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NSA MID SOUTH
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STATEMENT OF BASIS SOLID WASTE MANAGEMENT AREA 19 AND 49 (SWMU 19 AND
49) FORMER UNDERGROUND WASTE TANK 1648 AND HAZARDOUS WASTE
ACCUMULATION POINT AT BUILDING N 757 MILLINGTON SUPPACT TN
12/01/2005
TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION



STATEMENT OF BASIS



SWMUs 19/49 – Former Underground Waste Tank 1648 and Hazardous Waste Accumulation Point at Building N-757 Naval Support Activity Mid-South Millington, Tennessee

Purpose of the Statement of Basis

This Statement of Basis (SB) has been prepared to inform the public and provide an opportunity to comment on a proposed remedy at solid waste management units (SWMU) 19/49 – Former Underground Waste Tank 1648 and Hazardous Waste Accumulation Point at Building N-757, respectively, at Naval Support Activity (NSA) Mid-South, Millington, Tennessee. NSA Mid-South is responsible for corrective action at SWMUs 19/49, as required by a Resource Conservation and Recovery Act (RCRA) permit. The Tennessee Department of Environment and Conservation (TDEC) has determined that the proposed remedy of No Further Action is protective of human health and the environment.

How Can You Participate?

TDEC solicits public review and comment on this SB prior to implementation of the proposed remedy as the final one. The final remedy for SWMUs 19/49 will be incorporated in the Hazardous and Solid Waste Amendments Permit TNHW-094 for NSA Mid-South, scheduled to be updated in 2006.

Before the remedy is finalized, TDEC would like to give the public an opportunity to comment

Site Description
Both SWMUs 19 and 49 are associated with the former Naval Exchange Service Station (Building N-757). SWMU 19 is the location of a former underground waste tank that received waste oil from 1983 to 1992. The tank was removed in 1996 at which time visual indications of a release were noted. SWMU 49, which is adjacent to SWMU 19, operated as a hazardous waste accumulation point for the Naval Exchange from 1969 through 1986. Both SWMUs are located approximately 150 feet north of Navy Road, on the base's Northside (see Figure 1). As a result of their proximity to one another, the SWMUs have been investigated jointly.

on the proposed remedy. At any time during the comment period, the public may comment as described in the following section "How Can You Participate?" Upon closure of the public comment period, TDEC will evaluate all comments and determine if there is a need to modify the proposed remedy.



Figure 1 SWMUs 19/49 at NSA Mid-South in Millington, Tennessee

Public comment on this SB and the proposed remedy will begin on the date that a notice of the SB's availability is published in *The Millington Star* and *The Commercial Appeal*, local daily newspapers. Since community input could affect selection of a final remedy for SWMUs 19/49, a public comment period has been established for 45 days from *(insert date)*. If requested during the comment period, TDEC will hold a public meeting to respond to any oral comments or questions regarding the proposed remedy. To request a hearing or to provide comments, contact the following person in writing within the 45-day comment period:



**SWMUs 19/49
Statement of Basis**



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Management
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Investigative reports and documents related to SWMUs 19 and 49 are referenced at the end of this SB and are included in the Administrative Record, which can be reviewed in the Information Repository that was established to provide public access to documents pertaining to the Navy's environmental program. The Information Repository is maintained at:

Millington Civic Center
8077 Wilkinsville Road
Millington, Tennessee 38053
(901) 873-5770

Background Summary

Past operations at the former Naval Air Station (NAS) Memphis included metal plating, manufacturing, and other operations that involved the use of toxic and hazardous materials. Land use changed as a result of the 1990 Base Closure and Realignment (BRAC) Act, and the name of the facility was changed from NAS Memphis to NSA Mid-South.

A significant portion of NSA Mid-South's Northside was transferred to the City of Millington, and the remaining property was realigned (i.e., an operation was reassigned from NSA Mid-South to another facility, and/or an operation from another facility was reassigned to NSA Mid-South). Three facility operations changed: (1) Navy airfield operations ceased in October 1995, (2) training operations were realigned to NAS Pensacola in 1996, and (3) administrative operations for the Navy Bureau of Personnel were realigned from Washington, D.C., to NSA Mid-South in 1997.

SWMUs 19/49 are part of the remaining NSA Mid-South property.

Tank 1648 (SWMU 19) was a 280-gallon underground waste tank (UWT) that received waste automotive oil and hydraulic fluid generated from the auto-repair services at the Naval Exchange service station (Building N-757). During the 1996 tank removal, the fill pipe to the tank was noted to have been disconnected, allowing waste oil to infiltrate into the surrounding soil. Furthermore, noticeable amounts of petroleum were observed seeping from beneath the adjacent Building N-757 at the time of closure.

SWMU 49 operated as an accumulation point for used batteries, waste paints, mineral spirits, and tires from 1969 through 1986. During the 1990 *RCRA Facility Assessment* (RFA; ERC/EDGe) oil staining was observed on the asphalt adjacent to the accumulation area.

As required by the Navy's RCRA Permit, NSA Mid-South is required to evaluate and assess all SWMUs for potential environmental impacts. Due to the former operations and visual indications of contamination, SWMUs 19/49 were designated as a site warranting further evaluation to determine its potential risk to human health and the environment.

A subsequent *Confirmatory Sampling Investigation* (CSI; EnSafe, 2000a) was completed for both SWMUs. As a result of contamination identified at SWMU 19, the CSI recommended a more comprehensive evaluation of SWMU 19, while no further action was recommended for SWMU 49. SWMU 19 underwent a *RCRA Facility Investigation* (RFI; EnSafe, 2000) and a subsequent *Voluntary Corrective Action* (VCA; EnSafe, 2003) to remove petroleum contaminated soil.

Analytical results from these investigations and removal action resulted in the "No Further Action" remedy for SWMUs 19/49. The basis for the remedy selection is provided under the "Summary of Contaminant Evaluation" and "Summary of Site Risk" sections of this SB.

Summary of Contaminant Evaluation

The primary objective of the investigations was to identify whether soil and groundwater impacts were present and if so, determine the extent and potential risk to human health and the environment. Soil and groundwater sample locations for SWMUs 19/49 are provided in Figures 2 and 3, respectively (Attachment 1).

The data set used to characterize SWMU 19 consisted of surface soil from two locations (019S0001 and 019S0002) and six subsurface samples from four locations (019S0003 through 019S0006), as shown on Figure 2 (Attachment 1). Groundwater samples were collected from the upper part of the sand and gravel fluvial deposits (a depth of approximately 50 feet) at three locations (019G0001, 009G0002, 019G0007), as shown on Figure 3 (Attachment 1).

The SWMU 49 data set consisted of one surface and one subsurface soil sample (from location 049S0001) and six groundwater samples (from locations 049G0002 through 049G0007). Groundwater samples were collected from comparable depths as SWMU 19.

Soil

Numerous volatile organic compounds (VOCs), semivolatile organic compounds (SVOCs), pesticides, and metals were detected in SWMU 19/49 soil; however, all analyte concentrations were below the USEPA's risk-based screening thresholds. The only contaminant detected above a screening standard was total petroleum hydrocarbons (TPH). Table 1 lists the detections above the TDEC's most stringent 100 parts per million (ppm) cleanup standard.

Table 1
Soil Contaminants Exceeding Cleanup Criteria
(in ppm)^a

Sample Location (depth)	Analyte	Result	Cleanup Level (Navy) ^b	Cleanup Level (TDEC) ^c
049S0001 (0-1')	TPH	280	100	1,000
019S0004 (13-15')	TPH	4,600	1,000	1,000
019S0005 (13-15')	TPH	740	1,000	1,000
019S0006 (13-15')	TPH	120	1,000	1,000

Notes:

- ^a — parts per million (ppm)
- ^b — Navy self-imposed cleanup level for TPH in shallow soil (0-5')
- ^c — TDEC action level for TPH in soil based on site-specific soil permeability data.

Groundwater

No contaminants were identified in groundwater above a risk based screening or regulatory action level.

Summary of Site Risk

Risks to human health and the environment from the contaminants identified at SWMUS 19/49 were evaluated using human health and ecological risk assessments developed in accordance with existing USEPA and TDEC methods.

Human Health Risk

The risk evaluation provided in the CSI for SWMU 49 concluded that no chemicals of concern were present in soil and groundwater; therefore, the site was eligible for unrestricted residential or industrial reuse (EnSafe, 2000a).

The risk evaluation in the SWMU 19 RFI similarly concluded that no chemicals of concern were present in soil or groundwater, therefore the site was eligible for unrestricted residential or industrial reuse (EnSafe, 2000).



SWMUs 19/49 Statement of Basis



Ecological Risk

SWMUs 19/49 are covered with asphalt therefore no habitat for ecological receptors is present. Consequently, without an exposure pathway, there are no ecological risks (EnSafe, 2000).

Removal Actions

Based on recommendations from the CSI and RFI petroleum-contaminated soil was removed from the SWMUs 19/49 in June of 2003. Approximately 830 CY were removed from the location of the former UWT (SWMU 19) and a 5-foot square area at SWMU 49. The presence of a sanitary sewer main resulted in some TPH contamination, with concentrations between 400 and 700 ppm being left in place. While these levels are above the Navy's more stringent cleanup concentration, they are below the TDEC's applicable 1,000 ppm cleanup level. Metal concentrations in confirmation samples were below the USEPA's residential and industrial risk based screening values. Since TDEC's cleanup goals were met and metal concentrations were below the risk based thresholds, the VCA report recommended No Further Action (EnSafe, 2003).

Results of the removal actions were forwarded to the USEPA and TDEC on October 20, 2003 with the no further action recommendation. The USEPA and TDEC concurred with the recommendation and issued approval in February 2004.

Selected Remedy for SWMUS 19/49

Since TDEC's goals for human health and ecological risks have been met, no alternative remedies were evaluated. The Navy's proposed remedy of No Further Action is considered protective of human health and the environment. The remedy meets the four general standards of corrective measures, which are:

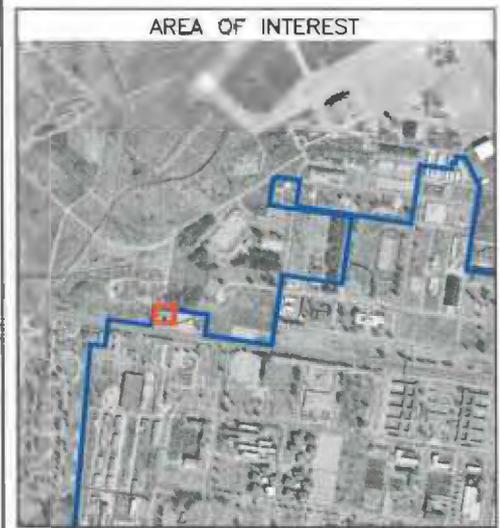
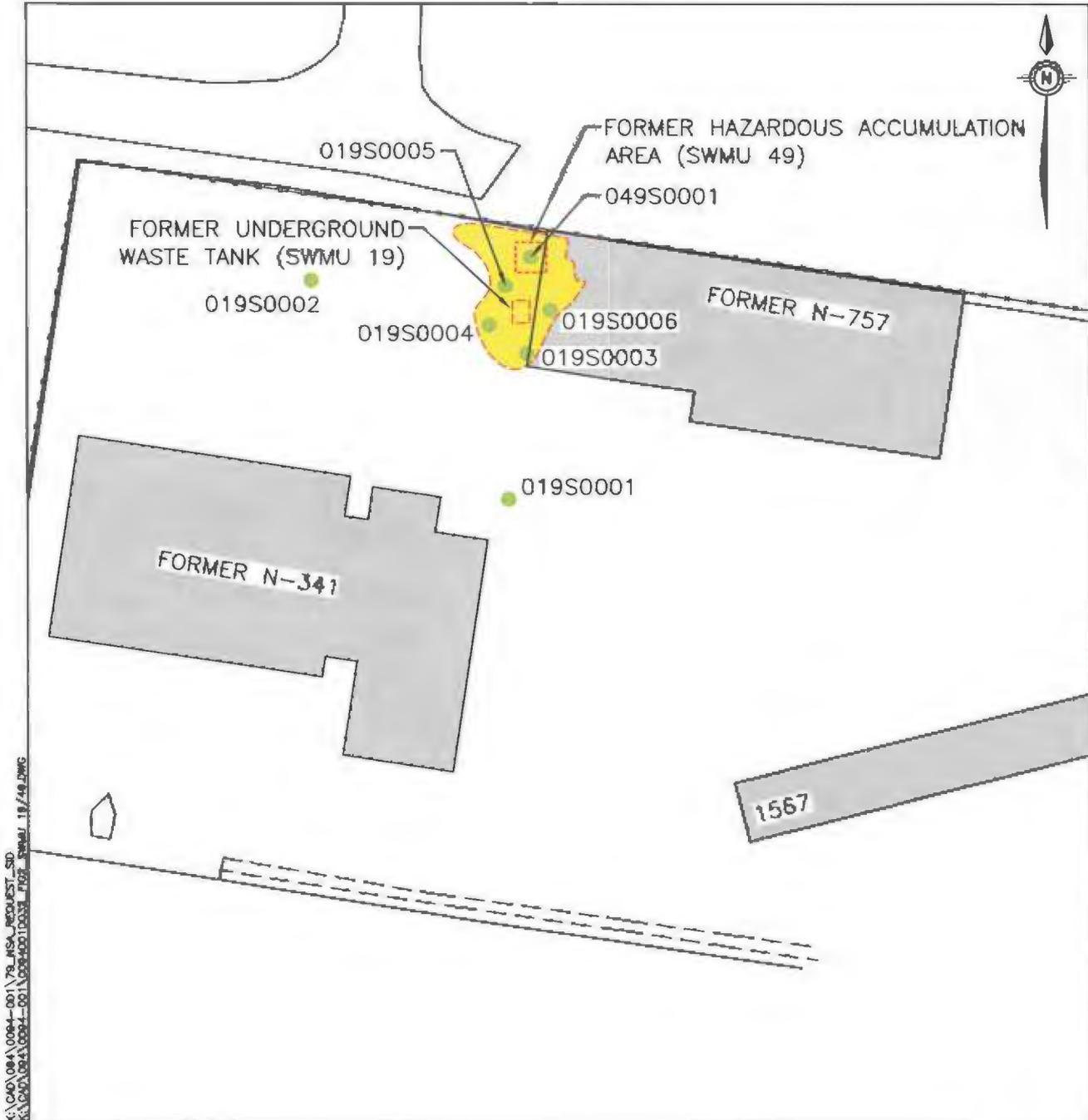
- Overall protection of human health and the environment
- Attainment of media cleanup standards
- Controlling the sources of release
- Compliance with standards for management

There are no site-related contaminants that would pose an excessive risk to an unrestricted reuse of the property or warrant implementation of institutional controls.

References

- EnSafe Inc. (2000a, April 28). *Confirmatory Sampling Investigation Report; Assemblies G and H – SWMUs 23, 24, 41, 43, 48, 49, and 61; NSA Mid-South, Millington, TN.* Revision 2. Memphis, Tennessee.
- EnSafe Inc. (2000, September 15). *RCRA Facility Investigation Report; Assembly F SWMUs – 17, 19, 20, 22, 39, and 63. NSA Mid-South, Millington, TN.* Revision 1. Memphis, Tennessee.
- EnSafe Inc. (2003, October 20). *Technical Memorandum – SWMU 19 Soil Sampling and Removal Report (VCA); NSA Mid-South RCRA Facility Investigation.* Memphis, Tennessee.
- ERC/EDGE. (1990, September). *RCRA Facility Assessment (RFA), NAS Memphis.* Nashville, Tennessee.

Attachment 1
Figures



- LEGEND**
- - SOIL SAMPLE LOCATION
 - AREA REMOVED DURING VCA
 - BUILDING
 - NSA MID-SOUTH BOUNDARY
 - AREA OF INVESTIGATION



FIGURE 2
STATEMENT OF BASIS
SWMU 19/49
SOIL SAMPLE LOCATIONS

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