/10	Tue 10/19/10	100%	653	A/E,NAVY
655	Draft Sediment Survey Report	13 days	Wed 10/20/10	Mon 11/1/10	100%	654	A/E,NAVY
656	DRAFT SEDIMENT SURVEY REPORT	0 days	Mon 11/1/10	Mon 11/1/10	100%	655	A/E,NAVY
657	Navy Review	24 days	Tue 11/2/10	Thu 11/25/10	100%	656	A/E,NAVY
658	Final Sediment Survey Report	63 days	Fri 11/26/10	Thu 1/27/11	100%	657	A/E,NAVY
659	FINAL SEDIMENT SURVEY REPORT	0 days	Thu 1/27/11	Thu 1/27/11	100%	658	A/E,NAVY
660	Draft 30% Design	47 days	Mon 12/20/10	Fri 2/4/11	100%	657FS+24 days	A/E,NAVY



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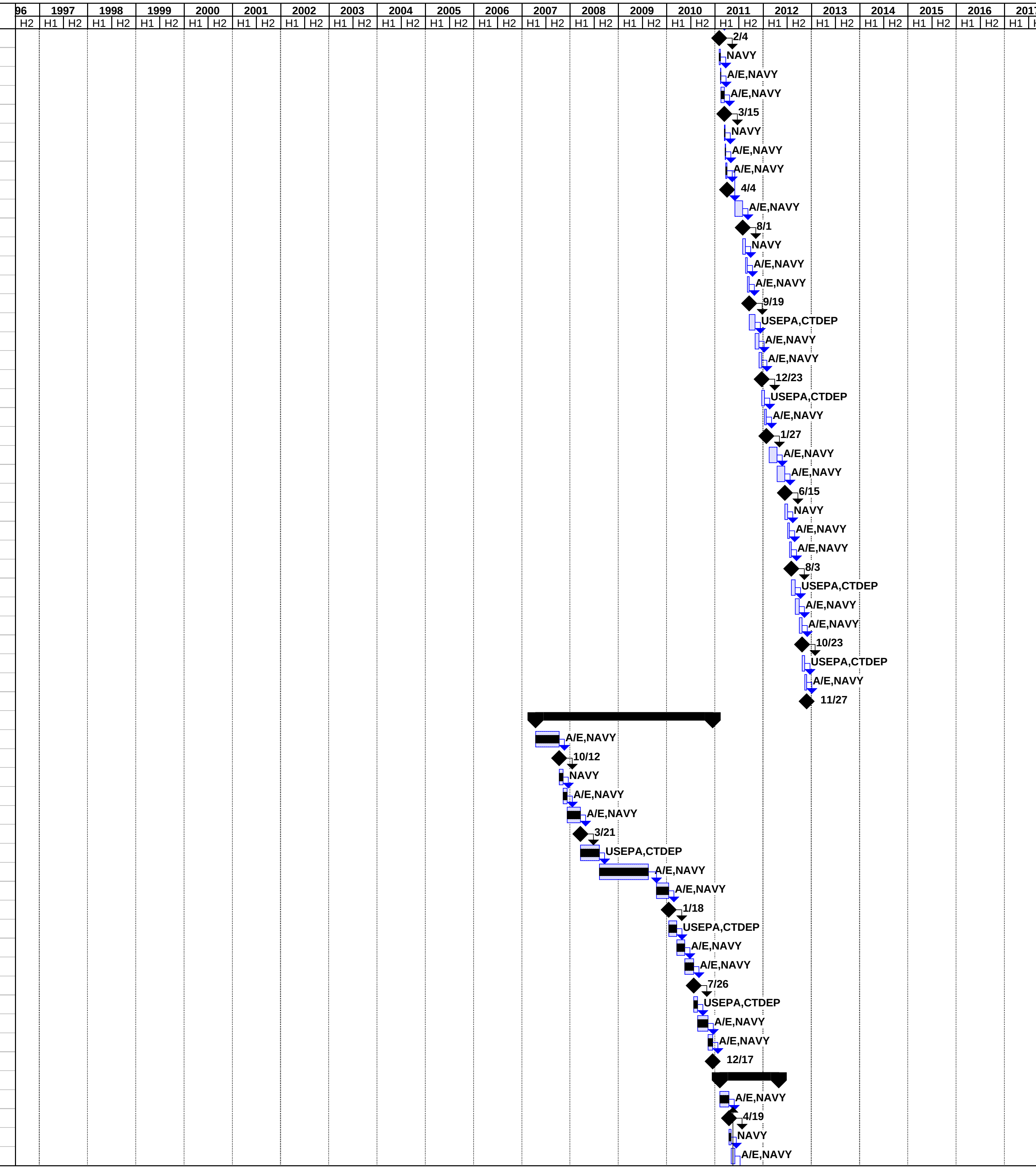
Task | Progress | Milestone | Summary | Rolled Up Task | Rolled Up Milestone | Rolled Up Progress | External Tasks | Project Summary | Split | Rolled Up Split | External Milestone | Deadline

2011 SMP SCHEDULE
NSB-NLON, GROTON, CONNECTICUT

ID		Task Name	Duration	Start	Finish	% Complete	Predecessors	Resource Names
661	✓	DRAFT 30% DESIGN	0 days	Fri 2/4/11	Fri 2/4/11	100%	660	A/E,NAVY
662	✓	Navy Review	10 days	Sat 2/5/11	Mon 2/14/11	100%	661	NAVY
663	✓	Resolution of Comments	3 days	Tue 2/15/11	Thu 2/17/11	100%	662	A/E,NAVY
664	✓	Draft Final 30% Design	26 days	Fri 2/18/11	Tue 3/15/11	100%	663	A/E,NAVY
665	✓	DRAFT FINAL 30% DESIGN	0 days	Tue 3/15/11	Tue 3/15/11	100%	664	A/E,NAVY
666	✓	Navy Review	6 days	Wed 3/16/11	Mon 3/21/11	100%	665	NAVY
667	✓	Resolution of Comments	4 days	Tue 3/22/11	Fri 3/25/11	100%	666	A/E,NAVY
668	✓	Final 30% Design	10 days	Sat 3/26/11	Mon 4/4/11	100%	667	A/E,NAVY
669	✓	FINAL 30% DESIGN	0 days	Mon 4/4/11	Mon 4/4/11	100%	668	A/E,NAVY
670		Internal Draft NTCRA Work Plan Addendum	60 days	Fri 6/3/11	Mon 8/1/11	0%	668FS+59 days	A/E,NAVY
671		INTERNAL DRAFT NTCRA WORK PLAN ADDENDUM	0 days	Mon 8/1/11	Mon 8/1/11	0%	670	A/E,NAVY
672		Navy Review	21 days	Tue 8/2/11	Mon 8/22/11	0%	671	NAVY
673		Resolution of Comments	14 days	Tue 8/23/11	Mon 9/5/11	0%	672	A/E,NAVY
674		Draft NTCRA Work Plan Addendum	14 days	Tue 9/6/11	Mon 9/19/11	0%	673	A/E,NAVY
675		DRAFT NTCRA WORK PLAN ADDENDUM	0 days	Mon 9/19/11	Mon 9/19/11	0%	674	A/E,NAVY
676		Regulator Review	45 days	Tue 9/20/11	Thu 11/3/11	0%	675	USEPA,CTDEP
677		Resolution of Comments	29 days	Fri 11/4/11	Fri 12/2/11	0%	676	A/E,NAVY
678		Draft Final NTCRA Work Plan Addendum	21 days	Sat 12/3/11	Fri 12/23/11	0%	677	A/E,NAVY
679		DRAFT FINAL NTCRA WORK PLAN ADDENDUM	0 days	Fri 12/23/11	Fri 12/23/11	0%	678	A/E,NAVY
680		Regulator Concurrence	21 days	Sat 12/24/11	Fri 1/13/12	0%	679	USEPA,CTDEP
681		Final NTCRA Work Plan Addendum	14 days	Sat 1/14/12	Fri 1/27/12	0%	680	A/E,NAVY
682		FINAL NTCRA WORK PLAN ADDENDUM	0 days	Fri 1/27/12	Fri 1/27/12	0%	681	A/E,NAVY
683		Additional Removal Action Field Work	60 days	Sat 2/18/12	Tue 4/17/12	0%	682FS+21 days	A/E,NAVY
684		Internal Draft NTCRA Completion Report	59 days	Wed 4/18/12	Fri 6/15/12	0%	683	A/E,NAVY
685		INTERNAL DRAFT NTCRA COMPLETION REPORT	0 days	Fri 6/15/12	Fri 6/15/12	0%	684	A/E,NAVY
686		Navy Review	21 days	Sat 6/16/12	Fri 7/6/12	0%	685	NAVY
687		Resolution of Comments	14 days	Sat 7/7/12	Fri 7/20/12	0%	686	A/E,NAVY
688		Draft NTCRA Completion Report	14 days	Sat 7/21/12	Fri 8/3/12	0%	687	A/E,NAVY
689		DRAFT NTCRA COMPLETION REPORT	0 days	Fri 8/3/12	Fri 8/3/12	0%	688	A/E,NAVY
690		Regulator Review	30 days	Sat 8/4/12	Sun 9/2/12	0%	689	USEPA,CTDEP
691		Resolution of Comments	30 days	Mon 9/3/12	Tue 10/2/12	0%	690	A/E,NAVY
692		Draft Final NTCRA Completion Report	21 days	Wed 10/3/12	Tue 10/23/12	0%	691	A/E,NAVY
693		DRAFT FINAL NTCRA COMPLETION REPORT	0 days	Tue 10/23/12	Tue 10/23/12	0%	692	A/E,NAVY
694		Regulator Concurrence	21 days	Wed 10/24/12	Tue 11/13/12	0%	693	USEPA,CTDEP
695		Final NTCRA Completion Report	14 days	Wed 11/14/12	Tue 11/27/12	0%	694	A/E,NAVY
696		FINAL NTCRA COMPLETION REPORT	0 days	Tue 11/27/12	Tue 11/27/12	0%	695	A/E,NAVY
697	✓	**Feasibility Study (SO, GW, and TR SD)**	**1341 days**	**Tue 4/17/07**	**Fri 12/17/10**	**100%**		
698	✓	Rough Draft FS	179 days	Tue 4/17/07	Fri 10/12/07	100%		A/E,NAVY
699	✓	ROUGH DRAFT FS	0 days	Fri 10/12/07	Fri 10/12/07	100%	698	A/E,NAVY
700	✓	Navy Review	30 days	Sat 10/13/07	Sun 11/11/07	100%	699	NAVY
701	✓	Resolution of Comments	30 days	Mon 11/12/07	Tue 12/11/07	100%	700	A/E,NAVY
702	✓	Draft FS Report	101 days	Wed 12/12/07	Fri 3/21/08	100%	701	A/E,NAVY
703	✓	DRAFT FS REPORT	0 days	Fri 3/21/08	Fri 3/21/08	100%	702	A/E,NAVY
704	✓	Regulator Review	143 days	Sat 3/22/08	Mon 8/11/08	100%	703	USEPA,CTDEP
705	✓	Resolution of Comments	371 days	Tue 8/12/08	Mon 8/17/09	100%	704	A/E,NAVY
706	✓	Draft Final FS Report	93 days	Sun 10/18/09	Mon 1/18/10	100%	705	A/E,NAVY
707	✓	DRAFT FINAL FS REPORT	0 days	Mon 1/18/10	Mon 1/18/10	100%	706	A/E,NAVY
708	✓	Regulator Review	61 days	Tue 1/19/10	Sat 3/20/10	100%	707	USEPA,CTDEP
709	✓	Resolution of Comments	60 days	Sun 3/21/10	Wed 5/19/10	100%	708	A/E,NAVY
710	✓	Revised Draft Final FS Report	68 days	Thu 5/20/10	Mon 7/26/10	100%	709	A/E,NAVY
711	✓	REVISED DRAFT FINAL FS REPORT	0 days	Mon 7/26/10	Mon 7/26/10	100%	710	A/E,NAVY
712	✓	Regulator Review	30 days	Tue 7/27/10	Wed 8/25/10	100%	711	USEPA,CTDEP
713	✓	Resolution of Comments	79 days	Thu 8/26/10	Fri 11/12/10	100%	712	A/E,NAVY
714	✓	Final FS Report	35 days	Sat 11/13/10	Fri 12/17/10	100%	713	A/E,NAVY
715	✓	FINAL FS REPORT	0 days	Fri 12/17/10	Fri 12/17/10	100%	714	A/E,NAVY
716		**PROPOSED PLAN/ROD (SO, GW, and TR SD)**	**446 days**	**Thu 2/10/11**	**Mon 4/30/12**	**14%**		
717	✓	Rough Draft Proposed Plan	69 days	Thu 2/10/11	Tue 4/19/11	100%	785	A/E,NAVY
718	✓	ROUGH DRAFT PROPOSED PLAN	0 days	Tue 4/19/11	Tue 4/19/11	100%	717	A/E,NAVY
719	✓	Navy Review	16 days	Wed 4/20/11	Thu 5/5/11	100%	718	NAVY
720	✓	Resolution of Comments	29 days	Fri 5/6/11	Fri 6/3/11	0%	719	A/E,NAVY



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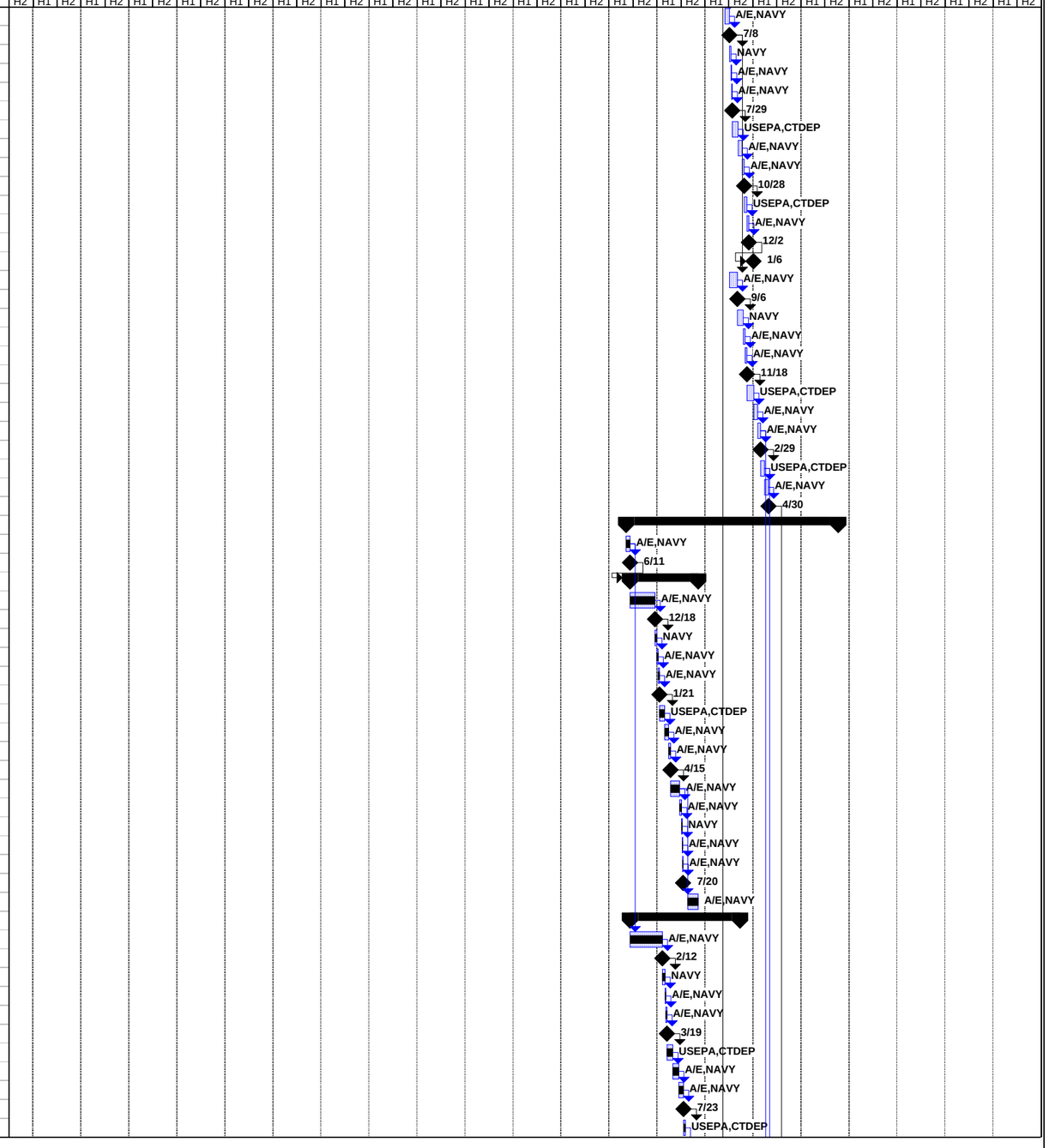
Task		Milestone		Rolled Up Task		Rolled Up Progress		Project Summary		Rolled Up Split		Deadline
Progress		Summary		Rolled Up Milestone		External Tasks		Split		External Milestone	

2011 SMP SCHEDULE
NSB-NLON, GROTON, CONNECTICUT

ID	Task Name	Duration	Start	Finish	% Complete	Predecessors	Resource Names
721	Rough Draft Proposed Plan - Revision 1	35 days	Sat 6/4/11	Fri 7/8/11	0%	720	A/E,NAVY
722	ROUGH DRAFT PROPOSED PLAN - REVISION 1	0 days	Fri 7/8/11	Fri 7/8/11	0%	721	A/E,NAVY
723	Navy Review	11 days	Sat 7/9/11	Tue 7/19/11	0%	722	NAVY
724	Resolution of Comments	5 days	Wed 7/20/11	Sun 7/24/11	0%	723	A/E,NAVY
725	Draft Proposed Plan	5 days	Mon 7/25/11	Fri 7/29/11	0%	724	A/E,NAVY
726	DRAFT PROPOSED PLAN	0 days	Fri 7/29/11	Fri 7/29/11	0%	725	A/E,NAVY
727	Regulator Review	45 days	Sat 7/30/11	Mon 9/12/11	0%	726	USEPA,CTDEP
728	Resolution of Comments	31 days	Tue 9/13/11	Thu 10/13/11	0%	727	A/E,NAVY
729	Draft Final Proposed Plan	15 days	Fri 10/14/11	Fri 10/28/11	0%	728	A/E,NAVY
730	DRAFT FINAL PROPOSED PLAN	0 days	Fri 10/28/11	Fri 10/28/11	0%	729	A/E,NAVY
731	Regulator Concurrence	21 days	Sat 10/29/11	Fri 11/18/11	0%	730	USEPA,CTDEP
732	Final Proposed Plan	14 days	Sat 11/19/11	Fri 12/2/11	0%	731	A/E,NAVY
733	FINAL PROPOSED PLAN	0 days	Fri 12/2/11	Fri 12/2/11	0%	732	A/E,NAVY
734	PUBLIC MEETING	0 days	Fri 1/6/12	Fri 1/6/12	0%	733FS+35 days	PUBLIC
735	Internal Draft ROD	60 days	Sat 7/9/11	Tue 9/6/11	0%	722	A/E,NAVY
736	INTERNAL DRAFT ROD	0 days	Tue 9/6/11	Tue 9/6/11	0%	735	A/E,NAVY
737	Navy Review	45 days	Wed 9/7/11	Fri 10/21/11	0%	736	NAVY
738	Resolution of Comments	14 days	Sat 10/22/11	Fri 11/4/11	0%	737	A/E,NAVY
739	Draft ROD	14 days	Sat 11/5/11	Fri 11/18/11	0%	738	A/E,NAVY
740	DRAFT ROD	0 days	Fri 11/18/11	Fri 11/18/11	0%	739	A/E,NAVY
741	Regulator Review	52 days	Sat 11/19/11	Mon 1/9/12	0%	740	USEPA,CTDEP
742	Resolution of Comments	30 days	Tue 1/10/12	Wed 2/8/12	0%	741	A/E,NAVY
743	Draft Final ROD	21 days	Thu 2/9/12	Wed 2/29/12	0%	742	A/E,NAVY
744	DRAFT FINAL ROD	0 days	Wed 2/29/12	Wed 2/29/12	0%	743	A/E,NAVY
745	Regulator Concurrence	31 days	Thu 3/1/12	Sat 3/31/12	0%	744	USEPA,CTDEP
746	Final ROD	30 days	Sun 4/1/12	Mon 4/30/12	0%	745	A/E,NAVY
747	FINAL ROD	0 days	Mon 4/30/12	Mon 4/30/12	0%	746	A/E,NAVY
748	**RD (SO, GW, and TR SD)**	**1615 days**	**Wed 5/13/09**	**Sun 10/13/13**	**42%**		
749	Scope of Work for RD/RA	30 days	Wed 5/13/09	Thu 6/11/09	100%		A/E,NAVY
750	SCOPE OF WORK FOR RD/RA	0 days	Thu 6/11/09	Thu 6/11/09	100%	749	A/E,NAVY
751	**GW PDI WP AND FIELD WORK**	**519 days**	**Fri 6/12/09**	**Fri 11/12/10**	**100%**	**750**	
752	Draft PDI GW Work Plan	190 days	Fri 6/12/09	Fri 12/18/09	100%		A/E,NAVY
753	DRAFT PDI GW WORK PLAN	0 days	Fri 12/18/09	Fri 12/18/09	100%	752	A/E,NAVY
754	Navy Review	14 days	Sat 12/19/09	Fri 1/1/10	100%	753	NAVY
755	Resolution of Comments	10 days	Sat 1/2/10	Mon 1/11/10	100%	754	A/E,NAVY
756	Draft Final PDI GW WP	10 days	Tue 1/12/10	Thu 1/21/10	100%	755	A/E,NAVY
757	DRAFT FINAL PDI GW WP	0 days	Thu 1/21/10	Thu 1/21/10	100%	756	A/E,NAVY
758	Regulator Review	40 days	Fri 1/22/10	Tue 3/2/10	100%	757	USEPA,CTDEP
759	Resolution of Comments	30 days	Wed 3/3/10	Thu 4/1/10	100%	758	A/E,NAVY
760	Final PDI GW Work Plan	14 days	Fri 4/2/10	Thu 4/15/10	100%	759	A/E,NAVY
761	FINAL PDI GW WORK PLAN	0 days	Thu 4/15/10	Thu 4/15/10	100%	760	A/E,NAVY
762	Round 1 GW PDI (Field Work, Analysis, Validation)	70 days	Fri 4/16/10	Thu 6/24/10	100%	761	A/E,NAVY
763	Round 1 Draft GW PDI Tech Memo	15 days	Fri 6/25/10	Fri 7/9/10	100%	762	A/E,NAVY
764	Navy Review	5 days	Sat 7/10/10	Wed 7/14/10	100%	763	NAVY
765	Resolution of Comments	2 days	Thu 7/15/10	Fri 7/16/10	100%	764	A/E,NAVY
766	Round 1 Final GW PDI Tech Memo	4 days	Sat 7/17/10	Tue 7/20/10	100%	765	A/E,NAVY
767	ROUND 1 FINAL GW TECH MEMO	0 days	Tue 7/20/10	Tue 7/20/10	100%	766	A/E,NAVY
768	Round 2 GW PDI (Field Work , Analysis, Validation)	79 days	Thu 8/26/10	Fri 11/12/10	100%	762FS+62 days	A/E,NAVY
769	**SOIL PDI WP, FIELD WORK, AND REPORTING**	**837 days**	**Fri 6/12/09**	**Mon 9/26/11**	**86%**		
770	Internal Draft PDI Soil Work Plan	246 days	Fri 6/12/09	Fri 2/12/10	100%	749	A/E,NAVY
771	INTERNAL DRAFT PDI SOIL WORK PLAN	0 days	Fri 2/12/10	Fri 2/12/10	100%	770	A/E,NAVY
772	Navy Review	21 days	Sat 2/13/10	Fri 3/5/10	100%	771	NAVY
773	Resolution of Comments	5 days	Sat 3/6/10	Wed 3/10/10	100%	772	A/E,NAVY
774	Draft PDI Soil Work Plan	9 days	Thu 3/11/10	Fri 3/19/10	100%	773	A/E,NAVY
775	DRAFT PDI SOIL WORK PLAN	0 days	Fri 3/19/10	Fri 3/19/10	100%	774	A/E,NAVY
776	Regulator Review	45 days	Sat 3/20/10	Mon 5/3/10	100%	775	USEPA,CTDEP
777	Resolution of Comments	45 days	Tue 5/4/10	Thu 6/17/10	100%	776	A/E,NAVY
778	Draft Final PDI Soil Work Plan	36 days	Fri 6/18/10	Fri 7/23/10	100%	777	A/E,NAVY
779	DRAFT FINAL PDI SOIL WORK PLAN	0 days	Fri 7/23/10	Fri 7/23/10	100%	778	A/E,NAVY
780	Regulator Concurrence	14 days	Sat 7/24/10	Fri 8/6/10	100%	779	USEPA,CTDEP



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Task | Milestone | Rolled Up Task | Rolled Up Progress | Project Summary | Rolled Up Split | Deadline
Progress | Summary | Rolled Up Milestone | External Tasks | Split | External Milestone

2011 SMP SCHEDULE
NSB-NLON, GROTON, CONNECTICUT

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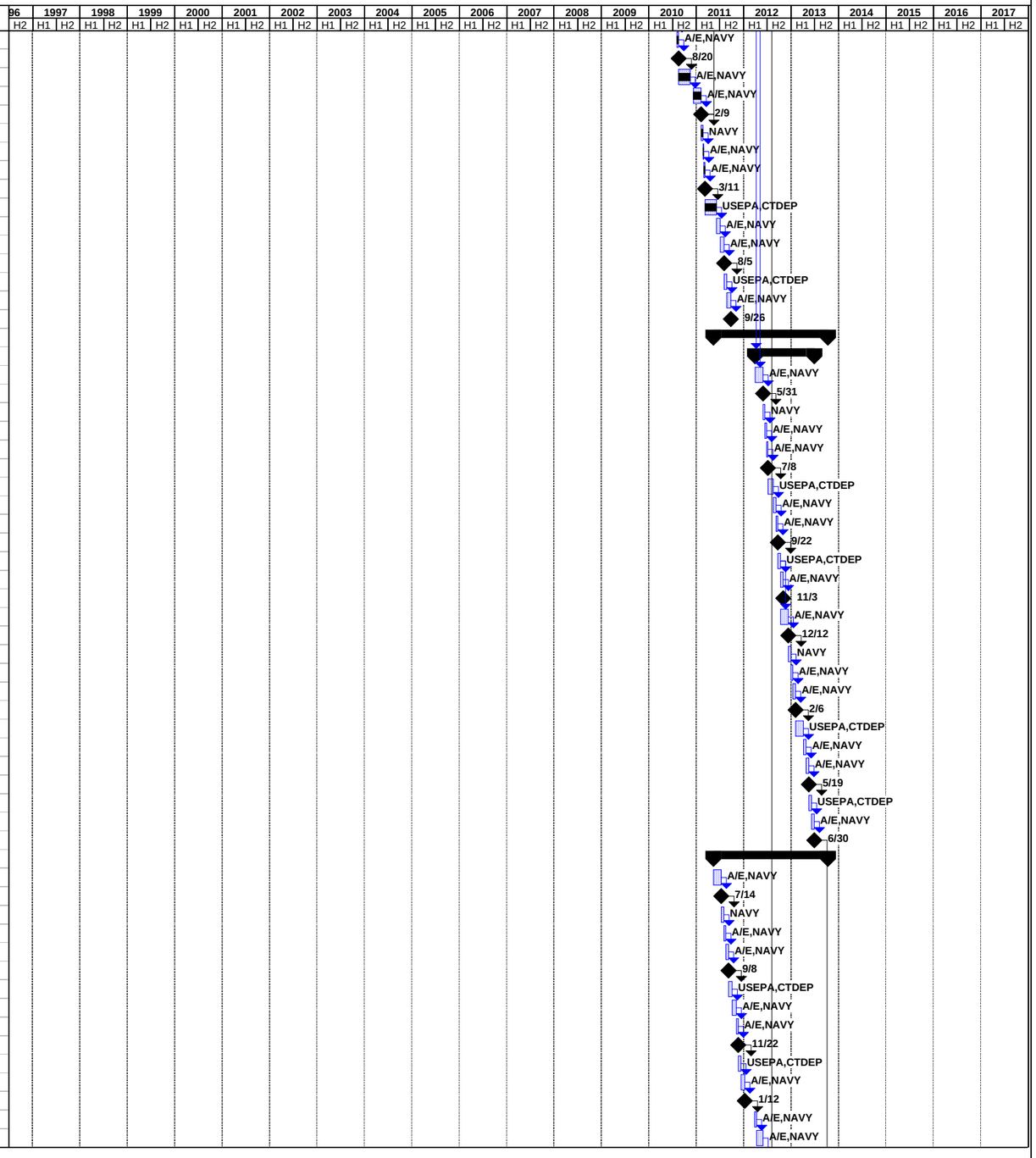
ID	Task Name	Duration	Start	Finish	% Complete	Predecessors	Resource Names
781	Final PDI Soil Work Plan	14 days	Sat 8/7/10	Fri 8/20/10	100%	780	A/E,NAVY
782	FINAL PDI SOIL WORK PLAN	0 days	Fri 8/20/10	Fri 8/20/10	100%	781	A/E,NAVY
783	Soil PDI (Field Work, Analysis, Validation)	88 days	Sat 8/21/10	Tue 11/16/10	100%	782	A/E,NAVY
784	Internal Draft SO/GW PDI Comp Rpt and FS Adnm	60 days	Sun 12/12/10	Wed 2/9/11	100%	783FS+25 days	A/E,NAVY
785	INTERNAL DRAFT SO/GW PDI COMP RPT AND FS ADNM	0 days	Wed 2/9/11	Wed 2/9/11	100%	784	A/E,NAVY
786	Navy Review	15 days	Thu 2/10/11	Thu 2/24/11	100%	785	NAVY
787	Resolution of Comments	5 days	Fri 2/25/11	Tue 3/1/11	100%	786	A/E,NAVY
788	Draft SO/GW PDI Comp Rpt and FS Adnm	10 days	Wed 3/2/11	Fri 3/11/11	100%	787	A/E,NAVY
789	DRAFT SO/GW PDI COMP RPT AND FS ADNM	0 days	Fri 3/11/11	Fri 3/11/11	100%	788	A/E,NAVY
790	Regulator Review	88 days	Sat 3/12/11	Tue 6/7/11	100%	789	USEPA,CTDEP
791	Resolution of Comments	29 days	Wed 6/8/11	Wed 7/6/11	0%	790	A/E,NAVY
792	Draft Final SO/GW PDI Comp Rpt and FS Adnm	30 days	Thu 7/7/11	Fri 8/5/11	0%	791	A/E,NAVY
793	DRAFT FINAL SO/GW PDI COMP RPT AND FS ADNM	0 days	Fri 8/5/11	Fri 8/5/11	0%	792	A/E,NAVY
794	Regulator Concurrence	21 days	Sat 8/6/11	Fri 8/26/11	0%	793	USEPA,CTDEP
795	Final SO/GW PDI Comp Rpt and FS Adnm	31 days	Sat 8/27/11	Mon 9/26/11	0%	794	A/E,NAVY
796	FINAL SO/GW PDI COMP RPT AND FS ADNM	0 days	Mon 9/26/11	Mon 9/26/11	0%	795	A/E,NAVY
797	**RD AND WORK PLAN**	**882 days**	**Mon 5/16/11**	**Sun 10/13/13**	**0%**		
798	**SOIL 30% DESIGN AND WORK PLAN**	**456 days**	**Sun 4/1/12**	**Sun 6/30/13**	**0%**	**743**	
799	Internal Draft Soil 30% Design	61 days	Sun 4/1/12	Thu 5/31/12	0%	745	A/E,NAVY
800	INTERNAL DRAFT SOIL 30% Design	0 days	Thu 5/31/12	Thu 5/31/12	0%	799	A/E,NAVY
801	Navy Review	14 days	Fri 6/1/12	Thu 6/14/12	0%	800	NAVY
802	Resolution of Comments	14 days	Fri 6/15/12	Thu 6/28/12	0%	801	A/E,NAVY
803	Draft Soil 30% Design	10 days	Fri 6/29/12	Sun 7/8/12	0%	802	A/E,NAVY
804	DRAFT SOIL 30% DESIGN	0 days	Sun 7/8/12	Sun 7/8/12	0%	803	A/E,NAVY
805	Regulator Review	41 days	Mon 7/9/12	Sat 8/18/12	0%	804	USEPA,CTDEP
806	Resolution of Comments	21 days	Sun 8/19/12	Sat 9/8/12	0%	805	A/E,NAVY
807	Draft Final Soil 30% Design	14 days	Sun 9/9/12	Sat 9/22/12	0%	806	A/E,NAVY
808	DRAFT FINAL SOIL 30% DESIGN	0 days	Sat 9/22/12	Sat 9/22/12	0%	807	A/E,NAVY
809	Regulator Concurrence	21 days	Sun 9/23/12	Sat 10/13/12	0%	808	USEPA,CTDEP
810	Final Soil 30% Design	21 days	Sun 10/14/12	Sat 11/3/12	0%	809	A/E,NAVY
811	FINAL SOIL 30% DESIGN	0 days	Sat 11/3/12	Sat 11/3/12	0%	810	A/E,NAVY
812	Internal Draft Soil RD Work Plan	60 days	Sun 10/14/12	Wed 12/12/12	0%	809	A/E,NAVY
813	INTERNAL DRAFT SOIL RD WORK PLAN	0 days	Wed 12/12/12	Wed 12/12/12	0%	812	A/E,NAVY
814	Navy Review	21 days	Thu 12/13/12	Wed 1/2/13	0%	813	NAVY
815	Resolution of Comments	14 days	Thu 1/3/13	Wed 1/16/13	0%	814	A/E,NAVY
816	Draft Soil RD Work Plan	21 days	Thu 1/17/13	Wed 2/6/13	0%	815	A/E,NAVY
817	DRAFT SOIL RD WORK PLAN	0 days	Wed 2/6/13	Wed 2/6/13	0%	816	A/E,NAVY
818	Regulator Review	60 days	Thu 2/7/13	Sun 4/7/13	0%	817	USEPA,CTDEP
819	Resolution of Comments	21 days	Mon 4/8/13	Sun 4/28/13	0%	818	A/E,NAVY
820	Draft Final Soil RD Work Plan	21 days	Mon 4/29/13	Sun 5/19/13	0%	819	A/E,NAVY
821	DRAFT FINAL SOIL RD WORK PLAN	0 days	Sun 5/19/13	Sun 5/19/13	0%	820	A/E,NAVY
822	Regulator Concurrence	21 days	Mon 5/20/13	Sun 6/9/13	0%	821	USEPA,CTDEP
823	Final Soil RD Work Plan	21 days	Mon 6/10/13	Sun 6/30/13	0%	822	A/E,NAVY
824	FINAL SOIL RD WORK PLAN	0 days	Sun 6/30/13	Sun 6/30/13	0%	823	A/E,NAVY
825	**SEDIMENT 30% DESIGN AND WORK PLAN**	**882 days**	**Mon 5/16/11**	**Sun 10/13/13**	**0%**		
826	Internal Draft Sediment PDI WP	60 days	Mon 5/16/11	Thu 7/14/11	0%		A/E,NAVY
827	INTERNAL DRAFT SEDIMENT PDI WP	0 days	Thu 7/14/11	Thu 7/14/11	0%	826	A/E,NAVY
828	Navy Review	21 days	Fri 7/15/11	Thu 8/4/11	0%	827	NAVY
829	Resolution of Comments	14 days	Fri 8/5/11	Thu 8/18/11	0%	828	A/E,NAVY
830	Draft Sediment PDI WP	21 days	Fri 8/19/11	Thu 9/8/11	0%	829	A/E,NAVY
831	DRAFT SEDIMENT PDI WP	0 days	Thu 9/8/11	Thu 9/8/11	0%	830	A/E,NAVY
832	Regulator Review	29 days	Fri 9/9/11	Fri 10/7/11	0%	831	USEPA,CTDEP
833	Resolution of Comments	31 days	Sat 10/8/11	Mon 11/7/11	0%	832	A/E,NAVY
834	Draft Final Sediment PDI WP	15 days	Tue 11/8/11	Tue 11/22/11	0%	833	A/E,NAVY
835	DRAFT FINAL SEDIMENT PDI WP	0 days	Tue 11/22/11	Tue 11/22/11	0%	834	A/E,NAVY
836	Regulator Concurrence	21 days	Wed 11/23/11	Tue 12/13/11	0%	835	USEPA,CTDEP
837	Final Sediment PDI WP	30 days	Wed 12/14/11	Thu 1/12/12	0%	836	A/E,NAVY
838	FINAL SEDIMENT PDI WP	0 days	Thu 1/12/12	Thu 1/12/12	0%	837	A/E,NAVY
839	Sediment PDI Field Work	15 days	Wed 3/28/12	Wed 4/11/12	0%	838FS+75 days	A/E,NAVY
840	Sediment PDI Analysis and Validation	50 days	Thu 4/12/12	Thu 5/31/12	0%	839	A/E,NAVY



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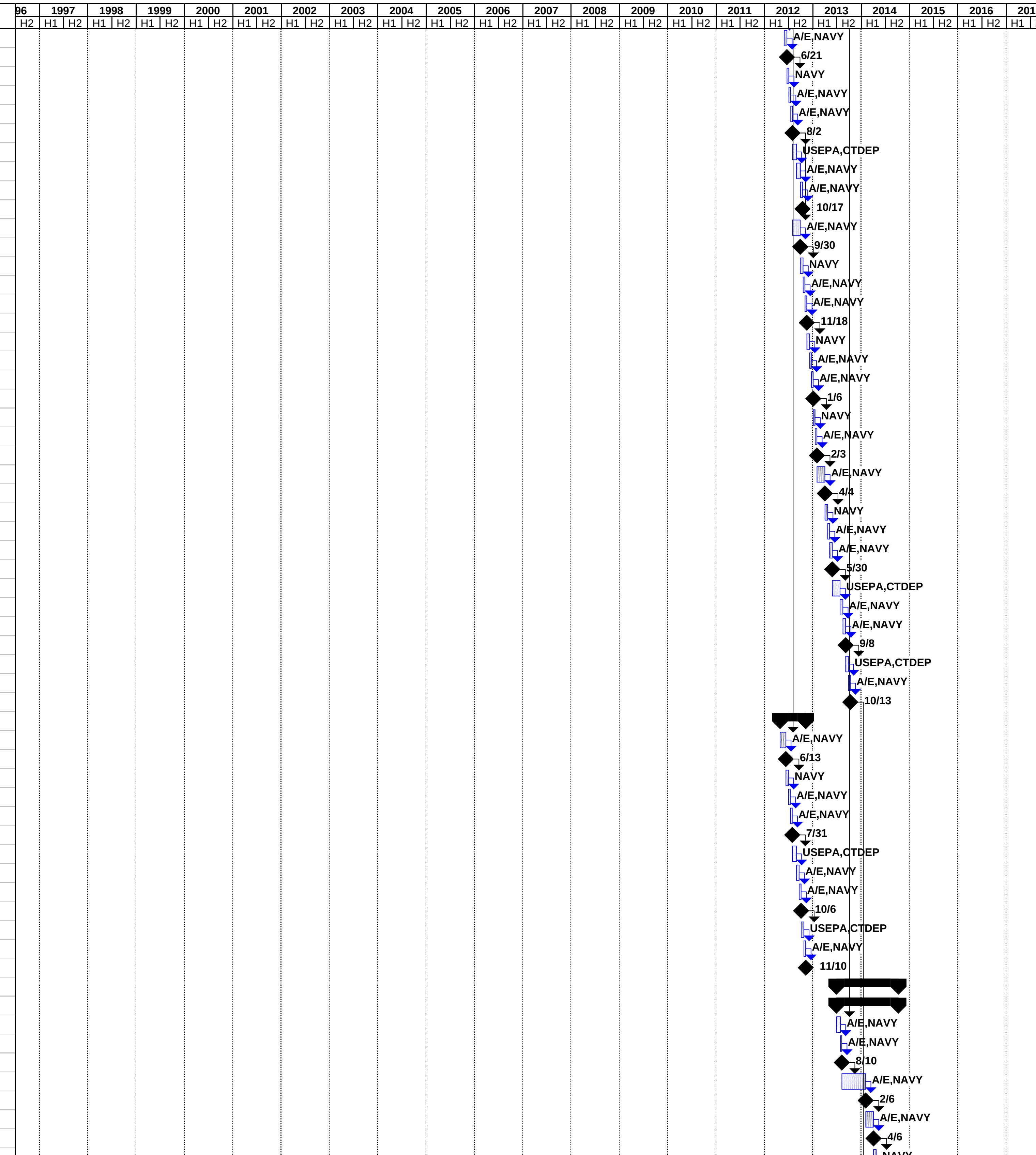
Task | Milestone | Rolled Up Task | Rolled Up Progress | Project Summary | Rolled Up Split | Deadline
Progress | Summary | Rolled Up Milestone | External Tasks | Split | External Milestone

2011 SMP SCHEDULE
NSB-NLON, GROTON, CONNECTICUT

ID	Task Name	Duration	Start	Finish	% Complete	Predecessors	Resource Names
841	Int Draft Sediment PDI Tech Memo	21 days	Fri 6/1/12	Thu 6/21/12	0%	840	A/E,NAVY
842	INT DRAFT SEDIMENT PDI TECH MEMO	0 days	Thu 6/21/12	Thu 6/21/12	0%	841	A/E,NAVY
843	Navy Review	14 days	Fri 6/22/12	Thu 7/5/12	0%	842	NAVY
844	Resolution of Comments	14 days	Fri 7/6/12	Thu 7/19/12	0%	843	A/E,NAVY
845	Draft Sediment PDI Tech Memo	14 days	Fri 7/20/12	Thu 8/2/12	0%	844	A/E,NAVY
846	DRAFT SEDIMENT PDI TECH MEMO	0 days	Thu 8/2/12	Thu 8/2/12	0%	845	A/E,NAVY
847	Regulator Review	30 days	Fri 8/3/12	Sat 9/1/12	0%	846	USEPA,CTDEP
848	Resolution of Comments	30 days	Sun 9/2/12	Mon 10/1/12	0%	847	A/E,NAVY
849	Final Sediment PDI Tech Memo	16 days	Tue 10/2/12	Wed 10/17/12	0%	848	A/E,NAVY
850	FINAL SEDIMENT PDI TECH MEMO	0 days	Wed 10/17/12	Wed 10/17/12	0%	849	A/E,NAVY
851	Int Draft Sediment 30% Design	59 days	Fri 8/3/12	Sun 9/30/12	0%	846	A/E,NAVY
852	INT DRAFT SEDIMENT 30% DESIGN	0 days	Sun 9/30/12	Sun 9/30/12	0%	851	A/E,NAVY
853	Navy Review	21 days	Mon 10/1/12	Sun 10/21/12	0%	852	NAVY
854	Resolution of Comments	14 days	Mon 10/22/12	Sun 11/4/12	0%	853	A/E,NAVY
855	Draft Sediment 30% Design	14 days	Mon 11/5/12	Sun 11/18/12	0%	854	A/E,NAVY
856	DRAFT SEDIMENT 30% DESIGN	0 days	Sun 11/18/12	Sun 11/18/12	0%	855	A/E,NAVY
857	Navy Review	21 days	Mon 11/19/12	Sun 12/9/12	0%	856	NAVY
858	Resolution of Comments	14 days	Mon 12/10/12	Sun 12/23/12	0%	857	A/E,NAVY
859	Draft Final Sediment 30% Design	14 days	Mon 12/24/12	Sun 1/6/13	0%	858	A/E,NAVY
860	DRAFT FINAL SEDIMENT 30% DESIGN	0 days	Sun 1/6/13	Sun 1/6/13	0%	859	A/E,NAVY
861	Navy Concurrence	14 days	Mon 1/7/13	Sun 1/20/13	0%	860	NAVY
862	Final Sediment 30% Design	14 days	Mon 1/21/13	Sun 2/3/13	0%	861	A/E,NAVY
863	FINAL SEDIMENT 30% DESIGN	0 days	Sun 2/3/13	Sun 2/3/13	0%	862	A/E,NAVY
864	Internal Draft Sediment RD Work Plan	60 days	Mon 2/4/13	Thu 4/4/13	0%	863	A/E,NAVY
865	INTERNAL DRAFT SEDIMENT RD WORK PLAN	0 days	Thu 4/4/13	Thu 4/4/13	0%	864	A/E,NAVY
866	Navy Review	21 days	Fri 4/5/13	Thu 4/25/13	0%	865	NAVY
867	Resolution of Comments	14 days	Fri 4/26/13	Thu 5/9/13	0%	866	A/E,NAVY
868	Draft Sediment RD Work Plan	21 days	Fri 5/10/13	Thu 5/30/13	0%	867	A/E,NAVY
869	DRAFT SEDIMENT RD WORK PLAN	0 days	Thu 5/30/13	Thu 5/30/13	0%	868	A/E,NAVY
870	Regulator Review	59 days	Fri 5/31/13	Sun 7/28/13	0%	869	USEPA,CTDEP
871	Resolution of Comments	21 days	Mon 7/29/13	Sun 8/18/13	0%	870	A/E,NAVY
872	Draft Final Sediment RD Work Plan	21 days	Mon 8/19/13	Sun 9/8/13	0%	871	A/E,NAVY
873	DRAFT FINAL SEDIMENT RD WORK PLAN	0 days	Sun 9/8/13	Sun 9/8/13	0%	872	A/E,NAVY
874	Regulator Concurrence	21 days	Mon 9/9/13	Sun 9/29/13	0%	873	USEPA,CTDEP
875	Final Sediment RD Work Plan	14 days	Mon 9/30/13	Sun 10/13/13	0%	874	A/E,NAVY
876	FINAL SEDIMENT RD WORK PLAN	0 days	Sun 10/13/13	Sun 10/13/13	0%	875	A/E,NAVY
877	**LAND USE CONTROL REMEDIAL DESIGN**	**194 days**	**Tue 5/1/12**	**Sat 11/10/12**	**0%**		
878	Internal Draft LUC RD	44 days	Tue 5/1/12	Wed 6/13/12	0%	747	A/E,NAVY
879	INTERNAL DRAFT LUC RD	0 days	Wed 6/13/12	Wed 6/13/12	0%	878	A/E,NAVY
880	Navy Review	20 days	Thu 6/14/12	Tue 7/3/12	0%	879	NAVY
881	Resolution of Comments	14 days	Wed 7/4/12	Tue 7/17/12	0%	880	A/E,NAVY
882	Draft LUC RD	14 days	Wed 7/18/12	Tue 7/31/12	0%	881	A/E,NAVY
883	DRAFT LUC RD	0 days	Tue 7/31/12	Tue 7/31/12	0%	882	A/E,NAVY
884	Regulator Review	32 days	Wed 8/1/12	Sat 9/1/12	0%	883	USEPA,CTDEP
885	Resolution of Comments	21 days	Sun 9/2/12	Sat 9/22/12	0%	884	A/E,NAVY
886	Draft Final LUC RD	14 days	Sun 9/23/12	Sat 10/6/12	0%	885	A/E,NAVY
887	DRAFT FINAL LUC RD	0 days	Sat 10/6/12	Sat 10/6/12	0%	886	A/E,NAVY
888	Regulator Concurrence	21 days	Sun 10/7/12	Sat 10/27/12	0%	887	USEPA,CTDEP
889	Final LUC RD	14 days	Sun 10/28/12	Sat 11/10/12	0%	888	A/E,NAVY
890	FINAL LUC RD	0 days	Sat 11/10/12	Sat 11/10/12	0%	889	A/E,NAVY
891	**RA (SO and TR SD)**	**469 days**	**Mon 7/1/13**	**Sun 10/12/14**	**0%**		
892	**SOIL REMEDIAL ACTION**	**468 days**	**Mon 7/1/13**	**Sat 10/11/14**	**0%**		
893	Contract Action	31 days	Mon 7/1/13	Wed 7/31/13	0%	824	A/E,NAVY
894	Award Construction	10 days	Thu 8/1/13	Sat 8/10/13	0%	893	A/E,NAVY
895	Start of Construction	0 days	Sat 8/10/13	Sat 8/10/13	0%	894	A/E,NAVY
896	Construction	180 days	Sun 8/11/13	Thu 2/6/14	0%	895	A/E,NAVY
897	Remedy In Place	0 days	Thu 2/6/14	Thu 2/6/14	0%	896	A/E,NAVY
898	Internal Draft RA Completion Report	59 days	Fri 2/7/14	Sun 4/6/14	0%	897	A/E,NAVY
899	INTERNAL DRAFT RA COMPLETION REPORT	0 days	Sun 4/6/14	Sun 4/6/14	0%	898	A/E,NAVY
900	Navy Review	21 days	Mon 4/7/14	Sun 4/27/14	0%	899	NAVY



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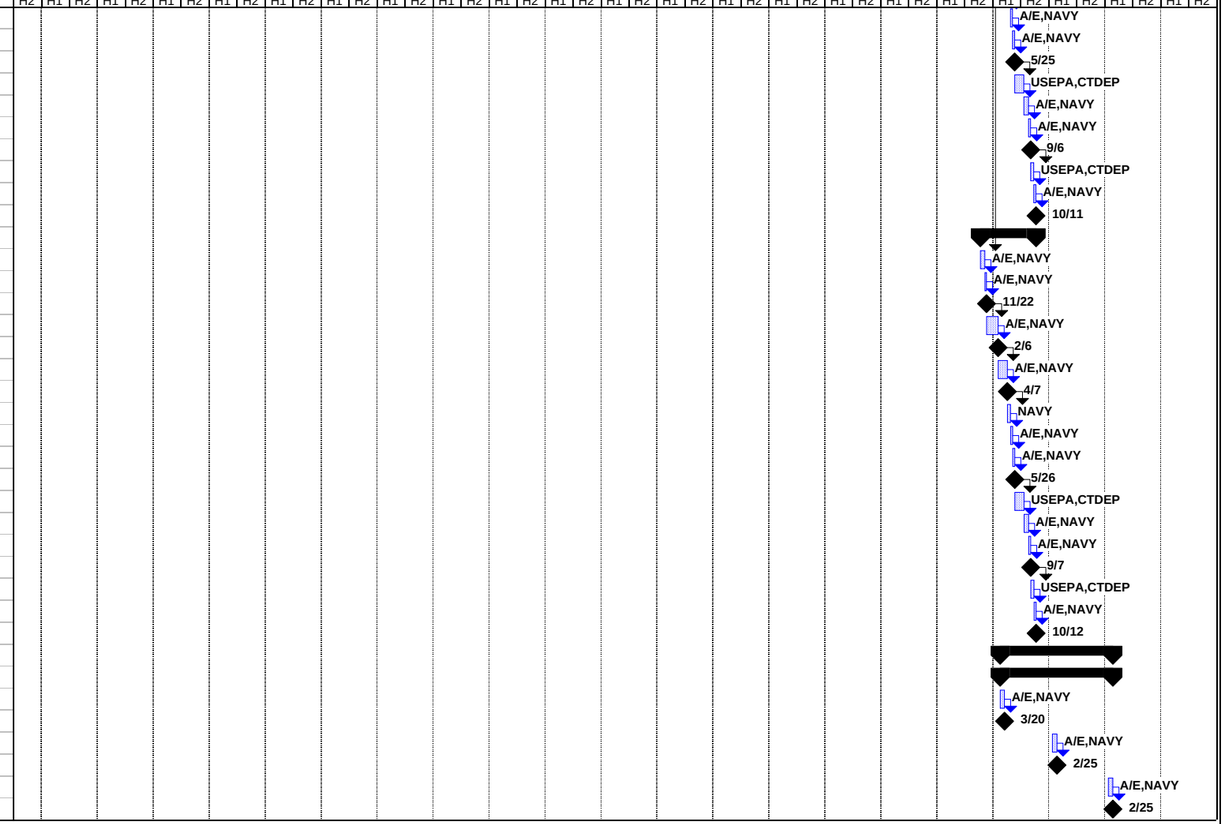
Task | Progress | Milestone | Summary | Rolled Up Task | Rolled Up Milestone | Rolled Up Progress | External Tasks | Project Summary | Split | Rolled Up Split | External Milestone | Deadline

2011 SMP SCHEDULE
NSB-NLON, GROTON, CONNECTICUT

ID	Task Name	Duration	Start	Finish	% Complete	Predecessors	Resource Names
901	Resolution of Comments	14 days	Mon 4/28/14	Sun 5/11/14	0%	900	A/E,NAVY
902	Draft RA Completion Report	14 days	Mon 5/12/14	Sun 5/25/14	0%	901	A/E,NAVY
903	DRAFT RA COMPLETION REPORT	0 days	Sun 5/25/14	Sun 5/25/14	0%	902	A/E,NAVY
904	Regulator Review	60 days	Mon 5/26/14	Thu 7/24/14	0%	903	USEPA,CTDEP
905	Resolution of Comments	30 days	Fri 7/25/14	Sat 8/23/14	0%	904	A/E,NAVY
906	Draft Final RA Completion Report	14 days	Sun 8/24/14	Sat 9/6/14	0%	905	A/E,NAVY
907	DRAFT FINAL RA COMPLETION REPORT	0 days	Sat 9/6/14	Sat 9/6/14	0%	906	A/E,NAVY
908	Regulator Concurrence	21 days	Sun 9/7/14	Sat 9/27/14	0%	907	USEPA,CTDEP
909	Final RA Completion Report	14 days	Sun 9/28/14	Sat 10/11/14	0%	908	A/E,NAVY
910	FINAL RA COMPLETION REPORT	0 days	Sat 10/11/14	Sat 10/11/14	0%	909	A/E,NAVY
911	**SEDIMENT REMEDIAL ACTION**	**364 days**	**Mon 10/14/13**	**Sun 10/12/14**	**0%**		
912	Contract Action	30 days	Mon 10/14/13	Tue 11/12/13	0%	876	A/E,NAVY
913	Award Construction	10 days	Wed 11/13/13	Fri 11/22/13	0%	912	A/E,NAVY
914	Start of Construction	0 days	Fri 11/22/13	Fri 11/22/13	0%	913	A/E,NAVY
915	Construction	76 days	Sat 11/23/13	Thu 2/6/14	0%	914	A/E,NAVY
916	Remedy In Place	0 days	Thu 2/6/14	Thu 2/6/14	0%	915	A/E,NAVY
917	Internal Draft RA Completion Report	60 days	Fri 2/7/14	Mon 4/7/14	0%	916	A/E,NAVY
918	INTERNAL DRAFT RA COMPLETION REPORT	0 days	Mon 4/7/14	Mon 4/7/14	0%	917	A/E,NAVY
919	Navy Review	21 days	Tue 4/8/14	Mon 4/28/14	0%	918	NAVY
920	Resolution of Comments	14 days	Tue 4/29/14	Mon 5/12/14	0%	919	A/E,NAVY
921	Draft RA Completion Report	14 days	Tue 5/13/14	Mon 5/26/14	0%	920	A/E,NAVY
922	DRAFT RA COMPLETION REPORT	0 days	Mon 5/26/14	Mon 5/26/14	0%	921	A/E,NAVY
923	Regulator Review	60 days	Tue 5/27/14	Fri 7/25/14	0%	922	USEPA,CTDEP
924	Resolution of Comments	30 days	Sat 7/26/14	Sun 8/24/14	0%	923	A/E,NAVY
925	Draft Final RA Completion Report	14 days	Mon 8/25/14	Sun 9/7/14	0%	924	A/E,NAVY
926	DRAFT FINAL RA COMPLETION REPORT	0 days	Sun 9/7/14	Sun 9/7/14	0%	925	A/E,NAVY
927	Regulator Concurrence	21 days	Mon 9/8/14	Sun 9/28/14	0%	926	USEPA,CTDEP
928	Final RA Completion Report	14 days	Mon 9/29/14	Sun 10/12/14	0%	927	A/E,NAVY
929	FINAL RA COMPLETION REPORT	0 days	Sun 10/12/14	Sun 10/12/14	0%	928	A/E,NAVY
930	**LONG-TERM MANAGEMENT (SO, GW, and TR SD)**	**736 days**	**Thu 2/20/14**	**Thu 2/25/16**	**0%**		
931	**O&M**	**736 days**	**Thu 2/20/14**	**Thu 2/25/16**	**0%**		
932	O&M Manual Update No. 4	29 days	Thu 2/20/14	Thu 3/20/14	0%		A/E,NAVY
933	O&M MANUAL UPDATE NO. 4	0 days	Thu 3/20/14	Thu 3/20/14	0%	932	A/E,NAVY
934	Year 1 O&M/LUC Inspection Report	30 days	Tue 1/27/15	Wed 2/25/15	0%		A/E,NAVY
935	YEAR 1 O&M/LUC INSPECTION REPORT	0 days	Wed 2/25/15	Wed 2/25/15	0%	934	A/E,NAVY
936	Year 2 O&M/LUC Inspection Report	30 days	Wed 1/27/16	Thu 2/25/16	0%		A/E,NAVY
937	YEAR 2 O&M/LUC INSPECTION REPORT	0 days	Thu 2/25/16	Thu 2/25/16	0%	936	A/E,NAVY



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Task | Milestone | Rolled Up Task | Rolled Up Progress | Project Summary | Rolled Up Split | Deadline
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