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FINAL CORRECTIVE MEASURES IMPLEMENTATION PLAN FOR SOLID WASTE
MANAGEMENT UNIT 51 FUEL DEPOT WASTE OIL UNDERGROUND STORAGE TANKS NS
MAYPORT FL
3/6/2014
TETRA TECH



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March 6, 2014

Project Number 112G00436

Naval Facilities Engineering Command, Southeast
ATTN: Mr. Dana Hayworth (OPC 6)
Remedial Project Manager
135 Ajax Street North
Naval Air Station Jacksonville
Jacksonville, FL 32212-0030

Reference: CLEAN IV Contract Number N62467-04-D-0055
Contract Task Order Number 0033

Subject: Final Corrective Measures Implementation Plans for Solid Waste Management Units 8, 9,
and 51, Naval Station Mayport, Jacksonville, Florida

Dear Mr. Hayworth:

Tetra Tech is pleased to submit the final Corrective Measures Implementation Plans for Solid Waste Management Units 8, 9, and 51 at Naval Station (NAVSTA) Mayport, Jacksonville, Florida that was prepared for the United States Navy, Naval Facilities Engineering Command Southeast under CTO 0033 for the Comprehensive Long-term Environmental Action Navy (CLEAN) IV Contract Number N62467-04-D-0055.

If you have any questions with regard to this submittal, please do not hesitate to contact me by telephone at (904) 730-4669, extension 215, or via e-mail at Gregory.Roof@tetrattech.com.

Sincerely,



Gregory S. Roof
Project Manager

GSR/lc

Enclosure

c: John Winters, FDEP (electronic only)
Paul Malewicki, NAVSTA Mayport (1 hardcopy, 1 CD)
John King, Resolution Consultants (electronic only)
Debra Humbert, Tetra Tech (Letter only)
RDM, Tetra Tech (1 unbound, 1 CD)
CTO 0033 Project File

Tetra Tech, Inc.

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**NAVAL STATION MAYPORT
CORRECTIVE MEASURES IMPLEMENTATION PLAN
SOLID WASTE MANAGEMENT UNIT 51,
FUEL DEPOT WASTE OIL UNDERGROUND STORAGE TANKS
FACILITY IDENTIFICATION NUMBER FL9 170 024 260**

1. OBJECTIVE

A Resource Conservation and Recovery Act (RCRA) Statement of Basis (SB) for Solid Waste Management Unit (SWMU) 51, Fuel Depot Waste Oil USTs, completed public comment requirements in April 2014. The SB stipulated the implementation of land use controls (LUCs) and long-term monitoring (LTM) to prevent unacceptable human health risks from exposure to subsurface soil and groundwater at SWMU 51. The objective of this Corrective Measures Implementation Plan (CMIP) is to communicate the requirements to implement, maintain, and monitor the corrective measures selected for SWMU 51.

The Florida Department of Environmental Protection (FDEP) issued the current Hazardous and Solid Waste Amendments (HSWA) permit to Naval Station (NAVSTA) Mayport on August 17, 2009 pursuant to RCRA, as amended by HSWA. The HSWA permit requires the CMIP to include identification of the LUC objectives.

The requirements set forth in this CMIP shall supersede the requirements of the LUC Memorandum of Agreement signed on September 7, 1999, by the United States Navy, the United States Environmental Protection Agency, and the FDEP. The inspections and reporting requirements described herein will be effective immediately upon approval of this CMIP by the FDEP. The requirements set forth in this document, once put into effect, will remain applicable to SWMU 51 during Navy ownership, as well as subsequent ownership of the SWMU. The Navy may amend these requirements with FDEP concurrence.

2. SWMU DESCRIPTION

SWMU 51 (Fuel Depot Waste Oil USTs) was identified in the RCRA Facility Assessment as three cut-and-cover waste oil tanks (former Tanks 99, 100, 101). The USTs, which were each approximately 210,000 gallons in capacity, were installed in 1954. These former tanks were used as the oily wastewater receiving tanks from the Oily Waste Treatment Plant effluent generated at SWMU 9. Waste oil was separated from the oily wastewater in Tanks 99 and 100 through the Oily Waste Collection System (SWMU 47). The oil phase from Tanks 99 and 100 was conveyed to Tank 101, and then pumped from Tank 101 into fuel tanker trucks. The three USTs were demolished during the 1998 Military Construction Project P-468. The SWMU 51 area is currently a paved parking area for fuel tanker trucks.

The RCRA Facility Investigation (RFI) Addendum and Corrective Measures Study (CMS) for SWMU 51 were submitted to the FDEP in June 2012 and November 2013, respectively. The RFI Addendum concluded that the subsurface soil at SWMU 51 exceeded FDEP Soil Cleanup Target Levels (SCTLs) for benzo(a)pyrene equivalents, benzo(a)anthracene, benzo(a)pyrene, 1-methylnaphthalene, 2-methylnaphthalene, acenaphthene, naphthalene and total petroleum hydrocarbons (TPH). The groundwater at SWMU 51 exceeded Groundwater Cleanup Target Levels (GCTLs) for 1-methylnaphthalene, 2-methylnaphthalene, naphthalene, and TPH. Corrective measures recommended for subsurface soil and groundwater in the CMS and selected in the SB are LUCs and LTM. LUCs are in place to prevent human contact with contaminated soil and groundwater by limiting activities at the site and restricting use of and access to the site.

The corresponding subsurface soil and groundwater LUC areas cover approximately 1.2 acres and 0.4 acre, respectively (see Attachment 1). The Navy plans to continue to use SWMU 51 for industrial operations. A table detailing the constituents of concern (COCs) follows.

SWMU 51 COCs

Media of Concern	COCs	SCTLs
Subsurface Soil	Benzo(a)pyrene Equivalents	0.1 mg/kg
	Benzo(a)anthracene	0.8 mg/kg (L)
	Benzo(a)pyrene	0.1 mg/kg
	1-Methylnaphthalene	200 mg/kg
	2-Methylnaphthalene	210 mg/kg
	Acenaphthene	2,400 mg/kg
	Naphthalene	55 mg/kg
	TPH	460 mg/kg
Media of Concern	COCs	SCTLs
Groundwater	1-Methylnaphthalene	28 µg/L
	2-Methylnaphthalene	28 µg/L
	Naphthalene	14 µg/L
	TPH	5 mg/L

L = Leachability
mg/kg = milligram per kilogram
µg/L = microgram per liter

3. CORRECTIVE MEASURES

a. Engineering Controls: None proposed.

b. Institutional Controls: The following are the corrective measures for the LUC corrective action to be implemented at SWMU 51 until such time as the concentrations of COCs in the subsurface soil and groundwater are at levels to allow for unrestricted use and unlimited exposure:

1. Prohibit the excavation and uncontrolled removal of soil with COC concentrations in excess of FDEP Direct Exposure Residential SCTLs unless notification is provided to the FDEP.
2. Prevent exposure to contaminated groundwater underlying SWMU 51 including, but not limited to potable use, dewatering, irrigation, heating/cooling purposes, and industrial processes, unless notification is provided to the FDEP.
3. Restrict the site to nonresidential use only. Nonresidential land use restrictions prohibit residential or residential-like uses including, but not limited to, any form of housing; childcare facilities; any kind of school including preschools, elementary schools, and secondary schools; playgrounds; and adult convalescent and nursing care facilities.
4. Maintain the integrity of any existing or future monitoring or remediation system(s).

c. Monitoring: The following monitoring of the corrective measures will be implemented at SWMUs 51:

1. Physical inspections of SWMU 51 will be conducted by the Navy annually to ensure that the implemented LUCs are being maintained.

2. Monitoring of the groundwater at SWMU 51 per the Sampling and Analysis Plan, approved July 2013, to assess possible contaminant reduction and possible contaminant migration of the following COCs:
 - 1-Methylnaphthalene
 - 2-Methylnaphthalene
 - Naphthalene
 - TPH

4. **CORRECTIVE ACTION IMPLEMENTATION**

The following implementation plan shall be executed by the Navy to ensure that the corrective measures for SWMU 51 are met and maintained:

- a. **CMIP Distribution:** The CMIP will be placed in the Information Repository within 30 days of receiving FDEP approval. The Information Repository is located at the Jacksonville Public Library – Beaches Branch, 600 3rd Street, Neptune Beach, Florida, 32266, (904) 241-1141.
- b. **Implementing Corrective Actions:** LUCs and groundwater LTM are the only planned corrective actions for this site. LUCs will be implemented by NAVSTA Mayport upon approval of the CMIP. LTMs will be implemented in conjunction with the modification of the current Sampling and Analysis Plan approved for LTM at NAVSTA Mayport.
- c. **SWMU Inspections:** Annual physical inspections of SWMU 51 will be conducted by the Navy upon the FDEP's approval of this CMIP. The annual inspections will confirm compliance with the corrective measures. Any activity inconsistent with the corrective measures objectives or use restrictions, or any other action that may interfere with the effectiveness of the corrective measures, will be addressed by the Navy upon discovery, and the FDEP will be notified per NAVSTA Mayport's RCRA permit. Additional groundwater monitoring may be required once these inconsistent activities have been corrected.
- d. **Compliance Reporting:** The Navy will provide to the FDEP an Annual Corrective Measures Compliance Certificate (consistent with Attachment 2) after the inspection of SWMU 51 has been completed. The Navy will also provide the FDEP a written description of any deficiencies discovered during the annual inspection along with the proposed measures to correct the deficiencies per NAVSTA Mayport's RCRA permit.
- e. **Remedy Reviews:** Remedy reviews are not required under RCRA; however, the Navy will conduct periodic reviews of the corrective measures at SWMU 51 to ensure that the corrective measures remain protective of human health and the environment.
- f. **Notice of Planned Property Conveyances:** The Navy may transfer these procedural responsibilities to another party by contract, property transfer agreement, or through other means; however, the Navy shall retain ultimate responsibility for the integrity of the corrective measures. The FDEP will be notified of any conveyance of the SWMU 51 property to any other agency, person, or entity by the Navy at least 6 months prior to the conveyance. If it is not possible for the Navy to notify the FDEP at least 6 months prior to the conveyance, then the Navy will notify the FDEP as soon as possible, but no later than 60 days prior to the conveyance. The notice shall describe the mechanism for maintenance of corrective measures and the responsible party. The Navy and the FDEP shall have the opportunity to review the intended deed restrictions in the event of a property transfer.
- g. **Changes and Termination of corrective measures:** The Navy shall not modify or terminate corrective measures, implementation actions, or modify land use without approval by the FDEP. The Navy shall seek prior FDEP concurrence before any anticipated action that may disrupt the effectiveness of the corrective measures or any action that may alter or

negate the need for corrective measures. Appropriate documentation will be provided by the Navy when the Navy determines, with FDEP concurrence, that one or more of the corrective measures at SWMU 51 are no longer needed for protection of human health and the environment.

5. POINTS OF CONTACT

Listed below is the point-of-contact information for the Navy and the FDEP.

Navy

Paul Malewicki
Environmental Division
Public Works Office
Naval Station Mayport
Jacksonville, FL 32228-0067
(904) 270-3188
Paul.G.Malewicki@navy.mil

FDEP

John Winters (MS 4535)
FDEP, Bob Martinez Center
Bureau of Waste Cleanup
Federal Programs Section
2600 Blair Stone Road
Tallahassee, FL 32399-2400
(850) 245-8999 or Fax (850) 245-7690
John.Winters@dep.state.fl.us

6. REFERENCES

Tetra Tech, Inc., 2014. Corrective Measure Study for Solid Waste Management Units 8, 9, 11, and 51, Naval Station Mayport, Jacksonville, Florida. January.

Tetra Tech, Inc., 2014. Statement of Basis for SWMU 5 – Landfill F, Naval Station Mayport, Jacksonville, Florida. January.

ATTACHMENT 1

LUC FIGURES

LOCATION	NORTHING	EASTING
1	2205330.90	523056.84
2	2205552.37	522988.77
3	2205616.11	522935.84
4	2205528.06	522884.52



Legend

-  SWMU Boundary
-  LUC Boundary

DRAWN BY DATE
J. MADDEN 10/21/13

CHECKED BY DATE
D.FEARS 10/21/13

COST/SCHEDULE AREA

SCALE
AS NOTED



GROUNDWATER LUC BOUNDARY MAP
SWMU 51 - WASTE OIL TANKS
NAVAL STATION MAYPORT
MAYPORT, FLORIDA

CONTRACT NUMBER
CTO

APPROVED BY DATE

APPROVED BY DATE

FIGURE NO.	REV
1	0

LOCATION	NORTHING	EASTING
1	2205488.36	522810.85
2	2205427.74	522807.63
3	2205320.13	522869.06
4	2205329.77	522992.32
5	2205389.59	523017.22
6	2205493.58	523088.28
7	2205518.07	523112.77
8	2205540.96	523084.27
9	2205517.27	523058.17
10	2205532.93	522991.12
11	2205589.14	522903.19



Legend

- SWMU Boundary
- LUC Boundary

DRAWN BY	DATE
J. MADDEN	10/21/13
CHECKED BY	DATE
D.FEARS	10/21/13
COST/SCHEDULE AREA	
SCALE AS NOTED	



SOIL LUC BOUNDARY MAP
SWMU 51 - WASTE OIL TANKS
NAVAL STATION MAYPORT
MAYPORT, FLORIDA

CONTRACT NUMBER	
CTO	
APPROVED BY	DATE
APPROVED BY	DATE
FIGURE NO.	REV
1	0

ATTACHMENT 2
ANNUAL CORRECTIVE MEASURES COMPLIANCE CERTIFICATE

Solid Waste Management Unit (SWMU) 51

ANNUAL CORRECTIVE MEASURES COMPLIANCE CERTIFICATE

Naval Station Mayport, Jacksonville, Florida
 Facility I.D. No.: FL9 170 024 260

SWMU and LUC boundaries are shown on the Attachments in the Corrective Measures Implementation Plan (CMIP) for SWMU 51.

This evaluation covers the period from **1 January through 31 December** _____. Form shall be submitted by **1 March** of the year following the reporting period.

CERTIFICATION CHECKLIST

	IN COMPLIANCE	NON- COMPLIANCE	SEE COMMENT	NOT APPLICABLE
1) No residential development or use on parcel including but not limited to, any form of housing, child-care facilities, pre-schools, elementary schools, secondary schools, playgrounds, or full-time adult convalescent or nursing care facilities. <u>Comments:</u>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2) No excavation of the cap or uncontrolled removal/ disturbance of soil/sediment exceeding FDEP Direct Residential Exposure SCTLs (unless Previously approved by FDEP and the Navy). <u>Comments:</u>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3) No digging into or disturbance of any concrete or asphalt covered areas (unless previously approved by the FDEP and the Navy.) <u>Comments:</u>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4) No human consumption of groundwater. <u>Comments:</u>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Solid Waste Management Unit (SWMU) 51

	IN COMPLIANCE	NON- COMPLIANCE	SEE COMMENT	NOT APPLICABLE
5) No groundwater usage. <u>Comments:</u>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6) No tampering or damage to any Navy monitoring or remediation systems. <u>Comments:</u>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7) Periodic groundwater sampling addressing contaminant migration and achievement of site closure <u>are</u> occurring reports summarizing the findings of each monitoring event and the analytical results <u>are</u> being submitted to the Navy and the FDEP. <u>Comments:</u>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

I, the undersigned, hereby certify that I am an authorized representative of the above named property owner and that the above described remedies and controls have been complied with for the period noted. Alternately, any known deficiency(ies) and the owner's completed or planned actions to address such deficiency(ies) are described in the attached page explaining the deficiency(ies).

Signature/Printed Name

Date

Mail completed form(s) to:
Chief, RCRA Programs Branch
U.S. Environmental Protection
Agency Region IV
Sam Nunn Atlanta Federal Center
61 Forsyth Street
Atlanta, GA 30303-3104

Florida Dept of Environmental Protection
Bob Martinez Building
Bureau of Waste Cleanup Federal
Facilities Section
2600 Blair Stone Road
Tallahassee, FL 32399-2400

Commanding Officer
NAVFAC SE
Attn: Director, Environmental
Services Business Line
PO Box 30
Jacksonville, FL 32212-0030