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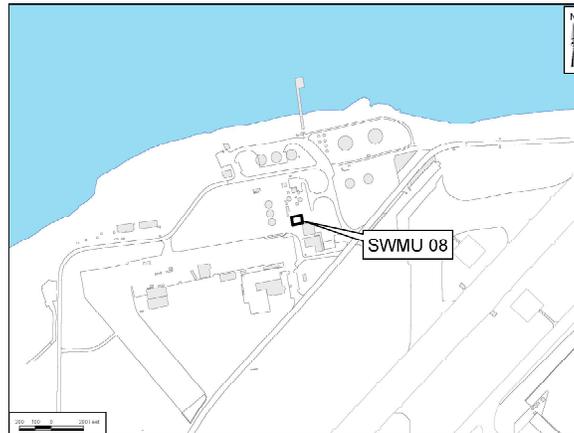
STATEMENT OF BASIS FOR SOLID WASTE MANAGEMENT UNIT 8 NS MAYPORT FL
4/14/2014
TETRA TECH

STATEMENT OF BASIS
Solid Waste Management Unit 8
Naval Station Mayport
Jacksonville, Florida



USEPA ID #FL9 170 024 260

April 14, 2014



Facility/Unit Type: Naval Station

Contaminants: Surface Soil – No Contaminants Exceeding Residential Cleanup Target Levels;
Subsurface Soil – No Contaminants Exceeding Residential Cleanup Target Levels;
Groundwater – Iron

Media: Soil and Groundwater

Corrective Action: Soil – No Action; Groundwater – Land Use Controls and Long-term Monitoring

SUMMARY

The proposed corrective action for **Solid Waste Management Unit (SWMU) 8** at Naval Station (NAVSTA) Mayport is **No Action** for **soils**, and **Land Use Control (LUC)** implementation and Long-term Monitoring (LTM) for **groundwater**. SWMU 8 has been impacted by an overflow of oily waste from the Oily Waste Treatment Plant (OWTP). No **contaminants of concern (COCs)** are identified for soil at SWMU 8; however, iron is identified as a COC for groundwater.

LUCs for groundwater will prohibit groundwater use/extraction and will also prohibit any interference with groundwater monitoring systems at SWMUs 8. The imposition of LUCs would serve to protect human health by prohibiting the use of groundwater until contaminant concentrations allow for unrestricted use and unlimited exposure. Additionally, sampling and analysis of site wells and downgradient wells will be implemented to assess COC attenuation in groundwater. Annual site inspections will be conducted by NAVSTA Mayport personnel to verify the groundwater LUCs are being maintained.

The public is invited to comment on this proposed corrective action or any other **corrective measure** alternative including those not previously studied. 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 renewed HSWA **permit** to NAVSTA Mayport on August 17, 2009.

This **Statement of Basis (SB)** identifies the proposed corrective action for SWMU 8, explains why the selected corrective action was chosen, solicits public review and comment on this decision, and provides information regarding how the public can be involved in the corrective action selection process. Additional details regarding the facility, environmental investigations, and the evaluation of the corrective measure alternatives may be found in the

RCRA Facility Investigation (RFI) and Corrective Measures Study (CMS). 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.

The corrective measures reflected in this SB are those proposed by the United States Navy and the FDEP for implementation at SWMU 8. Changes to the proposed corrective measure or a change from the proposed corrective action to another appropriate solution will require public participation as described in this document.

PROPOSED CORRECTIVE ACTION

The proposed corrective measure for soil is No Action. The proposed corrective measure for groundwater is LUCs and LTM. LUCs for groundwater will prohibit groundwater use/extraction and will also prohibit any interference with groundwater monitoring systems at SWMU 8. The imposition of groundwater LUCs would serve to protect human health by prohibiting the use of the groundwater until contaminant concentrations allow for unrestricted use and unlimited exposure. Additionally, sampling and analysis of site wells and downgradient wells will be implemented to assess COC attenuation in groundwater. The total present worth cost of the proposed groundwater corrective measure is \$257,000, which includes capital cost and monitoring cost over a 30-year period.

As required by NAVSTA Mayport's RCRA permit, the Navy will develop a **Corrective Measures Implementation Plan (CMIP)** for this SWMU, with FDEP concurrence, following selection of the final corrective measure. The CMIP will specify procedures for the future long-term oversight and maintenance of the LUCs to be imposed in the area of SWMU 8. The facility will ensure that these or similar instructions, processes, and requirements are complied with for all activities at SWMU 8 under the NAVSTA Mayport site approval process and/or the excavation permit process. NAVSTA Mayport will also conduct periodic inspections to confirm that the groundwater LUCs are complied with and report the results of those inspections to the FDEP. All processes, site inspections, and reporting activities will be conducted pursuant to specific requirements to be set forth in an approved CMIP for the site. The proposed groundwater LUC corrective action at SWMU 8 will ensure future protection of human health and the environment.

FACILITY BACKGROUND

NAVSTA Mayport is located near the town of Mayport within the city limits of Jacksonville, Florida, in northeastern Duval County on the southern shore of the confluence of the St. Johns River and the Atlantic Ocean (see Figure 1). SWMU 8 is located in the northwestern portion of the NAVSTA Mayport (see Figure 2).

Figure 1. Naval Station Mayport Location Map

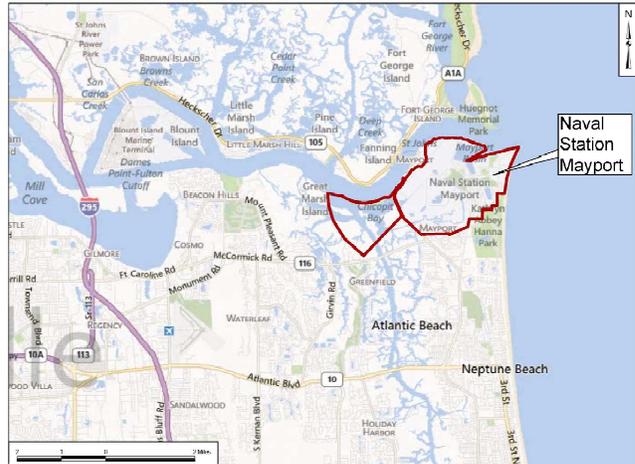
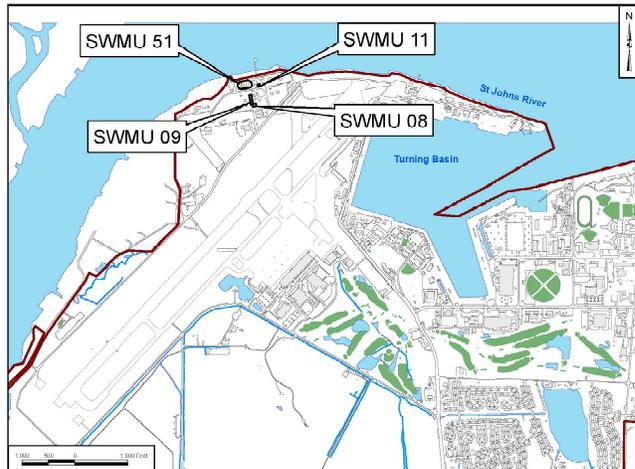


Figure 2. SWMU Location Map



SWMU 8 (OWTP Percolation Pond) was operated from 1979 to 1994 as an effluent percolation pond. The percolation pond was the final treatment unit of the OWTP prior to the discharge of the effluent at a National Pollutant Discharge Elimination System discharge point into the St. John's River. The percolation pond was unlined until 1988. Following an overflow of oily waste in 1988, the pond was emptied, cleaned out, and a liner consisting of 1 foot of gravel covered with 6 inches of compacted clay was added to the pond. In September 1992, the discharge pipe that connected the percolation pond to the St. John's River was plugged with concrete, and the wastewater was conveyed to NAVSTA Mayport's wastewater treatment plant. The

pond was formally taken out of service in 1994, and no longer receives treated effluent. Currently, the former percolation pond is covered with vegetation.

The RFI at SWMU 8 was conducted by ABB Environmental Services, Inc. between 1993 and 1994 as part of the Group II field investigation activities. Field activities consisted of field screening, collection of surface and subsurface soil samples, and collection of groundwater samples. During the RFI, surface soil and subsurface soil samples were screened and analyzed in a field laboratory for petroleum-based volatile organic compounds (VOCs). Groundwater samples were screened and analyzed for VOCs, semivolatile organic compounds (SVOCs), polychlorinated biphenyls (PCBs)/pesticides, and metals. The initial RFI reported detections of VOCs and SVOCs in soil and groundwater at SWMU 8; however, the results did not exceed criteria.

In 2006 and 2007, Tetra Tech conducted a RFI Addendum to compare data to new FDEP Cleanup Target Levels (CTLs) promulgated in 2005. During the RFI Addendum, surface soil samples were collected and analyzed for VOCs, SVOCs, polynuclear aromatic hydrocarbons, PCBs, metals, sulfide and cyanide; while subsurface soil and groundwater samples were analyzed for VOCs, SVOCs, PCBs, metals, sulfide, and cyanide.

Analytical results of the RFI Addendum soil and groundwater sampling were compared to the FDEP CTLs and the NAVSTA Mayport Background Screening Values (BSVs). Benzo(a)pyrene (BAP) and BAP equivalents exceeded the FDEP Soil Cleanup Target Level (SCTL) in one sample. Because the sample was adjacent to an asphalt road and parking area and was farther than 200 feet away from SWMU 8, BAP and BAP equivalents were not considered to be a COC. No target analytes exceeded SCTLs in subsurface soil samples at SWMU 8. Analytical results exceeded the groundwater FDEP Groundwater Cleanup Target Levels (GCTLs) for iron and manganese; however, manganese did not exceed the NAVSTA Mayport BSV of 141 micrograms per liter ($\mu\text{g/L}$). Analytical results of the additional sample collected in November 2012 exceeded both the FDEP GCTL (300 $\mu\text{g/L}$) and NAVSTA Mayport BSV (494 $\mu\text{g/L}$) for iron; thus, iron remains a COC.

SUMMARY OF FACILITY RISKS

A **Human Health Baseline Risk Assessment** and an **Ecological Risk Assessment** were performed as part of the RFI. The FDEP CTLs are based upon human health risk criteria. Sample results that exceed the FDEP CTLs indicate a potential concern for SWMU 8.

Human Health Risk Assessment

Soil. No analytes were detected at concentrations exceeding residential screening values in the surface or subsurface soil. Therefore, no human health risks or COCs were identified.

Groundwater. Groundwater sample results from the RFI Addendum sampling were compared to FDEP GCTLs and NAVSTA Mayport BSVs. Iron exceeded the GCTL in one well and was considered to be a COC.

Ecological Assessment

Soil. Exposure of terrestrial receptors to potential contamination in surface soil was not evaluated in the RFI due to the lack of habitat and industrial land use. No pathway for ecological exposure to subsurface soils was identified.

Groundwater. Groundwater was not determined to be a potential risk to ecological receptors.

Surface Water and Sediment. The screening level ecological risk assessment concluded that no adverse ecological risks exist for these media.

SCOPE OF CORRECTIVE ACTION

No COCs are identified in the surface or subsurface soil at SWMU 8. The proposed corrective action is No Action.

Iron is the COC for groundwater at SWMU 8 based on concentrations that exceed FDEP GCTLs in Chapter 62-777, Florida Administration Code. Groundwater LUCs will be required at SWMU 8 until contaminant concentrations allow unrestricted use and unlimited exposure.

SUMMARY OF ALTERNATIVES

An evaluation of the following corrective measure alternatives for groundwater at SWMU 8 was conducted in accordance with the final RCRA Corrective Action Plan Guidance (**United States Environmental Protection Agency** [USEPA], May 31, 1994, Office of Solid Waste and Emergency Response [OSWER] Directive 9902.3-2A).

Alternatives

Groundwater Alternative 1: No Action. The No Action alternative serves as a baseline consideration or addresses SWMUs that do not require remediation.

Groundwater Alternative 2: LUCs and LTM. This alternative would impose groundwater LUCs in the form of a use/extraction prohibition and would also prohibit

any interference with groundwater monitoring systems at the SWMU. The imposition of groundwater LUCs would serve to protect human health by prohibiting the use of groundwater until contaminant concentrations allow unrestricted use and unlimited exposure. Additionally, sampling and analysis of downgradient wells will be implemented to assess COC attenuation in groundwater. Once implemented, certain procedures would be set in place to ensure that the LUCs continue to be maintained via preparation of a SWMU-specific CMIP. This implementation plan will provide for periodic inspection and reporting requirements. LTM would consist of routine sampling of groundwater and comparison of analytical results against FDEP GCTLs. The details of the monitoring program will be presented in the CMIP; however, for cost estimating purposes, it is assumed that three monitoring wells will be sampled quarterly for 1 year, semiannually for years 2 through 5, and then annually thereafter until GCTLs are achieved or periodic data reviews determine alternative courses of action are necessary.

EVALUATION OF THE PROPOSED REMEDY AND ALTERNATIVES

The identified corrective measure alternatives were evaluated using the criteria contained in the final RCRA Corrective Action Plan Guidance (USEPA, May 31, 1994, OSWER Directive 9902.3-2A). Four criteria and five other factors were used to evaluate the corrective measure alternatives. These criteria and factors are as follows:

Criteria

- Protect Human Health and the Environment
- Attain Media Cleanup Standards
- Source Control
- Waste Management Standards

Other Factors

- Long-term Reliability and Effectiveness
- Reduction in Toxicity, Mobility, or Volume
- Short-term Effectiveness
- Implementability
- Cost

Tables 1 summarizes the evaluation of the corrective measure alternatives for groundwater at SWMU 8 as performed in the CMS Report.

RECOMMENDATIONS

Based on the screening of technologies and assessment of various alternatives performed, Groundwater Alternative 2 is preferred for addressing

groundwater contamination. Figure 3 shows the LUC area.

The preferred groundwater corrective measure alternative involves LUCs and LTM to address groundwater contamination. LUCs would prohibit the use of the groundwater until contaminant concentrations allow for unrestricted use and unlimited exposure. Additionally, sampling and analysis of the site wells and downgradient wells will be implemented to assess COC attenuation in groundwater.

Figure 3. LUC Area



PUBLIC PARTICIPATION

To make a final decision and incorporate corrective measures into the HSWA permit, the FDEP is soliciting public review and comment on this SB for the proposed corrective action for SWMU 8 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 April 14 2014, and will be published in the *Jacksonville Daily Record*.

Copies of the RFI, CMS Report, 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, Florida, 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 Paul Malewicki or John Winters (contact information provided below).

All comments must be postmarked no later than May 30, 2014.

CONTACT

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TABLE 1. EVALUATION OF GROUNDWATER CORRECTIVE MEASURE ALTERNATIVES FOR SWMU 8

Groundwater Alternative 1: No Action	Groundwater Alternative 2: MNA and LUCs
Protect Human Health and the Environment	
Would not restrict groundwater use.	Would be protective of workers and would restrict the future use to industrial.
Attain MCS	
May attain residential standards over time, but the progress of attenuation would not be monitored.	May attain residential standards over time, progress would be monitored.
Source Control	
Natural attenuation may eventually eliminate the source; however, the potential progress of natural attenuation would not be monitored.	No new source control would be implemented.
Comply with Waste Management Standards	
No standards for waste management apply as no waste would be generated.	No standards for waste management apply as no waste would be generated.
Long-term Reliability and Effectiveness	
Would not provide long-term reliability and effectiveness because it would not prevent future residential development.	LUCs would provide long-term reliability and effectiveness.
Reduction in Toxicity, Mobility, or Volume through Treatment	
Reduction of toxicity may occur through natural processes, but would not be monitored.	Reduction of toxicity may occur through natural processes, and would be monitored.
Short-term Effectiveness	
No short-term risks to workers, the community, or the environment.	The minimal short-term risks to workers and the environment would be manageable.
Implementability	
Would be readily implementable since no action would occur.	Would be readily implementable.
Cost (Net Present Worth over a 30 year period)	
No corrective action would occur; therefore, there would be no costs.	\$257,000

Shading indicates Proposed Alternative.

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 decision will detail the corrective measure chosen for SWMU 8 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.

KEY WORDS

BAP	Benzo(a)pyrene	NAVSTA	Naval Station
BSV	Background Screening Value	OSWER	Office of Solid Waste and Emergency Response
CFR	Code of Federal Regulations	OWTP	Oily Waste Treatment Plant
CMIP	Corrective Measures Implementation Plan	PCB	Polychlorinated Biphenyl
CMS	Corrective Measures Study	RCRA	Resource Conservation and Recovery Act
COC	Contaminant of Concern	RFI	RCRA Facility Investigation
CTL	Cleanup Target Level	SB	Statement of Basis
FDEP	Florida Department of Environmental Protection	SCTL	Soil Cleanup Target Level
GCTL	Groundwater Cleanup Target Level	SVOC	Semivolatile Organic Compound
HSWA	Hazardous and Solid Waste Amendments	SWMU	Solid Waste Management Unit
LTM	Long-term Monitoring	USEPA	United States Environmental Protection Agency
LUC	Land Use Control	VOC	Volatile Organic Compound
µg/L	Microgram per Liter		

GLOSSARY

Aquifer: An underground layer of permeable rock, sediment, or soil capable of storing and transporting water within cracks and pore spaces or between grains.

Contaminant of Concern (COC): A chemical detected in environmental media at a concentration that may adversely affect human health or ecological receptors.

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

Corrective Measures Implementation Plan (CMIP): A written plan normally developed after a decision document that required one or more LUCs or Engineering Controls for some particular area (operable unit, contaminated unit, and/or solid waste management unit). The CMIP (1) identifies each LUC/EC objective for that area (e.g., to restrict public access to the area for recreational use) and (2) specifies those actions required to achieve each identified objective (e.g., install/maintain a fence, post warning signs, record notice in deed records). CMIPs specify what must be done to impose and maintain the required LUCs/ECs and are therefore analogous to design and/

or operation and maintenance plans developed for active remedies.

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

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.

GLOSSARY

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

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 (e.g., no drilling of drinking water wells).

No Action: Recommendation or decision indicating no contaminants above regulatory limits.

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.

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 SWMU poses to human health and the environment.

Soils: Soils include surface soil, which is soil from 0 to 2 feet below land surface, and subsurface soil, which is soil 2 feet below land surface and deeper.

Solid Waste Management Unit (SWMU): Any discernible 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 measure at an SWMU.

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
Solid Waste Management Unit 8**

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