

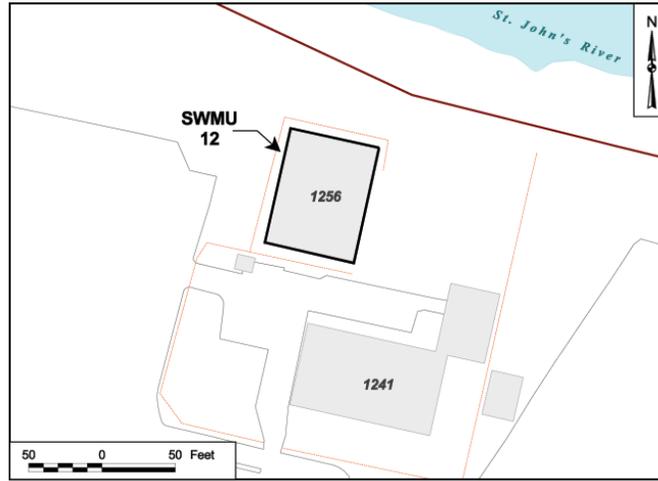
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FINAL STATEMENT OF BASIS FOR SOLID WASTE MANAGEMENT UNIT 12
NEUTRALIZATION BASIN NS MAYPORT FL
8/8/2008
NAVAL STATION MAYPORT

STATEMENT OF BASIS
SWMU 12 – Neutralization Basin
Naval Station Mayport
Mayport, Florida
USEPA ID # FL9 170 024 260



August 8, 2008



Facility/Unit Type: Naval Station
Contaminants: No Contaminants Exceeding Residential Cleanup Target Levels
Media: Soil and Groundwater
Corrective Action: Soil and Groundwater – No Action

SUMMARY

The proposed corrective action for **Solid Waste Management Unit (SWMU) 12** at Naval Station (NAVSTA) Mayport is No Action. SWMU 12 is located approximately 40 feet north of Building 1241 and 75 feet south of the shoreline of the St. Johns River. SWMU 12, the neutralization basin, has been impacted by a release of sodium hydroxide that mobilized metals from the soil into the **groundwater**. However, groundwater sampling determined that groundwater contamination is not of concern for SWMU 12. The most recent analysis of soil samples during the completion of the **Corrective Measures Study (CMS) Addendum** concluded that soil contamination is also not a concern for SWMU 12.

The public is invited to comment on this proposed corrective action or any other **corrective measure** alternative including those not previously studied. More information on how the public may participate in this decision-making process is provided in the Public Participation section of this document.

INTRODUCTION

Pursuant to the **Resource Conservation and Recovery Act (RCRA)**, as amended by the 1984 **Hazardous and Solid Waste Amendments (HSWA)**, the **Florida Department of Environmental Protection (FDEP)** issued the current HSWA permit to NAVSTA Mayport on August 30, 2005.

This **Statement of Basis (SB)** identifies the No Action corrective action for SWMU 12, explains the related rationale for its selection, solicits public review and comment on this decision, and provides information as to how the public can be involved in the decision process. Additional details regarding the facility, the environmental investigations, and the evaluation of the No Action decision may be found in the **RCRA Facility Investigation (RFI)**, CMS, and CMS Addendum Reports. These documents are kept as part of the Administrative Record at the **Information Repository**. Refer to the Public Participation section of this document for their location. A glossary, which defines some of the technical terms contained herein, is included at the end of this document.

Due to changes in the FDEP regulations, the corrective action recommended in the CMS is no longer required. The CMS Addendum Report provides additional information on the No Action corrective measure for SWMU 12. The No Action corrective measure reflected in this SB is proposed by the United States Navy (Navy) for implementation at SWMU 12. Changes to the proposed No Action corrective action or a change from the proposed No Action corrective action to another appropriate solution will require public participation.

PROPOSED CORRECTIVE ACTION

The proposed corrective action for SWMU 12 at NAVSTA Mayport is No Action for soil and groundwater.

FACILITY BACKGROUND

NAVSTA Mayport is located near the town of Mayport within the city limits of Jacksonville, Florida, in northeastern Duval County on the south shore of the confluence of the St. Johns River and the Atlantic Ocean (see Figure 1). SWMU 12 is located in the northern part of NAVSTA Mayport along the shoreline of the St. Johns River (see Figure 2).

Construction of the original basin was completed in 1971. This basin had an asphalt base covered with a synthetic liner. The original basin was damaged by a storm in 1985. Because of the damage, the original basin material was removed and a new neutralization basin was constructed at the same location in 1986.

The existing basin is approximately 59 feet wide and 78 feet long, and it is divided into two cells, each having a depth of 6 feet. The capacity of the basin is approximately 112,300 gallons with a 1.5-foot freeboard.

The basin was originally constructed to receive and neutralize backwash from the regeneration of ion exchange columns in the boiler plant. The neutralized wastewater was then discharged to the NAVSTA Mayport sanitary sewer system. The ion-exchange regeneration system was subsequently redesigned to accomplish neutralization prior to discharge into the basin. From July 1990 to January 1992, the basin was used for flow equalization and temporary storage of pretreated waste regeneration fluid from the redesigned ion-exchange process used in the boiler plant before being discharged to the NAVSTA Mayport sanitary sewer system. In January 1992, this process was discontinued and the basin was removed from service.

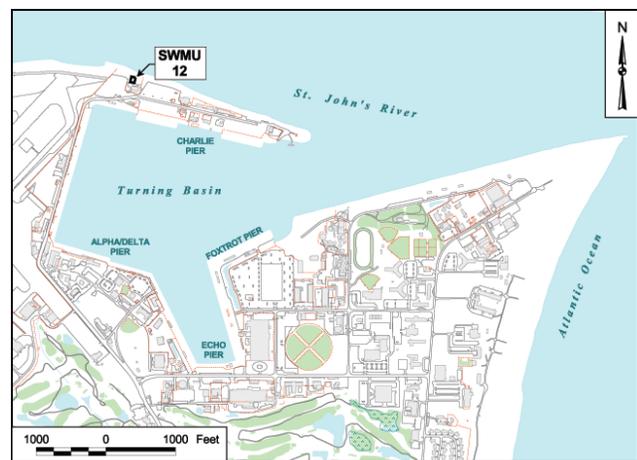
In 1992, a release of sodium hydroxide occurred when a sodium hydroxide tank was being removed from service. The tank was not completely emptied before removal due to a faulty pump; the accidental release resulted in a spill of approximately 300 gallons of sodium hydroxide on the ground. The release occurred about 20 feet east of the southeastern corner of the basin and 40 feet north of the boiler plant (Building 1241). Subsequently, stressed vegetation was observed in the vicinity of the spill. A 6- to 9-inch thick layer of soil was placed over the release area and the soil was seeded.

In 1993 and 1994, groundwater sampling was conducted at SWMU 12 as part of the RFI. The groundwater samples were analyzed for volatile organic compounds (VOCs), semivolatile organic compounds (SVOCs), pesticides, inorganic constituents, and cyanide. VOCs, SVOCs, and inorganic constituents were detected in the groundwater.

Figure 1. Naval Station Mayport Location Map



Figure 2. SWMU 12 Location Map



SUMMARY OF FACILITY RISKS

A **Human Health Baseline Risk Assessment** and an Ecological Risk Assessment were performed as part of the RFI Report. An exceedance of an FDEP or **United States Environmental Protection Agency** (USEPA) risk level indicates a potential concern for the SWMU.

Human Health Risk Assessment

Preliminary risk characterization for SWMU 12 was conducted in 1996 for potential exposures to groundwater under future land-use scenarios. Current use of groundwater was not evaluated since there was no exposure to groundwater in the surficial **aquifer** under the current industrial land use. **Surface** and **subsurface soil** samples were not collected for the **risk assessment** as there was no documentation of a release due to overtopping of the basin. Also, a previous investigation conducted for a closure plan showed that soil samples collected beneath the basin did not contain detectable inorganic concentrations.

Groundwater. Four VOCs (1,1-dichloroethane; 1,2-dichlorobenzene; 1,2-dichloroethene; and methylene chloride), two SVOCs (4-nitrophenol and phenol), and 16 inorganic constituents were detected in the groundwater. A review of groundwater results against current Cleanup Target Levels (CTLs) in Chapter 62-777, Florida Administrative Code (FAC) indicated no exceedances. Therefore, remediation in groundwater based on human health concerns was deemed unwarranted.

Ecological Assessment

The ecological risk assessment evaluated risks to aquatic life associated with exposure to groundwater as it discharges into the St. Johns River and concluded that the discharge is not expected to pose an unacceptable risk for aquatic receptors. Also, the groundwater was found to have no effects to aquatic receptors in surface water. Terrestrial receptors were not evaluated due to insufficient habitat.

Clean Closure Equivalency Demonstration (CCED).

The goal of this demonstration conducted in 1998 was to document that the operation of the basin did not result in a release of hazardous contaminants to the environment and to confirm that no remediation was necessary to clean close the basin. Only arsenic was detected at a concentration that exceeded the FDEP Soil Cleanup Target Level (SCTL) for residential direct

exposure. The concentration of arsenic did not exceed the FDEP SCTL for industrial direct exposure in effect at that time.

The pH of the soil samples ranged from 8.45 to 8.82 and averaged 8.54. The pH values in the soil appeared to be within the range that would be neutral for soil containing calcareous materials.

Conclusions

Arsenic was determined to be a concern for soil at SWMU 12 in the CCED; however, the FDEP updated its SCTL concentrations in April 2005. This regulatory change resulted in arsenic no longer exceeding FDEP SCTLs for direct residential exposure. The elimination of arsenic as a concern is documented in the CMS Addendum Report.

Based on the CMS results, there are no chemical constituents present in the soil or groundwater at SWMU 12 that would adversely impact human health or ecological receptors.

SCOPE OF CORRECTIVE ACTION

No contaminants in soil exceed the residential SCTLs in Chapter 62-777, FAC. No contaminants in groundwater exceed the GCTLs in Chapter 62-777, FAC.

No **chemicals of concern** were identified for SWMU 12. Therefore, contamination maps were not prepared and no excavation volumes were estimated.

SUMMARY OF ALTERNATIVES

Based on the findings of the CMS Addendum Report showing no contaminants exceeded current residential SCTLs or GCTLs, corrective action is not required and No Action is recommended for soil and groundwater at SWMU 12.

EVALUATION OF THE PROPOSED REMEDY AND ALTERNATIVES

No proposed corrective actions or alternatives were evaluated for SWMU 12 because No Action is recommended for this SWMU.

PUBLIC PARTICIPATION

To make a final decision and incorporate a No Action corrective measure into the HSWA permit, the Navy is soliciting public review and comment on this SB for the proposed corrective action for SWMU 12 at NAVSTA Mayport. The 40 *Code of Federal Regulations* (CFR) 124.10(6) requires a 45-day comment period for a permit modification request made by the permittee under RCRA. The FDEP has undertaken the lead role on this request initiated by the Navy (the permittee). The comment period will begin on August 24, 2008, and will be published in the *Florida Times Union* newspaper.

Copies of the RFI, CMS, and CMS Addendum Reports and the SB are available for public review at the Information Repository located at the Jacksonville Public Library - Beaches Branch, 600 3rd Street, Neptune Beach, FL, 32266 [Phone (904) 241-1141].

A public hearing will be held if one is requested. To request a public hearing, to obtain more information about this SB, or to submit written comments, please contact either Diane Racine or John Winters (see contact information).

All comments must be postmarked no later than October 7, 2008.

Next Steps

Unless otherwise indicated, the FDEP will modify the HSWA permit to incorporate the final decision on the RCRA permit modification request when the permit is renewed. The final selection will detail the No Action corrective measure chosen for SWMU 12 and will consider comments received during the **public comment period** in a **Response to Comments Summary**.

When the permit is modified, notice will be given to the Navy and to each person who has submitted written comments or who has requested notice of the final decision. The final permit decision shall become effective 30 days after the issuance of the notice of the decision unless a later date is specified or review is requested under 40 CFR 124.19. If no comments are received requesting a change in the draft permit, the final permit modification shall become effective immediately upon issuance.

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KEY WORDS

CCED	Clean Closure Equivalency Demonstration
CFR	Code of Federal Regulations
CMS	Corrective Measures Study
FAC	Florida Administrative Code
FDEP	Florida Department of Environmental Protection
GCTL	Groundwater Cleanup Target Level
HSWA	Hazardous and Solid Waste Amendments
LUC	Land Use Control
NAVSTA	Naval Station
Navy	United States Navy
RCRA	Resource Conservation and Recovery Act
RFI	RCRA Facility Investigation
SB	Statement of Basis
SCTL	Soil Cleanup Target Level
SVOC	Semivolatile Organic Compound
SWMU	Solid Waste Management Unit
USEPA	United States Environmental Protection Agency
VOC	Volatile Organic Compound

GLOSSARY

Aquifer: An underground layer of rock, sand, or gravel capable of storing and transmitting water within cracks and pore spaces, or between grains.

Corrective Measure: The actual construction or cleanup phase following the selection of cleanup alternatives.

Corrective Measures Study (CMS): An engineering analysis and report that identifies, evaluates, and compares the most appropriate technical approaches for addressing contamination at a site.

Florida Department of Environmental Protection (FDEP): The state agency responsible for implementing Florida environmental laws.

Groundwater: Water found within an aquifer.

Hazardous and Solid Waste Amendments (HSWA): Amendments to RCRA, passed in 1984, which greatly expand the nature and complexity of activities covered under RCRA.

Human Health Baseline Risk Assessment: Study to determine the likelihood that a given exposure or series of exposures may have damaged or will damage human health.

Information Repository: A public file containing technical reports, reference documents, and other materials relevant to the site cleanup.

Interim Measure: An action taken to address a release or potential release of hazardous substances posing immediate danger to human health or the environment.

Land Use Control (LUC): Is broadly interpreted to mean any restriction or control arising from the need to protect human health and the environment, that limits use of and/or exposure to any portion of a given property, including water resources. This term encompasses institutional controls, such as those involving real estate interests, governmental permitting, zoning, public advisories, deed notices, and other legal restrictions. The term may also include restrictions on access, whether achieved by means of engineered barriers such as a fence or concrete pad, or by human means, such as the presence of security guards. Additionally, the term may involve both affirmative measures to achieve the desired restriction (e.g., night lighting of an area) and prohibitive directives (no drilling of drinking water wells).

Permit: A RCRA permit, issued for NAVSTA Mayport, establishes the facility's operating conditions for managing hazardous waste.

Public Comment Period: A legally required opportunity for the community to provide written and oral comments on a proposed environmental action at a hazardous waste site.

RCRA Facility Investigation (RFI): Evaluates the nature and extent of the releases of hazardous waste.

Resource Conservation and Recovery Act (RCRA) of 1976: Requires each hazardous waste treatment, storage, and disposal facility to manage hazardous waste in accordance with a permit issued by the USEPA or a state agency that has a hazardous waste program approved by the USEPA.

Response to Comments Summary: A document summarizing the public comments received and the responses to the comments.

Risk Assessment: A study estimating the potential risk a site poses to human health and the environment.

Solid Waste Management Unit (SWMU): Any discernable unit (to include regulated units) at which RCRA regulated waste has been placed at any time, irrespective of whether the unit was intended for the management of solid or hazardous waste.

Statement of Basis (SB): A public participation document detailing the proposed corrective action at a site.

Surface Soil: Soil from 0 to 2 feet below land surface

Subsurface Soil: Soil 2 feet below land surface and deeper

United States Environmental Protection Agency (USEPA): The federal agency responsible for implementing United States environmental laws.

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**Comments on the Statement of Basis for the
Neutralization Basin (SWMU 12)**

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