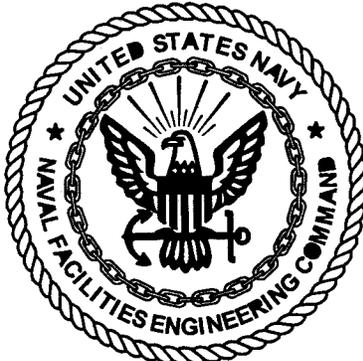


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DRAFT ENVIRONMENTAL BASELINE SURVEY FOR LEASE FOR FORMER BUILDINGS NS-
2, NS-3 AND FACILITY NS-4 CNC CHARLESTON SC
10/01/1999
ENSAFE INC

**DRAFT
ENVIRONMENTAL
BASELINE SURVEY
FOR LEASE**



**FORMER BUILDINGS NS-2, NS-3, AND
FACILITY NS-4
CHARLESTON NAVAL COMPLEX
CHARLESTON, SOUTH CAROLINA**

Prepared for:

**Department of the Navy, Southern Division
Naval Facilities Engineering Command
North Charleston, South Carolina**

**Contract Number: N62467-89-0318
CTO-135**



Prepared by:

**EnSafe Inc.
5724 Summer Trees Drive
Memphis, Tennessee 38134
(901) 372-7962**

October 1999

**DRAFT FINDING OF SUITABILITY TO LEASE
SITE OF FORMER BUILDINGS NS-2 AND NS-3 AND FACILITY NS-4
CHARLESTON NAVAL COMPLEX, CHARLESTON, S.C.**

I have reviewed the Environmental Baseline Survey for Lease (EBSL) prepared to facilitate the interim leasing of the site of former Buildings NS-2 and NS-3 and Facility NS-4 at the Charleston Naval Complex to xxx. I have also reviewed those portions of the Reuse Plan for the Charleston Naval Complex which are pertinent to the planned reuse of this facility and its associated realty (hereinafter subject property). Based upon these reviews and in reliance upon the specific findings contained in the EBSL, I have determined that the subject property is presently suitable for leasing to xxx for those general purposes that are in conformance with said Reuse Plan. A list of the former subject buildings/facilities and their past usage follows:

Building Usage		
Building/Facility Number	Building/Facility Designation	Usage
NS-2	NS-2 Utility Building	Boiler House
NS-3	Fuel Pumphouse	Pumphouse
NS-4	Fuel Oil Storage	Underground Storage Tank

A review of all available records, aerial photographs, personnel interviews and physical site inspections conducted in 1999 revealed the presence or likely presence of potentially hazardous substances or products on subject property and/or adjacent property(ies) which could migrate onto subject property. All reasonably ascertainable information as to the type, quantity and dates of storage, release and/or disposal of such substances and/or products has been included in Section 5.0 of the EBSL which supports this suitability determination.

Notwithstanding the discovered presence or likely presence of such substances or products, I am satisfied that subject property can be used for its intended purpose with acceptable risk to human health and the environment and without interference with the environmental restoration process ongoing at the Charleston Naval Complex with appropriate utilization of the attached lease restrictions. In light of the discovered presence and/or likely presence of such substances and/or products on subject property, any lease agreement(s) with the tenant shall also provide that the federal government will indemnify and hold the tenant harmless from future financial liability which might result from the presence of such contamination on subject property to the extent authorized by Section 330 of P.L. 102-484.

The Charleston Naval Complex currently operates under a Resource Conservation and Recovery Act (RCRA) hazardous waste management permit. A RCRA Facility Investigation (RFI) intended to identify the nature and extent of soil and/or groundwater contamination throughout the facility is presently ongoing. These environmental restoration activities are being

conducted pursuant to applicable RCRA regulations. The subject parcels are located in RFI Zone I. The Final RFI Zone I Report was submitted to the U.S. EPA and South Carolina Department of Health and Environmental Control (SCDHEC) for review in March 1999. Two RCRA units (AOCs 675 and 677) are associated with the subject property; these are discussed in more detail in Section 5.3 of the attached EBSL.

No Federal Facility Agreements or Interagency Agreements (FFAs/IAGs) pertain to the subject property or these activities. **Because as of the date of execution of this FOSL, investigative activities are still ongoing with regard to subject property, the Navy will provide notice to the CNCRA as Lessee of any newly discovered hazardous substance and/or petroleum product contamination found on the leased premises as a result of these efforts. The attached lease restrictions will ensure that the Navy, U.S. EPA and SCDHEC representatives or their agents will have the right to enter the leased premises to conduct all necessary investigations and surveys, including, where necessary, drilling, soil and water sampling, and other activities related to ensuring compliance with the Naval Base's RCRA permit.**

Several RCRA Solid Waste Management Units (SWMUs) and Areas of Concern (AOCs) are located on the Naval Base property within one-quarter mile of the subject property. These sites are discussed in more detail in Section 6.0 of the attached EBSL. Because these sites may present a potential for contaminant migration onto subject property, the Lessee will be restricted via the attached lease restrictions from either conducting or permitting any sublessee to conduct any subsurface excavation, digging, drilling or other disturbance of the surface without prior written approval from the Navy.

In accordance with the requirements of the National Environmental Policy Act of 1970 (NEPA), an Environmental Impact Statement was prepared for disposal and reuse of the entire Naval Base. The NEPA Record of Decision (RoD) was issued on 7 May 1996. In accordance with Section 120(h)(5) of the Comprehensive Environmental Response Compensation and Liability Act of 1980, as amended, and because interim leasing of Subject Property will occur after operational closure of the Naval Base, formal notification of the proposed duration of such lease along with a description of the use(s) will be provided to the U.S. EPA and SCDHEC prior to execution of any lease agreement with the CNCRA for such property

In accordance with Department of Defense (DoD) policy, the U.S. EPA and the SCDHEC have been provided copies of this FOSL and the EBSL for their review. Comments received were either incorporated directly into the final EBSL or are presently listed as unresolved comments as reflected in Appendix C of the EBSL. This FOSL and attached lease restrictions as well as the final EBSL for the subject property will be made part of any lease to be entered into with the CNCRA and copies of the same will be provided to the CNCRA as well as the appropriate U.S. EPA and South Carolina DHEC representatives after execution of the same.

NOW THEREFORE, based on the information contained herein and subject to application of the aforementioned lease restrictions, the subject property is suitable to lease.

Date

W.H. LEWIS, CAPT, CEC, USN
Commanding Officer
Southern Division
Naval Facilities Engineering Command
Charleston, South Carolina

LEASE RESTRICTIONS
Attachment to the Draft Finding of Suitability to Lease
Former Buildings NS-2 and NS-3 and Facility NS-4
Charleston Naval Complex

The following restrictions as a minimum shall be included in the lease for the subject buildings to ensure protection of human health and the environment and to prevent interruption of the environmental restoration process being conducted by the Navy.

1. The sole purpose for which the leased premises and any improvements thereon may be used, in the absence of prior written approval by the Government for any other use, is for industrial storage, parking, administration, and related support activities.
2. Lessee shall neither transfer nor assign this lease or any interest therein or any property on the leased premises without prior Government approval. Lessee may sublet the leased premises or any part thereof or any property thereon, or grant any interest, privilege, or license whatsoever in connection with this lease with the prior written consent of the Government. Any interim use and occupancy of the leased premises in each and every instance are subject to the prior approval of the Contracting Officer. Such consent shall not be unreasonably withheld or delayed. Every sublease shall contain the Environmental Protection provisions set forth herein.
3. Lessee and any sublessee shall comply with the applicable environmental laws and regulations and all other Federal, state, and local laws, regulations, and standards that are or may become applicable to Lessee's activities on the leased premises.
4. Lessee and any sublessee shall be solely responsible for obtaining at its cost and expense any environmental permits required for its operation under the lease, independent of any existing permits.
5. Government's rights under this lease specifically include the right for Government officials to inspect upon reasonable notice the leased premises for compliance with environmental, safety, and occupational health laws and regulations, whether or not Government is responsible for enforcing them. Such inspections are without prejudice to the right of duly constituted enforcement officials to make such inspections.
6. Government shall be allowed access to the premises for any purpose upon notice to the Lessee. All necessary keys to the buildings and facilities occupied by Lessee or any sublessee shall be made available to Government upon request. Government normally will give Lessee or any sublessee 24 hour prior notice of its intention to enter the leased premises unless it determines the entry is required for safety, environmental, operations or security purposes. Lessee shall have no claim on account of any entries against the United States or any officer, agent, employee or contractor.

7. The Lessee agrees that the Government assumes no liability to the Lessee or its sublessees should hazardous waste cleanup requirements, whether imposed by law, regulatory agencies, Department of Defense (DoD) or Navy, interfere with the Lessee's use of the leased premises. The Lessee shall have no claim on account of any such interference against the Government or any officer, agent, employee, or contractor thereof.

8. The Navy, U.S. Environmental Protection Agency (EPA), and South Carolina Department of Health and Environmental Control (DHEC) and their officers, agents, employees, contractors, and subcontractors have the right, upon reasonable notice to the Lessee and any sublessee, to enter upon the leased premises for the purposes enumerated below and for such other purposes associated with environmental restoration activities in or around the leased premises:

(a) To conduct investigations and surveys, including, where necessary, drilling, soil and water sampling, testpitting, borings, and other activities related to the Naval Base, Charleston, Installation Restoration (IR) Program.

(b) To inspect field activities of the Navy and its contractors and subcontractors in implementing these programs.

(c) To conduct any test or survey required by EPA or DHEC relating to the implementation of these programs or environmental conditions at the leased premises or to verify any data submitted to the EPA or DHEC by the Navy relating to such conditions.

(d) To construct, operate, maintain, or undertake any response or remedial action as required or necessary including, but not limited to, monitoring wells, pumping wells, and treatment facilities.

9. Lessee agrees to comply with the provisions of any health and safety plan in effect during the course of any of the described response or remedial actions. Any inspection, survey, investigation, or other response or remedial action will, to the extent practicable, be coordinated with representatives designated by Lessee and any sublessee. Lessee, any sublessees, or licensees shall have no claim on account of such entries against the United States or any officer, agent, employee, contractor, or subcontractor thereof. In addition, Lessee shall comply with all applicable Federal, state, and local occupational safety and health regulations.

10. Lessee agrees that in the event of assignment or sublease of the leased premises, it shall provide to the EPA and DHEC by certified mail a copy of the agreement or sublease of the leased premises within fourteen (14) days after the effective date of such transaction. Lessee may delete the financial terms and any other proprietary information from the copy of any agreement of assignment or sublease furnished pursuant to this condition.

11. The Lessee shall strictly adhere to the hazardous waste permit requirements under the Resource Conservation and Recovery Act (RCRA) and the State of South Carolina equivalent and any other applicable laws, rules or regulations. Except as specifically authorized by the

Government in writing, the Lessee must provide at its own expense such hazardous waste management facilities, complying with all laws and regulations, as it may need for such management. Government hazardous waste management facilities will not be available to the Lessee. Any violation of the requirements of this condition may be deemed a material breach of this Lease.

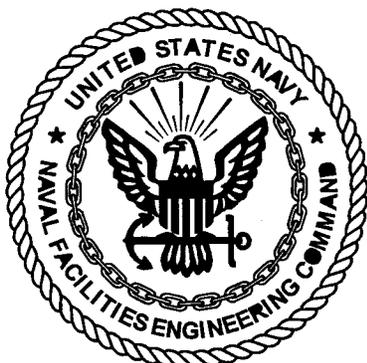
12. DoD Component accumulation points for hazardous and other wastes will not be used by the Lessee or any sublessee. Neither will the Lessee or sublessee permit its hazardous wastes to be commingled with hazardous waste of any DoD Component.

13. The Lessee shall have a Government-approved plan for responding to hazardous waste, fuel, and other chemical spills prior to commencement of operations at the leased facilities. Such plan shall be independent of any Government response plans, and shall not rely on use of Government personnel or equipment. Should the Government provide any personnel or equipment, whether for initial fire response and/or spill containment, or otherwise on request of the Lessee, or because the Lessee was not, in the opinion of said officer, conducting timely cleanup actions, the Lessee agrees to reimburse the Government for its cost.

14. The Lessee shall not construct, make, or permit its sublessees to construct or make any substantial alterations, additions, or improvements to or installations upon or otherwise modify or alter the leased premises in any way which may adversely affect the cleanup, human health, or the environment without prior written consent of the Government. Such consent may include a requirement to provide the Government with a performance and payment bond satisfactory to it in all respects and other requirements deemed necessary to protect the interests of the Government. For construction of alterations, additions, modifications, improvements or installations (collectively "work") in the proximity of any IR site, such consent may include a requirement for a written approval by the Government's Remedial Project Manager. Except as such written approval shall expressly provide otherwise, all such approved alterations, additions, modifications, improvements, and installations shall become Government property when annexed to the leased premises.

15. Lessee shall not conduct, or permit its sublessees to conduct, any subsurface excavation, digging, drilling or other disturbance of the surface without prior written approval of the Government. If, after written approval by the Government, the Lessee undertakes any subsurface excavation, digging, drilling or other disturbance of the surface, the Lessee shall immediately notify the government should any buried debris, or foreign, potentially hazardous material be encountered during this work.

**DRAFT
ENVIRONMENTAL
BASELINE SURVEY
FOR LEASE**



**FORMER BUILDINGS NS-2, NS-3, AND
FACILITY NS-4
CHARLESTON NAVAL COMPLEX
CHARLESTON, SOUTH CAROLINA**

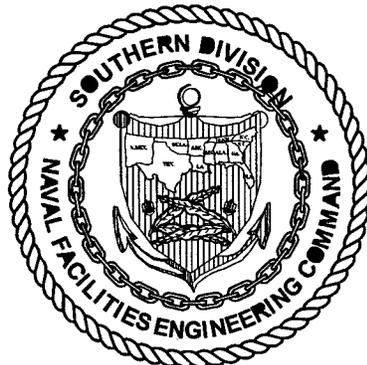
Prepared for:

**Department of the Navy, Southern Division
Naval Facilities Engineering Comm
North Charleston, South Carolina**

**Contract Number: N62467-89-0318
CTO-135**

Prepared by:

**EnSafe Inc.
5724 Summer Trees Drive
Memphis, Tennessee 38134
(901) 372-7962**



**The Contractor, EnSafe Inc., hereby
certifies that, to the best of its knowledge
and belief, the technical data delivered
herewith under Contract No.
N62467-89-D-0318 is complete, accurate, and
complies with all requirements of the
contract.**

Date: October 1999

**Signature
Name: Robert A. Maddux, Jr., P.E.
Title: Task Order Manager**

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List of Acronyms

ACM	Asbestos Containing Material
AOCs	Areas of Concern
AST	Aboveground Storage Tank
BRAC	Base Realignment and Closure
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
CERFA	Community Environmental Response Facilitation Act
DHEC	Department of Health and Environmental Control
DoD	Department of Defense
E/A&H	EnSafe/Allen & Hoshall
EBS	Environmental Baseline Survey
EBSL	Environmental Baseline Survey for Lease
EBST	Environmental Baseline Survey for Transfer
EPA	Environmental Protection Agency
FOSL	Finding of Suitability to Lease
FOST	Finding of Suitability to Transfer
IC	Institutional Controls
IM	Intermediate Measures
IRP	Installation Restoration Program
mph	miles per hour
msl	mean sea level
NAVRAMP	Navy Radon Assessment and Mitigation Program
NCSD	North Charleston Sewer District
NEPA	National Environmental Policy Act
NFA	No Further Action
NPDES	National Pollutant Discharge Elimination System
PAHs	Polynuclear Aromatic Hydrocarbons
PCBs	Polychlorinated Biphenyls
pCi/L	Picocuries per Liter
PST	Petroleum Storage Tank

List of Abbreviations (Continued)

RCRA	Resource Conservation and Recovery Act
RFA	RCRA Facility Assessment
RFI	RCRA Facility Investigation
SACM	Suspect Asbestos Containing Materials
SCDHEC	South Carolina Department of Health and Environmental Control
SOUTHNAVEFACENGCOM	Southern Division, Naval Facilities Engineering Command
SWMUs	Solid Waste Management Units
USEPA	United States Environmental Protection Agency
UST	Underground Storage Tank

EXECUTIVE SUMMARY

As a result of the Defense Base Closure and Realignment Act (BRAC) of 1990, the Charleston Naval Complex, Charleston, South Carolina, was identified as excess to the mission of the Department of Defense (DoD). Charleston Naval Complex was closed in April of 1996. The Department of the Navy intends to lease the property in the former location of Buildings NS-2, NS-3, and Facility NS-4 for unrestricted use.

The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) of 1990, as amended by the Community Environmental Response Facilitation Act (CERFA) of 1992, and the Fiscal Year 1997 National Defense Authorization Act requires the Navy to determine if excess real property can be classified as "uncontaminated". CERCLA, as amended, defines "uncontaminated" property as an area where no release, disposal, or migration of hazardous substances or petroleum products or their derivatives has occurred. To that end, DoD developed the Environmental Baseline Survey (EBS) process to assess potential impacts to human health and the environment resulting from the past use, release, disposal, and/or migration of hazardous substances and petroleum products. This Environmental Baseline Survey for Lease (EBSL) is based on information gathered during a site visit, a review of existing records, installation personnel interviews, and findings contained in the Charleston Naval Complex 1996 base-wide EBS. EnSafe Inc. performed this EBSL to document the environmental condition of the subject property at the request of Southern Division, Naval Facilities Engineering Command (SOUTHNAVFACENGCOM). A site visit initiating the EBSL was conducted by EnSafe personnel.

A summary of the environmental findings are provided below:

- No stained soil, stressed vegetation, unusual odors, or other visual signs of potential environmental impairment were observed during a visual survey of the subject property during the 1999 site visit.
- Hazardous materials or wastes were not observed at the subject property during the 1999 site visit.
- AOC 675 is associated with former Facility NS-4, and AOC 677 is associated with Building NS-2. These AOCs are being addressed under the UST Program.
- No underground or aboveground storage tanks (USTs/ASTs) or oil/water separators are located on the subject property. One UST and one oil/water separator were associated with former Building NS-2, and two USTs and two ASTs were associated with former Building NS-3. Former Facility NS-4 consisted of two USTs.
- No potential air emission sources subject to air permitting requirements are present at the subject property.
- No asbestos containing materials (ACM), lead-based paint, or polychlorinated biphenyls (PCBs) were identified at this subject property during the 1999 site visit.
- No records of visual evidence were found to indicate the improper use of pesticides at the subject property.
- No evidence of any PCB-related spills has been documented or was noted during the site survey of the subject property.

- No medical or biohazardous wastes are known to have been generated or treated at the subject property.
- No ordnance is known to have been stored, used, or disposed of on the subject property.
- No wastewater other than sanitary wastewater is known to have been generated at these former buildings.
- No radioactive or mixed wastes were generated or stored on the subject property.
- No evidence of the past disposal of solid waste on the subject property was observed during the site visit.
- No wetlands or habitats for threatened and endangered species were identified on the subject property.

The DoD and USEPA developed environmental condition of property categories to characterize the environmental condition of DoD excess property. Those categories are included in Section 2.4 of the EBSL. Based on an analysis of the EBSL findings and the joint environmental condition categories, former Buildings NS-2 and NS-3 and Facility NS-4 were assigned the classification 2-Blue (areas where only release or disposal of petroleum products has occurred). Further environmental investigation is not planned or warranted. The proposed use for the subject property would be protective of human health and the environment.

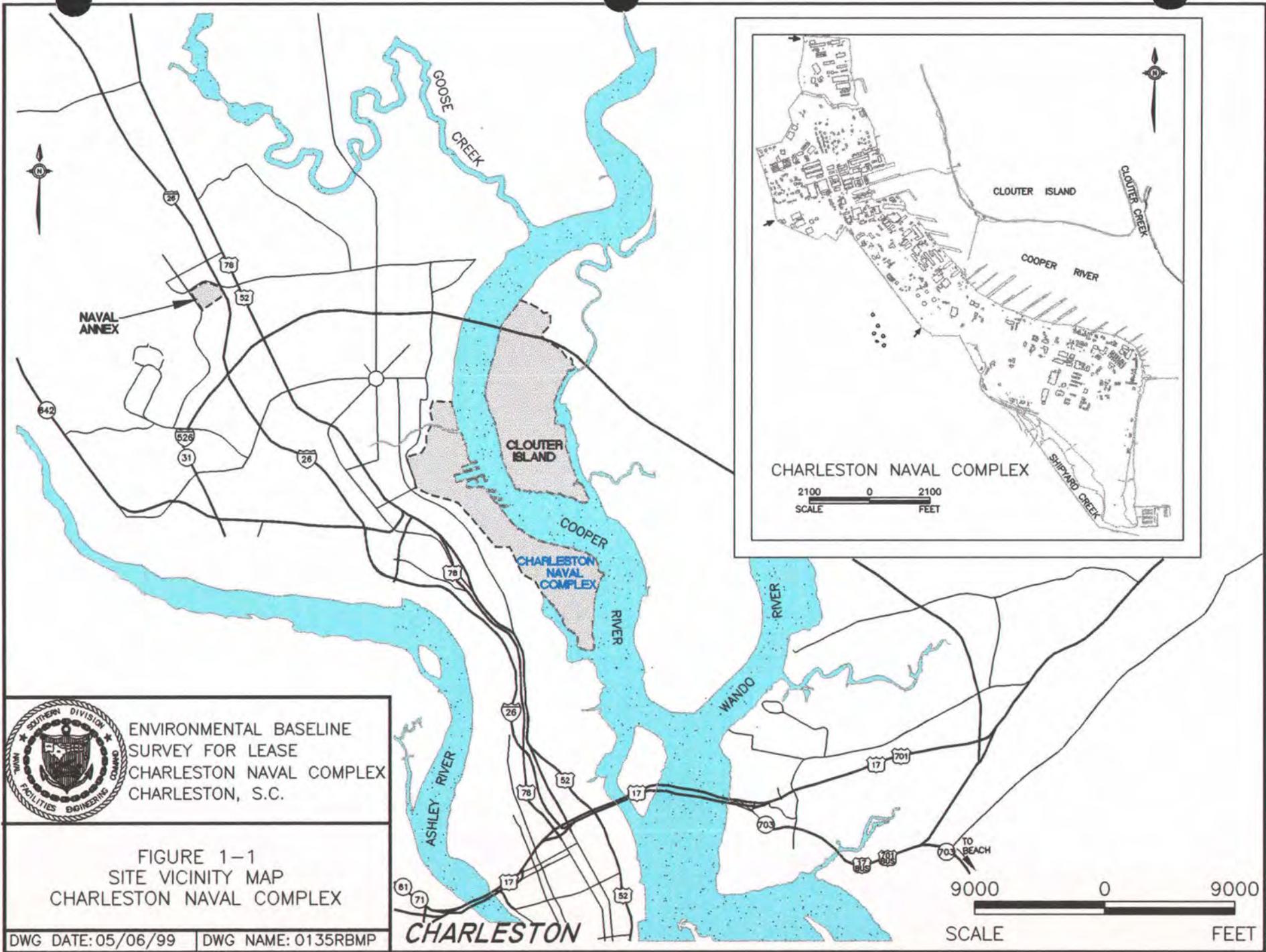
1.0 INTRODUCTION

1.1 Introduction and Background

This Environmental Baseline Survey for Lease (EBSL) documents the physical condition of the property known as Buildings NS-2, NS-3, and Facility NS-4 former parcels (hereinafter referred to as subject property) in Charleston County at Charleston Naval Complex (see the site location map, Figure 1-1), resulting from the storage, use, and disposal of hazardous substances and petroleum products over the installation's history. The 1996 base-wide EBS compiles into a single document all available information to establish a baseline for use by the Navy in documenting the environmental condition of the subject property.

An EBSL report fulfills the requirements of the CERCLA as amended by the CERFA and the 1997 National Defense Authorization Act. An EBS is required by DoD policy before any property can be sold, leased, or transferred. The EBSL report specifically helps the Navy to:

- Assess any human health or safety risks associated with the property surveyed, and determine what actions may be necessary to protect human health and the environment prior to effecting any proposed real property transaction.
- Support decisions for developing a Findings of Suitability to Lease (FOSL), and aid in determining lease restrictions.
- Document and obtain regulator concurrence on any "uncontaminated" properties as required and defined under CERCLA Section 120(4).
- Support notice, (when required under Section 120(h)(1) of CERCLA), of the type, quantity, and time frame of any storage, release, or disposal of hazardous substances or petroleum products on the property.



- Identify data gaps concerning environmental contamination.
- Define potential environmental liabilities associated with real property transactions.
- Aid in determining possible effects on property valuation from any contamination or concerns identified.

1.2 Organization of EBS

The organization of this EBSL follows the format for a base-wide EBS prescribed by the Naval Facilities Engineering Command Environmental Baseline Survey Guidance (SOUTHNAVFACENGCOM, 1995).

1.3 Boundaries/Properties Identification

A real property survey will be conducted to delineate the property boundaries prior to lease.

1.4 Limitations

In developing the methodology for completion of this EBSL, the Navy looked to a Deputy Secretary of Defense Memorandum regarding *Finding of Suitability to Transfer for BRAC Property* (June 1, 1994), DoD guidance as described in *Fast Track to FOST, A Guide to Determining if Property is Environmentally Suitable for Transfer* (February 1995), *Draft EPA Procedures for FOST/FOSLs* (October 17, 1994), and a DoD/EPA *Memorandum of Understanding*. However, while significant problems may not have been found, additional information may become available over time that may affect the conclusions presented in this report. No sampling of soil, groundwater, surface water, radon, lead, potable water, or asbestos was specifically conducted to support preparation of this EBSL.

2.0 SURVEY METHODOLOGY

2.1 Approach and Rationale

The EBSL was prepared to supplement the base-wide EBS prepared for Charleston Naval Complex in 1996, EnSafe/Allen & Hoshall (E/A&H), in support of the BRAC process. Information contained in this EBSL documents the environmental conditions of the subject property, including any changes noted or additional information obtained, since the base-wide EBS was performed.

This EBSL employs a variety of methods to obtain the necessary information to document the environmental condition of the property. This includes a comprehensive search of facility records and applicable federal, state, and local records as well as a visual walk-through site inspection. Therefore, the following steps were taken as a minimum:

1. Review of all surveys or inspection reports regarding asbestos, polychlorinated biphenyls (PCBs), lead (including lead-based paint), radon, underground storage tanks and piping systems, solid waste management units (SWMUs), areas of concern (AOCs), air pollution inventories, and Environmental Compliance Evaluation Program reports.
2. Review of all Installation Restoration Program (IRP) studies or other documentation produced in accordance with procedures being carried out at the installation under CERCLA or the Solid Waste Disposal Act.
3. Review of any applicable federal, state, or local regulatory agency reports, notices of violation or noncompliance, corrective action agreements, compliance orders, Resource Conservation and Recovery Act (RCRA) Facility Assessments, or similar records.

4. Review of current and/or discontinued permits pertaining to an environmentally regulated activity (e.g., air quality permits, National Pollutant Discharge Elimination System (NPDES) permits, RCRA Part B Permits, etc.).
5. Review of records of prior use contained in the 1996 base-wide EBS, or other available documents to ascertain prior uses of the real property which may have involved hazardous substances, otherwise contaminated the property, or created environmental or safety risks.
6. Site inspections of all Charleston Naval Complex real properties included in the scope of this EBSL, examining any buildings, structures, equipment, pipe outlets, pipelines, or other improvements. The purpose of the site inspection was to detect or confirm the presence of environmentally hazardous conditions or concerns (unusual odors, stained soils, stressed vegetation, leachate seeps, or other indications of potential contamination). Furthermore, the site inspection assessed any risk conditions from a safety standpoint. Indications of concern that were discovered, were followed up and resolved within the scope of the effort involved. Executive Summaries created during the 1999 EBSL are included as Appendix A of this document.
7. Review of reasonably obtainable records of state and local governmental agencies that reflect the prior uses of both installation and adjacent real property.
8. Identification of all hazardous substances/petroleum products stored for one year or more, released, or disposed on the subject property. The information includes the actual or approximate types and quantities, and time or times of storage, release, or disposal, of hazardous substances/petroleum products, to the extent that such information was reasonably available.

9. Conducting a physical inspection of adjacent property to the extent permitted by the owners/operators. "Adjacent properties" are normally defined as properties contiguous to the boundaries of the property being surveyed as well as other nearby properties, typically within a quarter-mile radius. Specifically, the survey addressed those properties relatively near the installation that could pose significant environmental concern and/or have a significant impact on the results of the EBS.

10. Review of all reasonably obtainable federal, state, and local government records of each adjacent property to ascertain if there has been a release of any hazardous substance or petroleum product or its derivatives (including aviation fuel and motor oil) which may migrate to the subject real property.

11. Interviews with current and/or former employees involved in operations concerning the property.

Existing data on contaminants in the following media are considered in the evaluation: air, soil, groundwater, surface water, soil gas and vapor, leachate, sludge, and sediment. Common sources of contaminants in these media are: hazardous material/waste, lead (including lead-based paint), solid waste, PCBs, leakage from aboveground and underground storage tanks, asbestos, petroleum spills, wastewater treatment and discharge, pesticides, radon, explosive ordnance disposal waste, biomedical waste, stationary air sources, radioactive waste, photochemical waste, oil, paints, solvents, and lubricants.

2.2 Data Management

Information for this EBSL was obtained through a records search, site inspections, and personnel interviews. All BRAC environmental reports concerning Charleston Naval Complex are maintained on file by SOUTHNAVFACENGCOM at the Base Closure Team office. Final

versions of all EBSLs and Environmental Baseline Surveys for Transfer (EBSTs) will be placed at the Charleston County Library located at 6325 Dorchester Road in North Charleston, South Carolina.

2.3 Title Search

Real property title information for all Charleston Naval Complex property is maintained by SOUTHNAVFACENGCOM in Charleston, South Carolina. This information was reviewed as part of the base-wide EBS in 1996. The property where Buildings NS-2, NS-3, and NS-4 were located was acquired by the U.S. Navy on September 15, 1941. The property was acquired from the City of Charleston. It was transferred from Naval Base Charleston to its current owner, SOUTHNAVFACENGCOM, in April 1996. Photographs of former Buildings NS-2, NS-3, and Facility NS-4 prior to their demolition are included in Appendix B.

2.4 Property Classification

The following environmental categories (see Table 2-1) were developed jointly by representatives from the Office of the Secretary of Defense, the Military Services, the USEPA, and California Environmental Protection Agency to describe the environmental condition of DoD excess property. After an analysis of all available data, each parcel can be classified into one of the following seven categories.

**Table 2-1
Charleston Naval Complex BRAC Area Types**

Ranking Number	Map Color	Ranking Criteria
1	White	Areas where no release or disposal of hazardous substances or petroleum products has occurred (including no migration of these substances from adjacent areas).
2	Blue	Areas where only release or disposal of petroleum products has occurred.
3	Light Green	Areas where release, disposal, and/or migration of hazardous substances has occurred, but at concentrations that do not require a removal or remedial response.
4	Dark Green	Areas where release, disposal, and/or migration of hazardous substances has occurred, and all remedial actions necessary to protect human health and the environment have been taken.

**Table 2-1
Charleston Naval Complex BRAC Area Types**

Ranking Number	Map Color	Ranking Criteria
5	Yellow	Areas where release, disposal, and/or migration of hazardous substances has occurred, removal and/or remedial actions are underway, but all required remedial actions have not yet been taken.
6	Red	Areas where release, disposal, and/or migration of hazardous substances has occurred, but required response actions have not yet been implemented.
7	Grey	Areas that are unevaluated or require additional evaluation.

3.0 PAST AND CURRENT OPERATIONS

Building NS-2

As summarized in the EBS checklist (November 1993), Building NS-2 was constructed in 1958 as an electrical (boiler) substation. The building was abandoned in 1992, and remained vacant until it was demolished in **MONTH YEAR**. The site is currently undeveloped. Figure 3-1 depicts the location of the subject property.

Building NS-3

As summarized in the EBS checklist (November 1993), Building NS-3 was constructed in 1958 as a fuel pumphouse. The building was used as a pumping station until the early 1980s. At the time of the EBS site visit (1993), the building was used to store miscellaneous items including chains and machine parts. Building NS-3 was demolished in **MONTH YEAR**. The site is currently undeveloped. Figure 3-1 depicts the location of the subject property.

Facility NS-4

According to the EBS checklist (November 1993), Facility NS-4, which is an UST, was installed in 1952. The UST was used to store fuel oil. The UST was removed in **MONTH YEAR**. Additional information pertaining to the UST is included in Section 5.4.



ENVIRONMENTAL
 BASELINE SURVEY FOR LEASE
 CHARLESTON NAVAL COMPLEX
 CHARLESTON, S.C.

FIGURE 3-1
 FORMER NS-2, NS-3, AND NS-4
 PARCELS
 DWG DATE: 10/01/99 | DWG NAME: 0135R029

4.0 ENVIRONMENTAL SETTING

A summary of the environmental setting for the Charleston Naval Complex is provided in the following sections. A more detailed discussion of these factors can be found in the March 1999 Zone I RFI Report.

4.1 Physiography

The Charleston Naval Complex is located in the lower South Carolina Coastal Plain Physiographic Province on the Cooper River side of the Charleston Peninsula, which is formed by the confluence of the Cooper and Ashley Rivers.

The topography of the Charleston Naval Complex is essentially flat, with elevations ranging from just over 20 feet mean sea level (msl) in the northwestern part to sea level at the Cooper River. Much of the original topography of the Charleston Naval Complex has been modified by human activities.

4.2 Geology

The geology of the Charleston, South Carolina area is typical of the southern part of the Atlantic Coastal Plain. A seaward-thickening wedge of Cretaceous and younger sediments is underlain by older igneous and metamorphic basement rock. At the Charleston Naval Complex, recent and/or Pleistocene sands, silts, and clays of high organic content are exposed at the surface. These materials are underlain by a plastic calcareous clay known as the Cooper Marl. The Cooper Marl is underlain by the Santee Limestone and older rocks. The surface soils on the Charleston Naval Complex have been extensively disturbed and re-worked by a history of intensive use and improvement. The natural surface soils were probably fine-grained materials typical of tidal marsh environments. Most areas of the Charleston Naval Complex have been either filled or re-worked.

4.3 Hydrogeology

Most potable water on the Charleston peninsula is supplied by surface water sources (Edisto River). In the Charleston area, the Cooper Marl is rather impermeable and acts as the confining bed for the Santee, which is not as permeable as in other areas and forms a confined aquifer. Groundwater in the Santee, which occurs at about 328 feet below msl, flows generally to the southeast. Some wells in the vicinity of the Charleston Naval Complex are pumping from the Santee for industrial purposes. In the shallow aquifer on the Charleston Naval Complex, water flows toward the Cooper River or Shipyard Creek, due to the fine-grained texture of the sediments and the level topography. The water table is within 3 to 7 feet of the ground surface. The shallow groundwater continually discharges to the Cooper River and Shipyard Creek.

4.4 Climate

The climate in the Charleston, South Carolina area is temperate with warm summers, mild winters, and ample precipitation. The weather is largely controlled by the west-to-east motion of pressure systems and fronts, except in the summer when tropical air persists. The mountains in the northern portion of the state serve as a barrier to cold air masses from the northwest, and the Bermuda high-pressure system limits the progress of cold fronts into the area. These conditions produce relatively mild temperate winters. Summers are hot and humid, but relatively moderate with regard to temperature extremes, largely due to the influence of the Gulf Stream.

The average daily maximum and minimum air temperatures from 1970 to 1985 for the Charleston area are 76°F and 54°F. Temperatures higher than 100°F and lower than 20°F are unusual for the area. The wind direction and velocity in the Charleston area are highly variable. The inland portions of the region are subjected to a southwest to northeast wind regime. The prevailing winds are northerly in the fall and winter, and southerly in the spring and summer. The monthly average wind velocities for the area range from a low of 7.5 miles per hour (mph) in May to a high of 10.4 mph in March.

The Charleston, South Carolina area receives an annual average precipitation of 49.2 inches, which is almost exclusively rain. Very little precipitation is recorded as snow, sleet, or hail. Relative humidity in the area ranges from 50 to 90 percent and can exhibit large fluctuations.

The primary concern with regard to climate extremes are the occurrence of tropical cyclones or hurricanes. Hurricanes frequent the east coast of the United States, and almost always have some effect on the weather around the Charleston Harbor typically between August and December. The last hurricane to make landfall in the Charleston, South Carolina area was Hurricane Hugo, a class IV hurricane which struck Charleston in September 1989 and caused severe damage.

4.5 Ecological Issues

No areas on the subject property meet the definition of protected wetlands. No endangered or threatened animal or plant species are known to exist on the subject property.

4.6 Historical and Cultural Resources

No structures associated with the subject property are designated as historical structures.

5.0 SUMMARY OF DATA FOR SUBJECT PROPERTY

5.1 EPA, State, Local Notices of Violation

No notices of violation were found during the records search, personnel interviews, or onsite assessments for the subject property during or since the 1996 base-wide EBS.

5.2 Hazardous Substance/Petroleum Product Management Practices

Hazardous substances and petroleum products were stored in former Buildings NS-2, NS-3, while NS-4 was an UST for the storage of #2 fuel oil. However, no hazardous materials were observed at these parcels during the 1999 site visit.

5.3 CERCLA-Related Contamination (Installation Restoration Program)

The Navy started the IRP in response to the Superfund legislation of 1980. The Navy IRP identifies, studies, and cleans up past spill and hazardous waste disposal sites on Navy and Marine Corps installations within the United States and its territories in accordance with CERCLA protocols.

An RFI is currently underway at the Charleston Naval Complex which should identify the nature and extent of any soil or groundwater contamination throughout the area. To facilitate management of the RFI process, the study area has been divided into 12 study zones, designated as Zones A through L. The parcels where former Buildings NS-2, NS-3, and NS-4 were present are located in Zone I. No SWMUs are associated with the subject parcels. However, AOC 675 is associated with former Building NS-4, and AOC 677 is associated with former Building NS-2. Several AOCs and SWMUs are located within approximately one-quarter mile of the subject property. These are discussed in Section 6.0.

Paul → AOC 675 was a 25,000-gallon UST used for the storage of heating fuel (#2 fuel oil). High levels of polynuclear aromatic hydrocarbons (PAHs) were detected in the soil stockpile and in the groundwater. This area was transferred to the UST Program.

Paul → AOC 677 (Building NS-2 Grounds) has been combined with AOC 675, and the transfer to the UST Program is pending submittal of Navy request.

5.4 Storage Tanks and Oil/Water Separators

According to the 1996 base-wide EBS, four ASTs and one UST were associated with Building NS-2. No ASTs were observed during the 1999 site visit. Additionally, the UST referenced in the 1996 EBS is a 25,000-gallon UST, which is believed to be the UST associated with Facility NS-4. [No information pertaining to a 25,000-gallon UST at Building NS-2 is available.] However, the *Base Realignment and Closure Tank Management Plan*, Charleston Environmental Detachment, lists one 560-gallon UST, which was used to store waste oil at Building NS-2, as removed. No evidence of any USTs, such as fill or vent pipes, was observed during the 1999 site visit. One oil/water separator was associated with this Building; however, it was closed in conjunction with the building demolition in MONTH YEAR.

↑
The 1996 base-wide EBS associates two USTs of unknown capacities with former Building NS-3. The USTs were reportedly used to store fuel. The *Base Realignment and Closure Tank Management Plan*, Charleston Environmental Detachment, however, lists one 280-gallon UST, which was used to store waste oil at former Building NS-3, as removed. No other information pertaining to USTs at this building was available. No evidence of any USTs, such as fill or vent pipes, was observed during the 1999 site visit. The 1996 EBS did not include any ASTs associated with this facility; however, concrete support structures for two ASTs were observed during the 1999 site visit. It is likely that the USTs were removed and replaced by ASTs, which were subsequently removed from the site.

According to the 1996 base-wide EBS, one 25,000-gallon UST is associated with Facility NS-4. The UST contained #2 fuel oil. No ASTs were associated with this facility. The *Base Realignment and Closure Tank Management Plan*, Charleston Environmental Detachment, lists one 25,000-gallon UST as removed from NS-4. Based on the available information, it appears that there were two USTs at this facility. One was removed in 1997 and the other in YEAR. No evidence of any USTs, such as fill or vent pipes, remains at the location of this facility.

5.5 Air Emissions

Based on inquiries and observations, no potential air emission sources subject to air permitting requirements are present at the subject property. According to the 1996 base-wide EBS two boilers were present in former Building NS-2.

5.6 Asbestos

Former Buildings NS-2, NS-3, and NS-4 were built during the 1950s when asbestos was a common building material. Suspect asbestos-containing materials (SACM) were observed in former Buildings NS-2 and NS-3 prior to the demolition. Observed SACM at the time included floor and ceiling tiles, pipe insulation, and plaster ceiling material. However, these materials were removed and disposed of prior to the demolition of the buildings.

5.7 Pesticides

Pesticide use at the subject building has been limited to mosquito control and quarterly treatment for general nuisance pests. All pesticide-related operations at the Charleston Naval Complex adhered to the Pesticide Management Plan. No records or visual evidence were found to indicate the improper use of pesticides at the subject property.

5.8 Polychlorinated Biphenyls (PCBs)

Based on historical information, a 1980 memo reported the presence of nine power capacitors at former Building NS-2 with a total capacity of 90 gallons of dielectric fluid. Reportedly, the fluid was sampled for PCBs; the lab results indicated that the fluid contained < 50 ppm of PCBs. No evidence of any PCB-related spills has been documented or was noted during the site survey of the subject property.

5.9 Radon

Radon gas concentrations became a concern when several federal and state studies concluded that indoor radon could present a health risk. In response to this information, the Secretary of the Navy initiated the Navy Radon Assessment and Mitigation Program (NAVRAMP) in January 1989 to implement facility testing. The initial portion of this effort concentrated on living spaces, training, and hospital buildings which personnel frequent. Since the U.S. Navy issued this program, federal law (Toxic Substances Control Act, Title III) was enacted requiring all federal agencies to test for radon.

Random testing for radon gas was conducted at the Charleston Naval Complex in late 1992. Although former Buildings NS-2, NS-3, and NS-4 were not included in the survey, radon gas is not expected to be a concern at the subject property. Charleston County has been classified as a Zone 3 area for radon gas by the USEPA. Zone 3 areas have a predicted average indoor radon screening level of less than 2 picocuries per liter (pCi/L), which is below the USEPA action level of 4pCi/L.

5.10 Medical/Biohazardous Waste

No medical or biohazardous wastes are known to have been generated or treated at the subject property.

5.11 Ordnance

Based on inquiries and observations, no ordnance is known to have been stored, used, or disposed of on the subject property.

5.12 Lead-Based Paint Surveys and Other Sources

No known lead-based paint surveys were ever conducted at former Buildings NS-2, NS-3, and NS-4. Based on the age of the former buildings, which were constructed during the 1950s, lead-based paint is expected to have been used in these former buildings. However, all paint was removed from these buildings prior to their demolition. No evidence of lead-based paint contamination was observed during the 1999 site visit.

5.13 Wastewater Treatment and Disposal

No wastewater other than sanitary wastewater is known to have been generated at these former buildings. Sanitary wastewater is discharged into the North Charleston Sewer District (NCSD) sanitary sewer system. No permits are required for discharges from Navy-owned facilities because the discharge from the entire base was permitted and monitored at Viaduct Road. Additionally, no requirements exist for the permitting of sanitary wastewater only. No septic tanks are known to have existed on the subject property.

5.14 Radioactive and Mixed Waste

Based on inquiries and observations, no radioactive materials are or have been used, stored, or disposed of on this property. There are no mixed waste (hazardous waste that is also contaminated with low level radioactivity) issues associated with this property.

5.15 Stressed Vegetation and Stained Areas

No evidence of stressed vegetation or stained areas was observed during the site inspection.

5.16 Solid Waste

No evidence of the past disposal of solid waste on the subject property was observed during the site visit.

5.17 Lead in Drinking Water

No sources of drinking water are present at the subject property.

5.18 Wetlands

Visual inspection of the subject property revealed no areas which met the regulatory definition of protected wetlands.

6.0 FINDINGS FOR ADJACENT PROPERTY

As depicted on Figure 3-1, former Buildings NS-2, NS-3, and Facility NS-4 were adjacent to each other, and were located on the southeastern portion of the Charleston Naval Complex. The following table summarizes the status of all SWMUs and AOCs located within approximately one-quarter mile of the subject property.

SWMU/AOC	Site Description	Current Status	Reference
SWMU 13	Current Fire Fighter Training Area	RFI complete, UST Program; Transferred to Petroleum Storage Tank (PST) Program	RFA (EPA, 1987), Final Zone H RFI, EnSafe, 3/99
SWMU 17	Oil Spill Area	CMS SWMU 17 (ongoing), RFI complete, CMS work plan addendum in progress	RFA (EPA, 1987), Final Zone H RFI, EnSafe, 3/99
SWMU 125	Building 202 SAA	NFA	RFA, Volume 1, EnSafe, 6/95; RFA Approval Letter, SCDHEC, 6/95
SWMU 126	Building 202 SAA	NFA	RFA, Volume 1, EnSafe, 6/95; RFA Approval Letter, SCDHEC, 6/95
SWMU 127	Building 202 SAA	NFA	RFA, Volume 1, EnSafe, 6/95; RFA Approval Letter, SCDHEC, 6/95
SWMU 128	Building 202 SAA	NFA	RFA, Volume 1, EnSafe, 6/95; RFA Approval Letter, SCDHEC, 6/95
SWMU 129	Building 202 SAA	NFA	RFA, Volume 1, EnSafe, 6/95; RFA Approval Letter, SCDHEC, 6/95
SWMU 130	Building 202 SAA	NFA	RFA, Volume 1, EnSafe, 6/95; RFA Approval Letter, SCDHEC, 6/95
SWMU 132	Building 61 SAA	NFA	RFA, Volume 1, EnSafe, 6/95; RFA Approval Letter, SCDHEC, 6/95
SWMU 133	Building 61 SAA	NFA	RFA, Volume 1, EnSafe, 6/95; RFA Approval Letter, SCDHEC, 6/95
SWMU 134	Building 61 SAA	NFA	RFA, Volume 1, EnSafe, 6/95; RFA Approval Letter, SCDHEC, 6/95

*Draft Environmental Baseline Survey for Lease
Former Buildings NS-2, NS-3, and NS-4 Parcels
Charleston Naval Complex
October 1999*

SWMU/AOC	Site Description	Current Status	Reference
SWMU 135	Building 61 SAA	NFA	RFA, Volume 1, EnSafe, 6/95; RFA Approval Letter, SCDHEC, 6/95
SWMU 136	Building NS-53 SAA	RFI complete; SCDHEC comments received on CMS report; CMS report currently being revised; NFA proposed	RFA, Volume 1, EnSafe 6/95; Final Zone H RFI Report, EnSafe, 3/99
SWMU 142	Building 681 SAA	NFA	RFA, Volume 1, EnSafe, 6/95; RFA Approval Letter, SCDHEC, 6/95
SWMU 160	Port Services, SAA	NFA	RFA, Volume 3, EnSafe, 6/95; RFA Approval Letter, SCDHEC, 6/95
SWMU 177	RTC-4 Oil Spill	RFI complete, CMS risk management decision pending, IM scheduled to be complete by August 1999	RFA, Volume 4, EnSafe, 6/95; Final Zone I RFI Report, EnSafe, 3/99
SWMU 178	Site of Apparent Transformer Fire	RFI complete, Transferred to PST program	RFA, Volume 4, EnSafe, 6/95; Final Zone H RFI Report, EnSafe, 3/99
AOC 500	UXO Site between Piers S and T	RFI Work Plan, IM complete, NFA w/IC	RFA, Volume 1, EnSafe, 6/95; IM Completion Report, Detachment, 8/98
AOC 658	Gas Storage	NFA	RFA, Volume 2, EnSafe, 6/95; RFA Approval Letter, SCDHEC, 6/95
AOC 659	Diesel Storage	RFI complete, UST Program; Transferred to PST Program	RFA, Volume 2, EnSafe, 6/95; Final Zone H RFI Report, EnSafe, 6/98; RFI Approval Letter, SCDHEC, 11/97
AOC 660	Mosquito Control Facility	RFI complete; NFA	RFA, Volume 2, EnSafe, 6/95; Final Zone H RFI Report, EnSafe, 6/98
AOC 662	Former Gasoline Station, Building NS-54	RFI complete, UST Program; Transferred to PST Program	RFA, Volume 1, EnSafe, 6/95; Final Zone H RFI Report, EnSafe, 6/98
AOC 663	Gas/Diesel Pumping Station, Building 851	Draft CMS report submitted; RFI complete	RFA, Volume 2, EnSafe, 6/95; Final Zone H RFI Report, EnSafe, 6/98; Draft CMS Report, EnSafe, 5/99
AOC 664	Transformer Vault (X 33A)	Combined with SWMU 136, RFI complete	RFA, Volume 2, EnSafe, 6/95; Final Zone H RFI Report, EnSafe, 6/98

*Draft Environmental Baseline Survey for Lease
Former Buildings NS-2, NS-3, and NS-4 Parcels
Charleston Naval Complex
October 1999*

SWMU/AOC	Site Description	Current Status	Reference
AOC 665	Pyrotechnic Storage	RFI complete; NFA	RFA, Volume 2, EnSafe, 6/95; Final Zone II RFI Report, EnSafe, 6/98; RFI Approval Letter, SCDHEC, 11/97
AOC 674	Paint Storage	NFA	RFA, Volume 2, EnSafe, 6/95; RFA Approval Letter, SCDHEC, 6/95
AOC 676	Former Incinerator	RFI complete, Transfer to UST Program pending submittal of Navy request; combine 675	RFA, Volume 2, EnSafe, 6/95; Final Zone I RFI Report, EnSafe, 3/99
AOC 678	Fire Fighting School	Draft RFI submitted to SCDHEC, awaiting comments from SCDHEC, Addendum	RFA, Volume 2, EnSafe, 6/95; Draft Zone I RFI Report, EnSafe, 1/96
AOC 679	Former Wash Rack	Draft RFI submitted to SCDHEC, awaiting comments from SCDHEC, Addendum	RFA, Volume 2, EnSafe, 6/95; Draft Zone I RFI Report, EnSafe, 1/96
AOC 680	Brake repair and welding area	Draft RFI submitted to SCDHEC, awaiting comments from SCDHEC, Addendum	RFA, Volume 2, EnSafe, 6/95; Draft Zone I RFI Report, EnSafe, 1/96
AOC 681	Blast Booth Building 681	Draft RFI submitted to SCDHEC, awaiting comments from SCDHEC, Addendum	RFA, Volume 1, EnSafe, 6/95; Draft Zone I RFI Report, EnSafe, 1/96
AOC 682	Spray Booth	NFA	RFA, Volume 1, EnSafe, 6/95; RFA Approval Letter, SCDHEC, 6/95
AOC 691	Waterfront	RFI Zone J Scheduled to be completed by June 2000	RFA, Volume 2, EnSafe, 6/95; Draft Zone I RFI Report, EnSafe, 1/96
AOC 692	Free Product Along Cooper River	RFI Zone J Scheduled to be completed by June 2000	RFA, Volume 2, EnSafe, 6/95; Final Zone J Work Plan, EnSafe, 9/96

Notes:

- RFI — RCRA Facility Investigation
- RFA — RCRA Facility Assessment
- CMS — Corrective Measures Study
- NFA — No further action
- IM — Interim Measures
- IC — Institutional controls

7.0 CONCLUSIONS

7.1 Property Classification

According to a review of all reasonably available information, the parcels where former Buildings NS-2, NS-3, and NS-4 were located have been categorized as 2-Blue under the DoD environmental condition of property classifications previously discussed in Section 2.4 of this report. This classification is indicative of areas where only release or disposal of petroleum products has occurred. Therefore, this subject property is suitable for lease in accordance with CERCLA and DoD guidance.

7.2 Recommended Use Restrictions

The following restrictions as a minimum shall be included in the lease for the subject buildings to ensure protection of human health and the environment and to prevent interruption of the environmental restoration process being conducted by the Navy.

1. The sole purpose for which the leased premises and any improvements thereon may be used, in the absence of prior written approval by the Government for any other use, is for industrial storage, parking, administration, and related support activities.
2. Lessee shall neither transfer nor assign this lease or any interest therein or any property on the leased premises without prior Government approval. Lessee may sublet the leased premises or any part thereof or any property thereon, or grant any interest, privilege, or license whatsoever in connection with this lease with the prior written consent of the Government. Any interim use and occupancy of the leased premises in each and every instance are subject to the prior approval of the Contracting Officer. Such consent shall not be unreasonably withheld or delayed. Every sublease shall contain the Environmental Protection provisions set forth herein.

3. Lessee and any sublessee shall comply with the applicable environmental laws and regulations and all other Federal, state, and local laws, regulations, and standards that are or may become applicable to Lessee's activities on the leased premises.
4. Lessee and any sublessee shall be solely responsible for obtaining at its cost and expense any environmental permits required for its operation under the lease, independent of any existing permits.
5. Government's rights under this lease specifically include the right for Government officials to inspect upon reasonable notice the leased premises for compliance with environmental, safety, and occupational health laws and regulations, whether or not Government is responsible for enforcing them. Such inspections are without prejudice to the right of duly constituted enforcement officials to make such inspections.
6. Government shall be allowed access to the premises for any purpose upon notice to the Lessee. All necessary keys to the buildings and facilities occupied by Lessee or any sublessee shall be made available to Government upon request. Government normally will give Lessee or any sublessee 24 hour prior notice of its intention to enter the leased premises unless it determines the entry is required for safety, environmental, operations or security purposes. Lessee shall have no claim on account of any entries against the United States or any officer, agent, employee or contractor.
7. The Lessee agrees that the Government assumes no liability to the Lessee or its sublessees should hazardous waste cleanup requirements, whether imposed by law, regulatory agencies, DoD or Navy, interfere with the Lessee's use of the leased premises. The Lessee shall have no claim on account of any such interference against the Government or any officer, agent, employee, or contractor thereof.

8. The Navy, U.S. Environmental Protection Agency (EPA), and South Carolina Department of Health and Environmental Control (DHEC) and their officers, agents, employees, contractors, and subcontractors have the right, upon reasonable notice to the Lessee and any sublessee, to enter upon the leased premises for the purposes enumerated below and for such other purposes associated with environmental restoration activities in or around the leased premises:
- (a) To conduct investigations and surveys, including, where necessary, drilling, soil and water sampling, testpitting, borings, and other activities related to the Charleston Naval Complex, Installation Restoration (IR) Program.
 - (b) To inspect field activities of the Navy and its contractors and subcontractors in implementing these programs.
 - (c) To conduct any test or survey required by EPA or DHEC relating to the implementation of these programs or environmental conditions at the leased premises or to verify any data submitted to the EPA or DHEC by the Navy relating to such conditions.
 - (d) To construct, operate, maintain, or undertake any response or remedial action as required or necessary including, but not limited to, monitoring wells, pumping wells, and treatment facilities.
9. Lessee agrees to comply with the provisions of any health and safety plan in effect during the course of any of the described response or remedial actions. Any inspection, survey, investigation, or other response or remedial action will, to the extent practicable, be coordinated with representatives designated by Lessee and any sublessee. Lessee, any

- sublessees, or licensees shall have no claim on account of such entries against the United States or any officer, agent, employee, contractor, or subcontractor thereof. In addition, Lessee shall comply with all applicable Federal, state, and local occupational safety and health regulations.
10. Lessee agrees that in the event of assignment or sublease of the leased premises, it shall provide to the EPA and DHEC by certified mail a copy of the agreement or sublease of the leased premises within fourteen (14) days after the effective date of such transaction. Lessee may delete the financial terms and any other proprietary information from the copy of any agreement of assignment or sublease furnished pursuant to this condition.
 11. The Lessee shall strictly adhere to the hazardous waste permit requirements under the RCRA and the State of South Carolina equivalent and any other applicable laws, rules or regulations. Except as specifically authorized by the Government in writing, the Lessee must provide at its own expense such hazardous waste management facilities, complying with all laws and regulations, as it may need for such management. Government hazardous waste management facilities will not be available to the Lessee. Any violation of the requirements of this condition may be deemed a material breach of this Lease.
 12. DoD Component accumulation points for hazardous and other wastes will not be used by the Lessee or any sublessee. Neither will the Lessee or sublessee permit its hazardous wastes to be commingled with hazardous waste of any DoD Component.
 13. The Lessee shall have a Government-approved plan for responding to hazardous waste, fuel, and other chemical spills prior to commencement of operations at the leased facilities. Such plan shall be independent of any Government response plans, and shall not rely on use of Government personnel or equipment. Should the Government provide any

- personnel or equipment, whether for initial fire response and/or spill containment, or otherwise on request of the Lessee, or because the Lessee was not, in the opinion of said officer, conducting timely cleanup actions, the Lessee agrees to reimburse the Government for its cost.
14. The Lessee shall not construct, make, or permit its sublessees to construct or make any substantial alterations, additions, or improvements to or installations upon or otherwise modify or alter the leased premises in any way which may adversely affect the cleanup, human health, or the environment without prior written consent of the Government. Such consent may include a requirement to provide the Government with a performance and payment bond satisfactory to it in all respects and other requirements deemed necessary to protect the interests of the Government. For construction of alterations, additions, modifications, improvements or installations (collectively "work") in the proximity of any IR site, such consent may include a requirement for a written approval by the Government's Remedial Project Manager. Except as such written approval shall expressly provide otherwise, all such approved alterations, additions, modifications, improvements, and installations shall become Government property when annexed to the leased premises.
15. Lessee shall not conduct, or permit its sublessees to conduct, any subsurface excavation, digging, drilling or other disturbance of the surface without prior written approval of the Government. If, after written approval by the Government, the Lessee undertakes any subsurface excavation, digging, drilling or other disturbance of the surface, the Lessee shall immediately notify the government should any buried debris, or foreign, potentially hazardous material be encountered during this work.

7.3 Recommendations for Further Actions

No further environmental action is necessary for the subject property.

7.4 Regulatory/Public Comments

A FOSL has been prepared documenting the findings of this EBSL and concurring with the 2-Blue condition of property classification. Copies of this EBSL and FOSL have been provided to the Region 4 office of the USEPA and the South Carolina DHEC for their review and concurrence. A copy of the EBSL and FOSL was also located in the public library and a Notice of Public Review was posted in *The Post and Courier* providing a thirty-day public review period ending **(DATE)**. Copies of any comments received are located in **Appendix C**. The comments have been reviewed and entered into this EBSL, as appropriate. Those comments which were unresolved have been listed with the Navy's response in **Appendix C**.

8.0 CERTIFICATION AND LIST OF PREPARERS

8.1 Certification

This report describes the pertinent information obtained during the EBSL assessment. I certify that the property conditions stated in this report are based on a review of available records, visual inspections, and interviews as noted, and are true and correct, to the best of my knowledge and belief.

Submitted by EnSafe Inc.

Preparer Signature/Date

*Robert A. Maddux, Jr., P.E.
Task Order Manager
EnSafe Inc.*

I have reviewed the methodology and information presented in this report, and certify that the information contained herein is accurate and complete to the best of my knowledge and belief.

For: **SOUTHNAVFACENGCOM**

BRAC Environmental Coordinator Signature/Date

*Matthew A. Hunt, P.E.
BRAC Environmental Coordinator
Naval Facilities Engineering Command Southern Division*

8.2 List of Preparers

Noel E. Pacheco, Regulatory Compliance Specialist, 6 years

Shannon Jaeger, Civil Engineer, 4 years

James Watson, Environmental Specialist, 11 years

9.0 REFERENCES

Base Realignment and Closure Tank Management Plan, prepared by Charleston Environmental Detachment of North Charleston, South Carolina.

Environmental Condition of Property, Charleston Naval Complex, Charleston, SC prepared by EnSafe Inc. of Charleston, South Carolina under contract to Southern Division Naval Facilities Engineering Command (dated December 1998).

Final Environmental Baseline Survey, Naval Base Charleston, Charleston, SC prepared by EnSafe/Allen & Hoshall of Charleston, South Carolina under contract to Southern Division Naval Facilities Engineering Command (dated October 1996).

Final RCRA Facility Assessment, Volumes I through V, Naval Base Charleston, Charleston, SC prepared by EnSafe/Allen & Hoshall of Charleston, South Carolina, under contract to Southern Division Naval Facilities Engineering Command (dated May 1995).

NAVFACENGCOM Petroleum Storage Tank Program Records prepared by Environmental Detachment Charleston of North Charleston, South Carolina (dated April 1999).

Zone I RCRA Facility Investigation, Charleston Naval Complex, Charleston, SC prepared by EnSafe Inc. of Charleston, South Carolina, under contract to Southern Division Naval Facilities Engineering Command (dated March 1999).

Appendix A

**Facility Checklists: Executive Summary Excerpts
from the Environmental Baseline Survey (EBS)**

Note which documents you review
in all sections of this form.

Base: Naval Base Charleston (CNSY)
Building Number: NS-2
Site Location: M-16

CONCLUSION/EXECUTIVE SUMMARY

(ATTACH PLANS AND PHOTOGRAPHS)

CLASSIFICATION (BASED ON THE INFORMATION/DATA/DOCUMENTATION AVAILABLE AT THE TIME OF THE SURVEY)	CLASSIFICATION NUMBER	MAP COLOR
AREAS WHERE NO STORAGE, RELEASE OR DISPOSAL OF HAZARDOUS SUBSTANCES OR PETROLEUM PRODUCTS HAS OCCURRED (INCLUDING NO MIGRATION OF THESE SUBSTANCES FROM ADJACENT AREAS).	1	WHITE
AREAS WHERE ONLY STORAGE OF HAZARDOUS SUBSTANCES OR PETROLEUM PRODUCTS HAS OCCURRED (BUT NO RELEASE, DISPOSAL, OR MIGRATION FROM ADJACENT AREAS HAS OCCURRED).	2	BLUE
AREAS WHERE STORAGE, RELEASE, DISPOSAL AND/OR MIGRATION OF HAZARDOUS SUBSTANCES OR PETROLEUM PRODUCTS HAS OCCURRED, BUT AT CONCENTRATIONS THAT DO NOT REQUIRE A REMOVAL OR A REMEDIAL ACTION.	3	LIGHT GREEN
AREAS WHERE STORAGE, RELEASE, DISPOSAL AND/OR MIGRATION OF HAZARDOUS SUBSTANCES OR PETROLEUM PRODUCTS HAS OCCURRED, AND ALL REMEDIAL ACTIONS NECESSARY TO PROTECT HUMAN HEALTH AND THE ENVIRONMENT HAVE BEEN TAKEN.	4	DARK GREEN
AREAS WHERE STORAGE, RELEASE, DISPOSAL AND/OR MIGRATION OF HAZARDOUS SUBSTANCES OR PETROLEUM PRODUCTS HAS OCCURRED, REMOVAL AND/OR REMEDIAL ACTIONS ARE UNDER WAY, BUT ALL REQUIRED REMEDIAL ACTIONS HAVE NOT YET BEEN TAKEN.	5	YELLOW
AREAS WHERE STORAGE, RELEASE, DISPOSAL AND/OR MIGRATION OF HAZARDOUS SUBSTANCES OR PETROLEUM PRODUCTS HAS OCCURRED, BUT REQUIRED RESPONSE ACTIONS HAVE NOT YET BEEN IMPLEMENTED.	6	RED
AREAS THAT HAVE NOT BEEN EVALUATED OR REQUIRE ADDITIONAL EVALUATION.	7	GREY

EXECUTIVE SUMMARY:

FACILITY NS-2 WAS CONSTRUCTED IN 1958 FOR USE AS A BOILER HOUSE. IT WAS INCORPORATED INTO THE BASEWIDE STEAM SYSTEM IN 1990. THE BOILERS ORIGINALLY USED #5 FUEL OIL, BUT WERE CONVERTED IN 1991 TO OPERATE ON #2 FUEL OIL. THE BOILERS ARE INCLUDED ON THE BASEWIDE AIR PERMIT #0560-0002 AND ARE ASSIGNED COMPANY POINT ID NUMBER SY023 AND SY024. PREVIOUS USE OF THE AREA INCLUDED A SEAPLANE HANGER WHERE SEA PLANES WERE REFUELED. SUBSURFACE OIL OR PETROLEUM PRODUCT WAS DISCOVERED DURING A CONSTRUCTION PROJECT. THE NEARBY FUEL OIL TANK WAS TESTED AND INDICATED NO LOSS OF PRODUCT. IT IS ASSUMED THAT THE SUBSURFACE PETROLEUM WAS A RESULT OF THE SEAPLANE REFUELING OPERATIONS. THERE IS A 25,000 UST ON-SITE FOR #2 FUEL OIL. TWO ADJOINING PROPERTIES, NS-3 AND NS-4, HAVE FUEL STORAGE TANKS ASSOCIATED WITH THEM. THE BOILER BLOWDOWN SUMP PUMP PERIODICALLY LEAKED OIL INTO THE COOPER RIVER. IN 1979, THE BOILER BLOWDOWN SUMP DISCHARGE WAS DIVERTED INTO THE SANITARY SEWER SYSTEM. THERE IS A HISTORY OF DOCUMENTED FUEL OIL SPILLS RANGING FROM 3 TO 500 GALLONS. EACH SPILL HAS BEEN CLEANED WITH ABSORBENT WHICH WAS RECOVERED AND REMOVED. DUE TO THE PRESENCE OF PETROLEUM PRODUCT IN THE SOIL AND THE HISTORY OF FUEL OIL SPILLS, IT WAS RECOMMENDED THAT THE SOIL BE EXCAVATED AND REPLACED.

CONTINUED ON SUPPLEMENTAL INFORMATION, PAGE 17.

LIST A DESCRIPTION OF DOCUMENTS REVIEWED.

- 1990. (JANUARY) "REPORT ON SCREENING OF DRINKING WATER COOLERS FOR LEAD AT CHARLESTON NAVAL BASE"
- 1990. SEWAGE COLLECTION SYSTEM, DRAWINGS H410-234 THROUGH H410-247, UNITED STATES NAVY, NAVAL FACILITIES ENGINEERING COMMAND, CHARLESTON NAVAL SHIPYARD, CHARLESTON, SC.
- 1975. STORM DRAINAGE, DRAWINGS H409-70 THROUGH H409-84, UNITED STATES NAVY, NAVAL FACILITIES ENGINEERING COMMAND, CHARLESTON NAVAL SHIPYARD, CHARLESTON, SC.
- 1993. PERSONAL COMMUNICATION WITH MR. MCINTYRE, PUBLIC WORKS UTILITY DEPARTMENT, CHARLESTON NAVAL SHIPYARD.
- 1993. TELEPHONE CONVERSATION, JEFF COLFER (ADVANCED SCIENCES, INC.) TO GUS HOLLIDAY (CHARLESTON NAVAL BASE, PUBLIC WORKS DEPARTMENT).
- 1993. REMEDIAL INVESTIGATION/FEASIBILITY STUDY COMPLIANCE OVERSIGHT - CHARLESTON NAVAL SHIPYARD, CHARLESTON, SOUTH CAROLINA - SOURCES OF HAZARDOUS WASTE RELEASE TABLES. (DOCUMENT CONTROL NO. C04163-NAVSHIP-LC-005), DYNAMAC CORPORATION, ENVIRONMENTAL SERVICES.
- 1993. (JANUARY) MAP OF CHARLESTON NAVAL SHIPYARD, NAVAL STATION AND CONTIGUOUS ACTIVITIES. DRAWING NO. H606-281, CHARLESTON NAVAL SHIPYARD, CHARLESTON, SC.

CONTINUED ON SUPPLEMENTAL INFORMATION, PAGE 17.

SUPPLEMENTAL INFORMATION

STORAGE TANKS CONTINUED:

THE LATEST SAMPLING WAS COMPLETED IN 1991 AND DOCUMENTATION SHOWS THAT THE OIL/WATER SEPARATOR IS TESTED AND SAMPLED BI-ANNUALLY.

SOLID WASTE CONTINUED:

THE CURRENT WASTE HAULING COMPANY FOR THE BASE IS FENNEL CONTAINER COMPANY. THE BROWNING-FERRIS INDUSTRIES (BFI) LANDFILL WAS USED FOR WASTE BURIAL DURING THE PERIOD BETWEEN 1970 TO 1990 (ESTIMATED). THE CHARLESTON COUNTY SOLID WASTE DISPOSAL LANDFILL WAS ALSO USED BY THE BASE DURING THE PERIOD OF 1970 TO THE EARLY 1980S (ESTIMATED). PRIOR TO 1970, SOLID WASTES WERE DISPOSED OF IN THE BASE LANDFILL. (REF: TELEPHONE CONVERSATION OF 11/30/93 FROM J. COLFER (ASI) TO GUS HOLLIDAY OF PUBLIC WORKS.)

ASBESTOS-CONTAINING MATERIALS CONTINUED:

THE 1990 BASEWIDE ASBESTOS INVENTORY ASSESSMENT AND SURVEY IDENTIFIED PIPE INSULATION AND THE PLASTER CEILING AS CONTAINING ASBESTOS (CONTAINS > 1% ASBESTOS). OTHER SUSPECT MATERIALS WERE NOTED BUT NOT SAMPLED AND INCLUDE FLOOR TILE, MASTIC AND TOEBOARD. MR. MCINTYRE SAID ALL SUSPECTED ASBESTOS WAS TAKEN OFF AND SEALED SEVERAL YEARS AGO.

EXECUTIVE SUMMARY CONTINUED:

THE RECORD SEARCH AND INTERVIEW DID NOT INDICATE IF THIS RECOMMENDATION WAS FOLLOWED UP ON. THERE IS AN OIL/WATER SEPARATOR WHICH HAS BEEN TESTED BI-ANNUALLY AND HAS BEEN GIVEN A "PASSED" RATING. A 1980 MEMO IDENTIFIED NINE POWER CAPACITORS WHICH CONTAINED TEN GALLONS OF PCBs. MCINTYRE STATED THAT THESE WERE REPLACED WITH NON-PCB CAPACITORS. THE POTABLE WATER HAS BEEN TESTED FOR LEAD AND WAS FOUND TO CONTAIN 0.0013 PPM OF LEAD WHICH IS BELOW EPA'S MCL OF 0.015 PPM. A BASEWIDE ASBESTOS SURVEY FOUND UNDEGRADED PIPE INSULATION AND A DAMAGED PLASTER CEILING MATERIAL AS CONTAINING MORE THAN 1% ASBESTOS. OTHER NOTED MATERIALS WERE FLOOR TILE, MASTIC, AND TOEBOARD. THESE MATERIALS WERE NOT SAMPLED. MR. MCINTYRE STATED THAT THE PIPE INSULATION WAS REPLACED A FEW YEARS AGO WITH NON-ASBESTOS INSULATION, HOWEVER, HE WAS UNAWARE OF THE STATUS ON THE PLASTER CEILING. NS-2 IS GIVEN A CLASSIFICATION NUMBER OF 6 (RED) WHICH INDICATES THAT ALL REQUIRED RESPONSE ACTIONS HAVE NOT YET BEEN IMPLEMENTED. STAINED SOIL IS PRESENT AROUND THE UST FILL POTS AND WAS RECOMMENDED TO BE REMOVED AND REPLACED. THE ASBESTOS CONTAINING PLASTER CEILING MATERIAL, WHICH WAS IDENTIFIED DURING THE ASBESTOS SURVEY, IS BADLY PEELING IN THE OFFICE AREA. THIS MATERIAL SHOULD BE REMOVED AND REPLACED.

DOCUMENTS REVIEWED CONTINUED:

- 1988. *U. S. FISH AND WILDLIFE SERVICE NATIONAL WETLAND INVENTORY: MAP NUMBERS 5050 III SW AND 5049 IV NW.* U. S. DEPARTMENT OF THE INTERIOR, FISH AND WILDLIFE SERVICE.
- 1988. *U. S. ARMY CORPS OF ENGINEERS WETLAND DELINEATION SURVEY OF THE CHARLESTON NAVAL BASE:* DRAWINGS H606-268 AND H606-269 (MAP OF CHARLESTON NAVAL SHIPYARD), AS MODIFIED BY THE U. S. ARMY CORPS OF ENGINEERS, CHARLESTON DISTRICT, 2 FEB. 1988. U. S. ARMY CORPS OF ENGINEERS, CHARLESTON DISTRICT.
- 1993. *NOTIFICATION OF NEW SOLID WASTE MANAGEMENT UNITS (SWMUS) AT NAVAL BASE, CHARLESTON, SC.* DEWITT, R.E., OCCUPATIONAL SAFETY AND ENVIRONMENTAL OFFICE, CHARLESTON NAVAL SHIPYARD, CHARLESTON, SC.
- 1963. *BLACK AND WHITE AERIAL PHOTOGRAPH OF CHARLESTON NAVAL STATION, CHARLESTON, SC.* SOUTH DIV NATURAL RESOURCES.
- 1957. *BLACK AND WHITE AERIAL PHOTOGRAPH OF CHARLESTON NAVAL STATION, CHARLESTON, SC.* UNIVERSITY OF SOUTH CAROLINA.
- 1949. *BLACK AND WHITE AERIAL PHOTOGRAPH OF CHARLESTON NAVAL STATION, CHARLESTON, SC.* UNIVERSITY OF SOUTH CAROLINA.
- 1939. *BLACK AND WHITE AERIAL PHOTOGRAPH OF CHARLESTON NAVAL STATION, CHARLESTON, SC.* CHARLESTON COUNTY SOIL AND WATER CONSERVATION DISTRICT.
- 1990. "OIL SPILL PREVENTION CONTROL AND COUNTERMEASURE PLAN," J.W. SNEED AND C.D. ROBERTSON, NAVSTACHASN
- 1986. "PHASE I, UNDERGROUND STORAGE TANK REGISTRATION," U.S. NAVAL ACTIVITIES, SOUTH CAROLINA, HARDING LAWSON ASSOCIATES.
- 1986. "MEMO FROM J.W. SNEED TO FOSTER WHEELER," USA CORPORATION
- 1985. "ENVIRONMENTAL INCIDENT REPORT #85-31," FROM C. HAYES, CODE 440.32 TO CODE 440.3.
- 1985. "ENVIRONMENTAL INCIDENT REPORT #85-29," FROM K. SCOTT, CODE 440.311 TO CODE 440.3.
- 1984. "ENVIRONMENTAL INCIDENT REPORT #84-80," FROM W. NEVILLE, CODE 440.322 TO CODE 440.3.
- 1979. "WATER-OIL SEPARATOR," BUILDING NS-2, FRASER SANITARY ENGINEERING
- 1979. "POLYCHLORINATED BI PHENYLS (PCBs)," FROM A.E. MCMAHON, CODE 450 TO CODE 440.
- 1991. "NEESA DEFICIENCY ABATEMENT PROGRAM MANAGEMENT INFORMATION SYSTEM (DAP/MIS)," ASBESTOS ASSESSMENT BUILDING #NS-2.
- 1990. *ASBESTOS INVENTORY ASSESSMENT & SURVEY, PART I, VOL I OF I, CHARLESTON NAVAL SHIPYARD, CHARLESTON, SC.* DEPARTMENT OF THE NAVY, SOUTHERN DIVISION, NAVAL FACILITIES ENGINEERING COMMAND. CONTRACT #N62467-88-0649 AMENDMENT 4, WESTINGHOUSE PROJECT #1238-89-023.
- 1992. "FUEL BURNING EMISSION GENERATING POINTS"
- 1987. "ENVIRONMENTAL INCIDENT REPORT #87-46," FROM W. NEVILLE, CODE 462.41 TO CODE 460.
- 1983. *INITIAL ASSESSMENT STUDY OF NAVAL BASE CHARLESTON, CHARLESTON, SOUTH CAROLINA.* ENVIRONMENTAL SCIENCE AND ENGINEERING, INC. (ESE). CONTRACT NUMBER N62474-81-C-9583.

Note which documents you review
in all sections of this form.

Base:
Building Number:
Site Location:

Naval Base Charleston (CNSY)
NS-3
M-17

CONCLUSION/EXECUTIVE SUMMARY

(ATTACH PLANS AND PHOTOGRAPHS)

CLASSIFICATION (BASED ON THE INFORMATION/DATA/DOCUMENTATION AVAILABLE AT THE TIME OF THE SURVEY)	CLASSIFICATION NUMBER	MAP COLOR
AREAS WHERE NO STORAGE, RELEASE OR DISPOSAL OF HAZARDOUS SUBSTANCES OR PETROLEUM PRODUCTS HAS OCCURRED (INCLUDING NO MIGRATION OF THESE SUBSTANCES FROM ADJACENT AREAS).	1	WHITE
AREAS WHERE ONLY STORAGE OF HAZARDOUS SUBSTANCES OR PETROLEUM PRODUCTS HAS OCCURRED (BUT NO RELEASE, DISPOSAL, OR MIGRATION FROM ADJACENT AREAS HAS OCCURRED).	2	BLUE
AREAS WHERE STORAGE, RELEASE, DISPOSAL AND/OR MIGRATION OF HAZARDOUS SUBSTANCES OR PETROLEUM PRODUCTS HAS OCCURRED, BUT AT CONCENTRATIONS THAT DO NOT REQUIRE A REMOVAL OR A REMEDIAL ACTION.	3	LIGHT GREEN
AREAS WHERE STORAGE, RELEASE, DISPOSAL AND/OR MIGRATION OF HAZARDOUS SUBSTANCES OR PETROLEUM PRODUCTS HAS OCCURRED, AND ALL REMEDIAL ACTIONS NECESSARY TO PROTECT HUMAN HEALTH AND THE ENVIRONMENT HAVE BEEN TAKEN.	4	DARK GREEN
AREAS WHERE STORAGE, RELEASE, DISPOSAL AND/OR MIGRATION OF HAZARDOUS SUBSTANCES OR PETROLEUM PRODUCTS HAS OCCURRED, REMOVAL AND/OR REMEDIAL ACTIONS ARE UNDER WAY, BUT ALL REQUIRED REMEDIAL ACTIONS HAVE NOT YET BEEN TAKEN.	5	YELLOW
AREAS WHERE STORAGE, RELEASE, DISPOSAL AND/OR MIGRATION OF HAZARDOUS SUBSTANCES OR PETROLEUM PRODUCTS HAS OCCURRED, BUT REQUIRED RESPONSE ACTIONS HAVE NOT YET BEEN IMPLEMENTED.	6	RED
AREAS THAT HAVE NOT BEEN EVALUATED OR REQUIRE ADDITIONAL EVALUATION.	7	GREY

EXECUTIVE SUMMARY:

THE INFORMATION COLLECTED DURING THIS INVESTIGATION DOES INDICATE RECOGNIZED ENVIRONMENTAL IMPACTS FROM THIS FACILITY. THE FOLLOWING SIGNIFICANT OBSERVATIONS ARE PROVIDED:

- BASED ON INQUIRIES AND OBSERVATIONS, SOME ASBESTOS IS SUSPECTED TO BE PRESENT ON THE PROPERTY. HOWEVER, NO SAMPLING WAS PERFORMED TO ESTABLISH THE PRESENCE OR ABSENCE OF ASBESTOS DURING THIS SURVEY.
- AIR EMISSIONS FROM THE PROPERTY ARE NOT CURRENTLY SUBJECT TO REGULATION.

THIS FACILITY WAS CONSTRUCTED AS A FUEL PUMPING STATION IN 1958 AND WAS CONVERTED TO A STORAGE AREA IN THE EARLY 1980S. TWO UNDERGROUND STORAGE TANKS WERE OBSERVED AT THIS FACILITY ALTHOUGH THEIR SIZE WAS NOT DETERMINED. THIS FACILITY IS SUSPECT OF LEAD-BASED PAINT DUE TO ITS AGE. FACILITY NS-2 IS A UTILITY BUILDING THAT HOUSES AOC 677 WHICH IS OIL BASED AND ON THE ADJACENT PROPERTY. BASED ON THE ABOVE OBSERVATIONS, THIS FACILITY IS CLASSIFIED AS A 7 (GREY).

LIST A DESCRIPTION OF DOCUMENTS REVIEWED.

- 1993. *REMEDIAL INVESTIGATION/FEASIBILITY STUDY COMPLIANCE OVERSIGHT - CHARLESTON NAVAL SHIPYARD, CHARLESTON, SOUTH CAROLINA - SOURCES OF HAZARDOUS WASTE RELEASE TABLES.* (DOCUMENT CONTROL No. C04163-NAVSHIP-LC-005), DYNAMAC CORPORATION, ENVIRONMENTAL SERVICES.
- 1993. (JANUARY) *MAP OF CHARLESTON NAVAL SHIPYARD, NAVAL STATION AND CONTIGUOUS ACTIVITIES.* DRAWING No. H606-281, CHARLESTON NAVAL SHIPYARD, CHARLESTON, SC.
- 1983. *INITIAL ASSESSMENT STUDY OF NAVAL BASE CHARLESTON, CHARLESTON, SOUTH CAROLINA.* ENVIRONMENTAL SCIENCE AND ENGINEERING, INC. (ESE). CONTRACT NUMBER N62474-81-C-9583.
- 1939. *BLACK AND WHITE AERIAL PHOTOGRAPH OF CHARLESTON NAVAL STATION, CHARLESTON, SC.* CHARLESTON COUNTY SOIL AND WATER CONSERVATION DISTRICT.
- 1941. *BLACK AND WHITE AERIAL PHOTOGRAPH OF CHARLESTON NAVAL STATION, CHARLESTON, SC.* CHARLESTON COUNTY SOIL AND WATER CONSERVATION DISTRICT.
- 1949. *BLACK AND WHITE AERIAL PHOTOGRAPH OF CHARLESTON NAVAL STATION, CHARLESTON, SC.* UNIVERSITY OF SOUTH CAROLINA.
- 1954. *BLACK AND WHITE AERIAL PHOTOGRAPH OF CHARLESTON NAVAL STATION, CHARLESTON, SC.* CHARLESTON COUNTY SOIL AND WATER CONSERVATION DISTRICT.

CONTINUED ON SUPPLEMENTAL INFORMATION, PAGE 17.

Note which documents you review
in all sections of this form.

Base: Naval Base Charleston (NS)
Building Number: NS-4
Site Location: M-16

CONCLUSION/EXECUTIVE SUMMARY

(ATTACH PLANS AND PHOTOGRAPHS)

CLASSIFICATION (BASED ON THE INFORMATION/DATA/DOCUMENTATION AVAILABLE AT THE TIME OF THE SURVEY)	CLASSIFICATION NUMBER	MAP COLOR
AREAS WHERE NO STORAGE, RELEASE OR DISPOSAL OF HAZARDOUS SUBSTANCES OR PETROLEUM PRODUCTS HAS OCCURRED (INCLUDING NO MIGRATION OF THESE SUBSTANCES FROM ADJACENT AREAS).	1	WHITE
AREAS WHERE ONLY STORAGE OF HAZARDOUS SUBSTANCES OR PETROLEUM PRODUCTS HAS OCCURRED (BUT NO RELEASE, DISPOSAL, OR MIGRATION FROM ADJACENT AREAS HAS OCCURRED).	2	BLUE
AREAS WHERE STORAGE, RELEASE, DISPOSAL AND/OR MIGRATION OF HAZARDOUS SUBSTANCES OR PETROLEUM PRODUCTS HAS OCCURRED, BUT AT CONCENTRATIONS THAT DO NOT REQUIRE A REMOVAL OR A REMEDIAL ACTION.	3	LIGHT GREEN
AREAS WHERE STORAGE, RELEASE, DISPOSAL AND/OR MIGRATION OF HAZARDOUS SUBSTANCES OR PETROLEUM PRODUCTS HAS OCCURRED, AND ALL REMEDIAL ACTIONS NECESSARY TO PROTECT HUMAN HEALTH AND THE ENVIRONMENT HAVE BEEN TAKEN.	4	DARK GREEN
AREAS WHERE STORAGE, RELEASE, DISPOSAL AND/OR MIGRATION OF HAZARDOUS SUBSTANCES OR PETROLEUM PRODUCTS HAS OCCURRED, REMOVAL AND/OR REMEDIAL ACTIONS ARE UNDER WAY, BUT ALL REQUIRED REMEDIAL ACTIONS HAVE NOT YET BEEN TAKEN.	5	YELLOW
AREAS WHERE STORAGE, RELEASE, DISPOSAL AND/OR MIGRATION OF HAZARDOUS SUBSTANCES OR PETROLEUM PRODUCTS HAS OCCURRED, BUT REQUIRED RESPONSE ACTIONS HAVE NOT YET BEEN IMPLEMENTED.	6	RED
AREAS THAT HAVE NOT BEEN EVALUATED OR REQUIRE ADDITIONAL EVALUATION.	7	GREY

EXECUTIVE SUMMARY:

FACILITY NS-4 WAS CONSTRUCTED IN 1952 AS A UNDERGROUND FUEL OIL STORAGE TANK. THERE WAS NO VISUAL EVIDENCE OR DOCUMENTATION OF SPILLS OR LEAKS ASSOCIATED WITH THIS FACILITY. FACILITY NS-2 IS LOCATED ADJACENT TO THE EAST AND IS ASSOCIATED WITH AOC 677. THERE IS KNOWN SUBSURFACE OIL OR PETROLEUM CONTAMINATION IN THIS AREA WHICH IS ATTRIBUTED TO THE REFUELING OF SEAPLANES IN THE PAST. THE DATES OF THE SEAPLANE OPERATIONS IS UNKNOWN, THE TOP OF THE TANK IS PAINTED, WHICH IS CRACKED AND PEELING, AND IS LIKELY TO HAVE BEEN PAINTED WITH LEAD-BASED PAINT IN THE PAST. THE FACILITY IS GIVEN A CLASSIFICATION NUMBER OF 7/GREY BECAUSE OF THE POSSIBLE MIGRATION OF PETROLEUM FROM NS-2. IT WAS RECOMMENDED THAT AOC 677 BE REMEDIATED BY REMOVING AND REPLACING ALL THE CONTAMINATED SOIL. IT IS LIKELY THAT SIMILAR RESPONSE ACTIONS MAY BE IMPLEMENTED AT FACILITY NS-4 DUE TO ITS CLOSE PROXIMITY TO FACILITY NS-2.

LIST A DESCRIPTION OF DOCUMENTS REVIEWED.

- 1993. PERSONAL COMMUNICATION WITH MR. BO CHEVERIH
- 1993. (JANUARY) MAP OF CHARLESTON NAVAL SHIPYARD, NAVAL STATION AND CONTIGUOUS ACTIVITIES. DRAWING No. H606-281, CHARLESTON NAVAL SHIPYARD, CHARLESTON, SC.
- 1993. REMEDIAL INVESTIGATION/FEASIBILITY STUDY COMPLIANCE OVERSIGHT - CHARLESTON NAVAL SHIPYARD, CHARLESTON, SOUTH CAROLINA - SOURCES OF HAZARDOUS WASTE RELEASE TABLES. (DOCUMENT CONTROL No. C04163-NAVSHIP-LC-005), DYNAMAC CORPORATION, ENVIRONMENTAL SERVICES.
- 1990. SEWAGE COLLECTION SYSTEM, DRAWINGS H410-234 THROUGH H410-247, UNITED STATES NAVY, NAVAL FACILITIES ENGINEERING COMMAND, CHARLESTON NAVAL SHIPYARD, CHARLESTON, SC.
- 1975. STORM DRAINAGE, DRAWINGS H409-70 THROUGH H409-84, UNITED STATES NAVY, NAVAL FACILITIES ENGINEERING COMMAND, CHARLESTON NAVAL SHIPYARD, CHARLESTON, SC.

[CONTINUED ON SUPPLEMENTAL PAGE]

Appendix B

Photographs



Northwest portion of NS-2, Delta Marine's boats



Northwest side of former Building NS-2



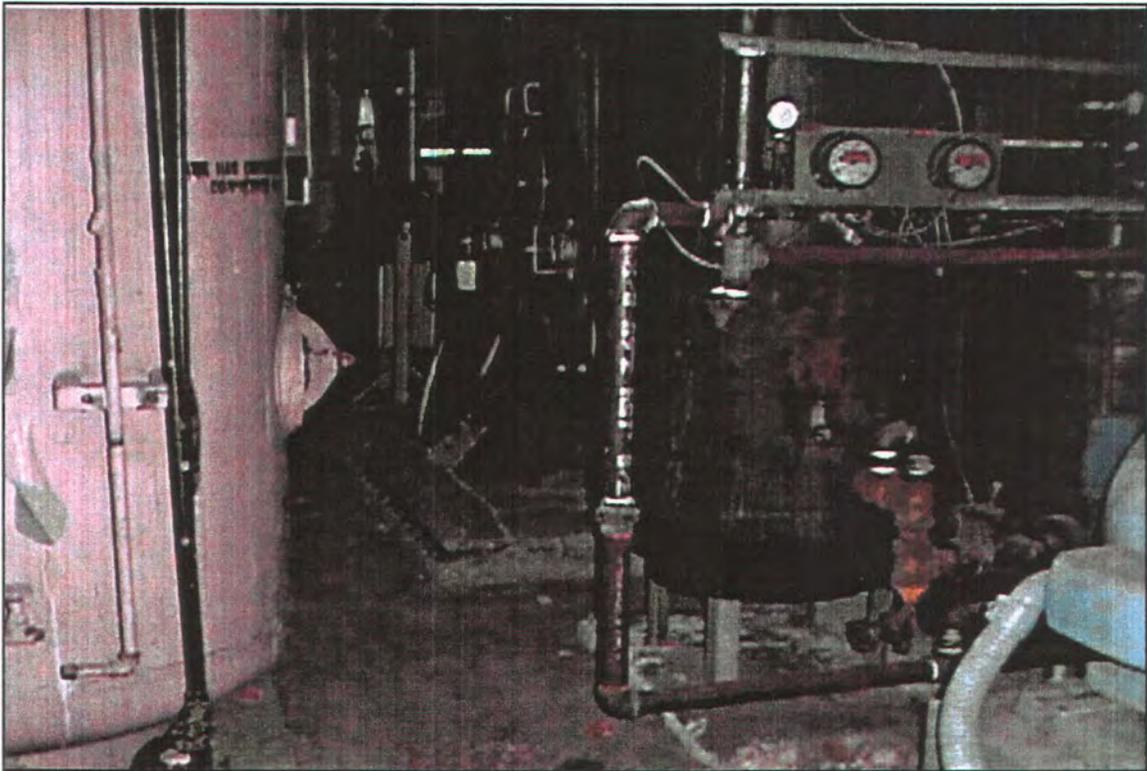
East side of former Building NS-2



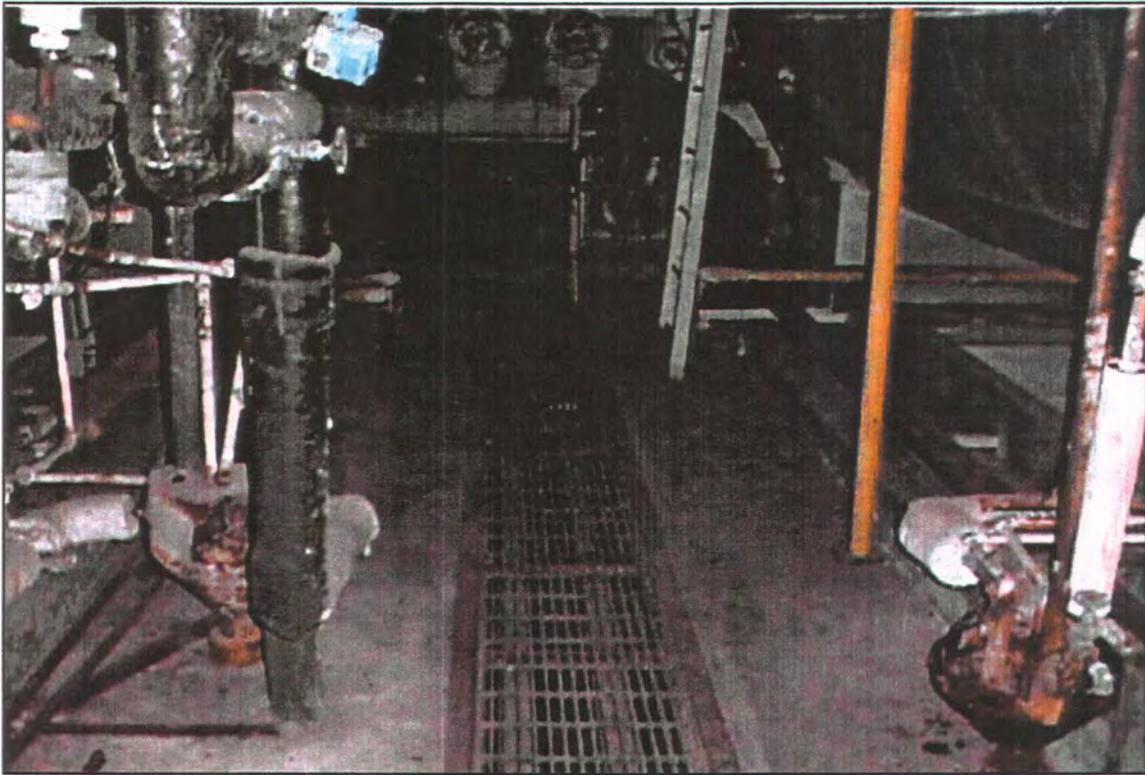
Stained area on parking lot asphalt at NS-2



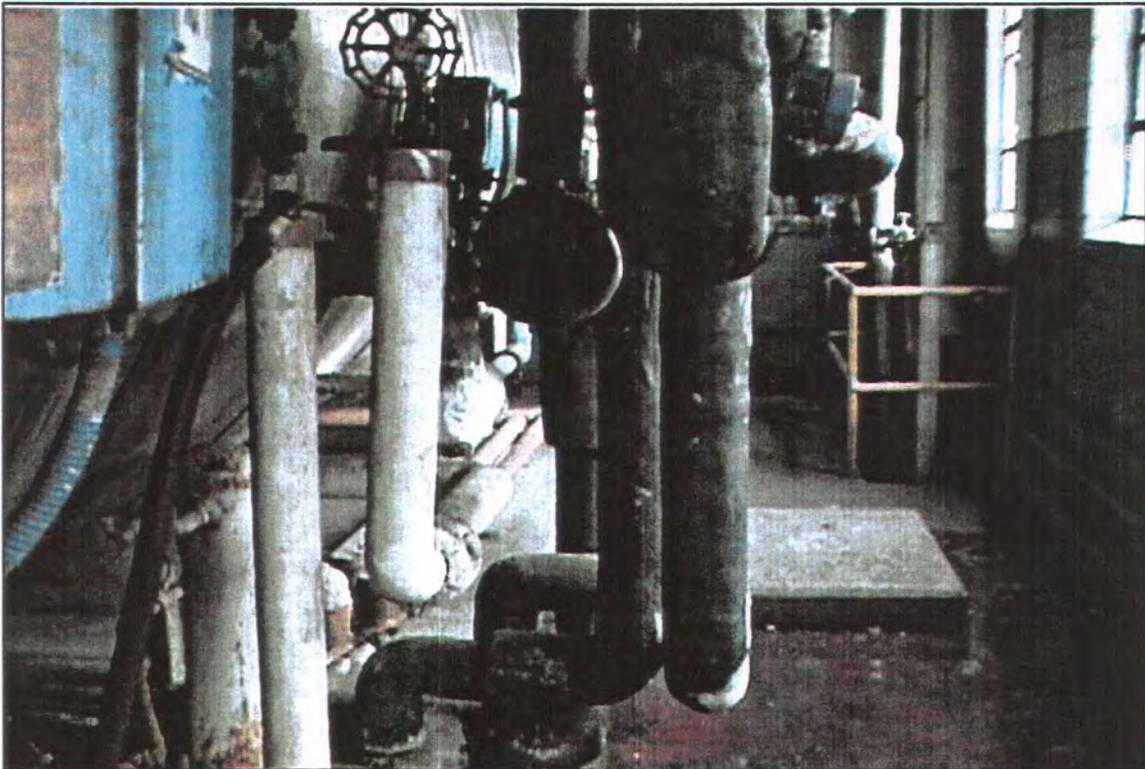
Area to the east of former Building NS-2



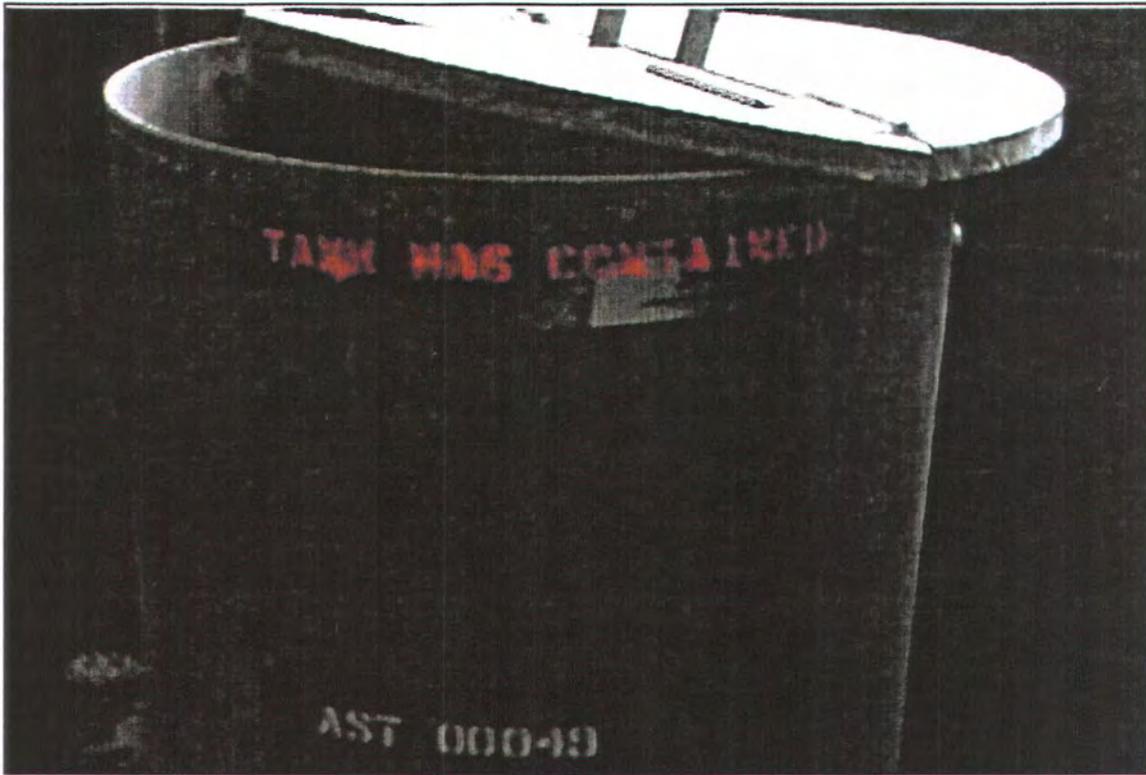
Boiler room in former Building NS-2



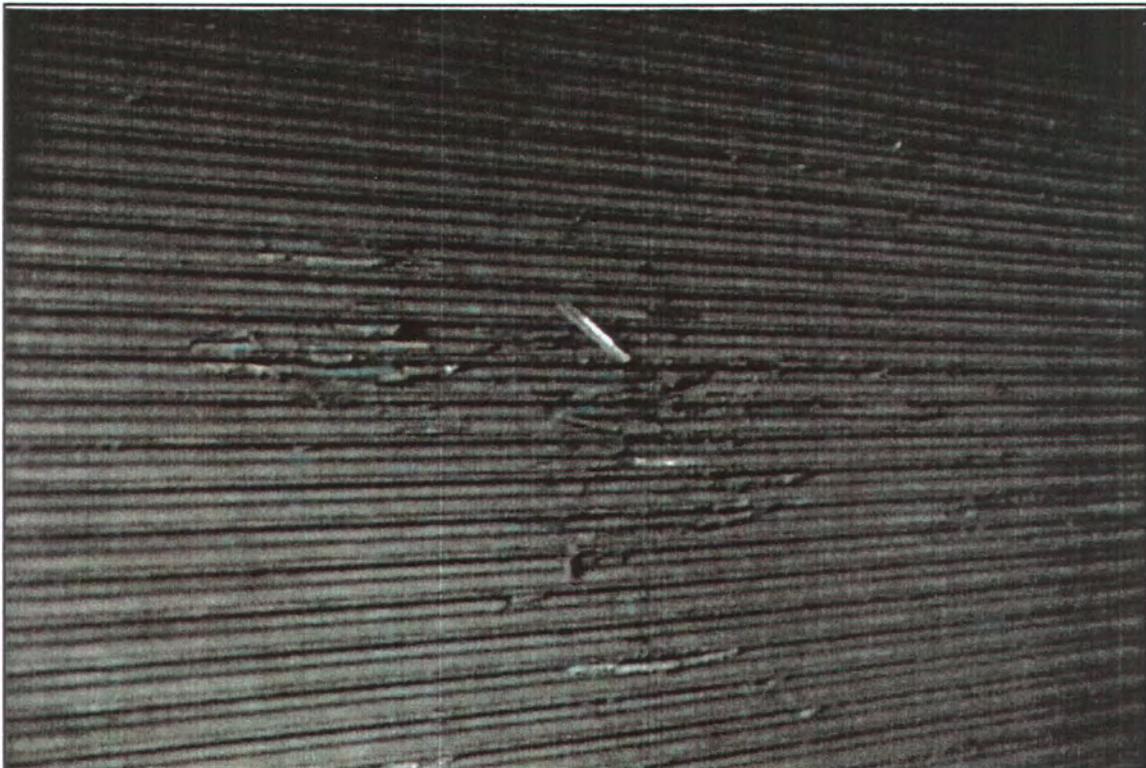
Boiler room in former Building NS-2



Boiler room in former Building NS-2



Empty chemical tank in boiler room of former Building NS-2



Peeling paint on overhead door in former Building NS-2



Peeling paint on tank in boiler room in former Building NS-2



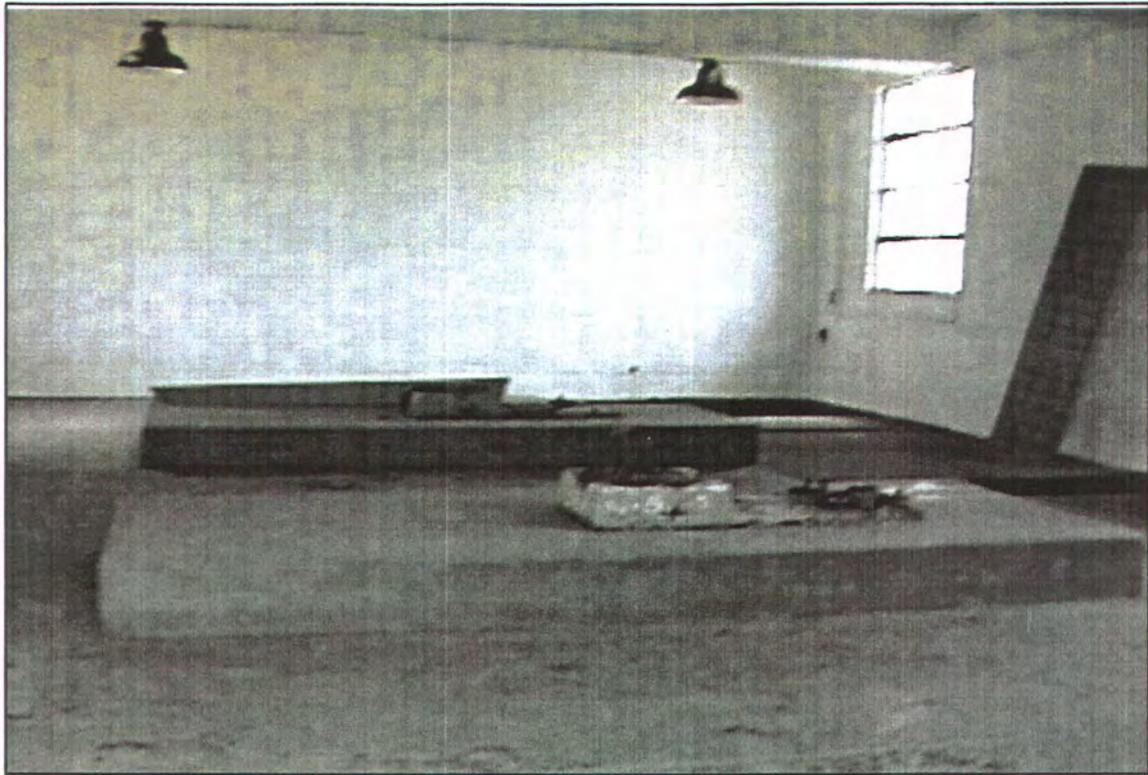
East side of former Building NS-3



Former AST foundation on north side of former Building NS-3



Former fuel unloading area on north side of former Building NS-3



AST foundation inside former Building NS-3



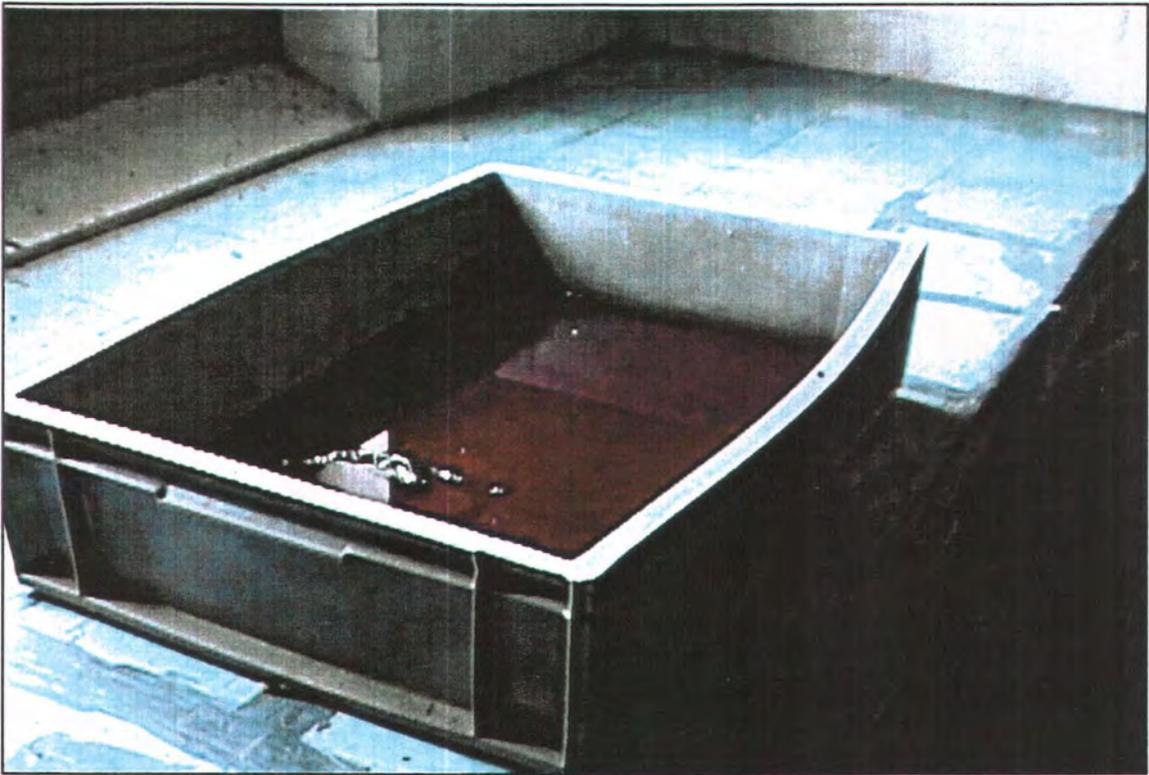
Fuel pipeline inside former Building NS-3



Southern side of former Building NS-3



Facility NS-4 - Underground Storage Tank



Spent oil/lubricant observed in former Building NS-2



Peeling paint inside former Building NS-2

Appendix C
EBSL Comments