



THE MEMPHIS DEPOT TENNESSEE

ADMINISTRATIVE RECORD COVER SHEET

AR File Number 376

VERSION 2 FINAL REPORT

BRAC CLEANUP PLAN Version 2

The Memphis Depot

(formerly the Defense Distribution Depot
Memphis, Tennessee)

Prepared by the Memphis Depot Caretaker
Environmental Division

October 1998

EXECUTIVE SUMMARY

EXECUTIVE SUMMARY

The Secretary of Defense, in cooperation with Congress, proposed a law to close bases and bring base structure in line with force structure. Public Law 100-526, enacted in 1988, created the Commission on Base Realignment and Closure (BRAC). The law charged the Commission with recommending installations for closure or realignment, based on independent study of the domestic military base structure. With subsequent passage of Public Law 101-510 under Title XXIX, enacted in 1990, Congress created the Defense BRAC Commission to provide a fair process for the timely closure and realignment of military installations. Public Law 101-510 provided for the BRAC Commission to meet in 1991, 1993 and 1995. The BRAC process identifies installations based on eight criteria, including military value, cost saving and return-on-investment, and the economic and environmental impacts of closure. In July 1993, the President of the United States announced his base closure community reinvestment program to help speed the economic recovery of communities affected by the Department of Defense's BRAC program. The BRAC 95 program has been developed in response to the President's program to limit delays in property reuse and transfer by changing the way cleanup is conducted (i.e., from a slow-paced, structured process to an accelerated, fluid process).

This BRAC Cleanup Plan (BCP) for the former Defense Distribution Depot Memphis, Tennessee is being prepared under the BRAC 95 program. The BRAC process includes preparing an environmental baseline survey, Community Environmental Response Facilitation Act reports, sampling and analysis recommendations and a BCP. The BCP process under the BRAC 95 program centers on a single goal *expediting and improving environmental response actions in order to facilitate disposal and reuse of the Depot while protecting human health and the environment*.

The BCP provides the status, management and response strategy, and action items related to the ongoing environmental restoration and associated compliance programs at the Depot. These programs support full restoration of the base property, where feasible, which is necessary to meet the requirements for property transfer and reuse activities associated with closure of the installation.

The BCP is a planning document based on the best available, current information. The information and assumptions presented may not necessarily have final approval from the base authorities and/or federal and state regulatory agencies. The BCP is a dynamic document that will be updated periodically to reflect the current status and strategies of remedial actions. This document is the second in a series of updates/modifications and represents conditions and strategies as of October 1998.

EXECUTIVE SUMMARY

The following BCP abstract (Table ES-1) provides a summary of essential information contained in the BCP for the Depot. It includes summaries of the installation description, environmental condition of the property, reuse planning status, restoration program, compliance program, conservation program, issues for execution of the program and projected fiscal year funding.

TABLE ES-1 BRAC CLEANUP PLAN ABSTRACT

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Department of Defense Component: Defense Logistics Agency

Installation Name: Defense Distribution Depot Memphis, Tennessee
(Memphis Depot Caretaker)

Date Prepared: 1998/10

FFID: TN-971520570

BRAC Round: IV

Location: Memphis, TN

BRAC Type: Closure

INSTALLATION SUMMARY

Scheduled Operational Closure Date:	9/30/96	Date CERFA EBS Submitted:	1996/9
Actual Operational Closure Date:	9/30/96	Number of CERFA Acres Proposed:	57.43
		Number of CERFA Acres Concurred	57.25
Total Number of Installation Acres:	642	Date CERFA Concurrence Received:	1998/10
Acres Retained by Component:	0		
Acres to be Transferred to another Component:	0	Date BCT Formed	1995/12
Acres Planned for Federal Transfer	0	Date Initial BCP Completed:	1996/11
Acres Planned for Non-Federal Transfer	642	Date of Last BCP Update:	1998/10
		Date RAB Established:	1994/2
Actual Acres Leased to Federal Entity	0	Actual Acres Transferred to Federal Entity:	0
Actual Acres Leased to Non-Federal Entity:	136.25	Actual Acres Transferred to Non-Federal Entity:	0

Types of Acres	Environmental Condition of Property						
	1	2	3	4	5	6	7
Acres according to CERCLA	57.43	6.80	57.28	58.89	2.00	30.91	428.90

Additional Environmental Considerations	Number of Acres
Petroleum, oils, and lubricants	420
Unexploded ordnance/ordnance or explosives	8.2
Areas that require protection because of the presence of natural or cultural resources	56.03

Total Number of Acres Environmentally Suitable for Transfer 180.40

Total Number of Acres Eligible for Disposal. 642

Activity	Installation Budget (\$000)								FY05-Completion
	FY97	FY98	FY99	FY00	FY01	FY02	FY03	FY04	
Restoration	15,500	9,652	3,467	16,488	2,335	50	50	50	210
Compliance	383	324	146	41	44	36	31	39	32
Planning	108	36	5	5	5	5	5	5	0
Management	323	712	1,324	881	884	762	566	520	1,286
TOTAL	16,314	10,724	4,942	17,415	3,268	853	652	614	1,528

REUSE PLANNING STATUS

Name of LRA Depot Redevelopment Corporation

Status of the Redevelopment Plan Completed and approved by MDRA Board, City, and County

Projected Date of Installation-Wide Disposal and Reuse EA/EIS. 98/2/10

Type of NEPA: EA

Actual Date of Installation-Wide Disposal and Reuse EA/EIS. 98/3/13

Type of NEPA: EA

Final Property Disposal Date: 2005/12

Actual/Projected Projected

	FOST	FOSL
Cumulative NUMBER Completed	0	7
Cumulative ACRES Completed	0	199.29
NUMBER Projected in Next Fiscal Year	1	1
ACRES Projected in Next Fiscal Year	188	378.71

TABLE ES-1 BRAC CLEANUP PLAN ABSTRACT

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RESTORATION PROGRAM

Summary: The EPA placed the Defense Depot Memphis, Tennessee (DDMT; now the Memphis Depot Caretaker [MDC]) on the National Priorities List on October 14, 1992. Contaminated media include soil, pond and lake sediment, and groundwater. EPA and TDEC recognize 81 sites at the DDMT facility including former landfill areas, former hazardous material/waste storage areas, former hazardous material recoup area, former wood treatment dipvat area, and former spray paint and sandblast facilities. Contaminants include TCE, PCE, Dieldrin, DDT, DDE, heavy metals and CWM. RI, Screening and BRAC site sampling was completed 9/7/2. BCT reviewed data to determine future actions and made many parcel category changes. Construction of the Interim Remedial Action for Groundwater at Dunn Field is completed. Anticipate the pump system to be operational by the end of October 1998. Dieldrin contaminated soil removal project at the Military Family Housing units is completed. PCB contaminated soil removal project at "J" Street Cafeteria will begin in October 1998. Dieldrin and PAH issues on remainder of Main Installation will require Risk Assessment to make cleanup decisions. Dieldrin bioremediation study being conducted to provide cleanup options for Golf Course. CWM field work, which included installation of six monitoring wells and soil sampling, is completed. Soil samples indicate no CWM materiel or breakdown products have migrated from suspected burial locations. Will know more about CWM impact on groundwater upon finalization of the report. Main Installation groundwater investigation began in October 1998.

	Site Name	Projected Date
Final Remedy in Place/Response Complete:	Acid Burial/Site 2	2004/2007
Long-Term Monitoring	POL Burial/Site 4	2007

COMPLIANCE PROGRAM

Summary: The facility operates under a state NPDES (stormwater) permit and has received no violations to date in FY98. MDC completed a NPDES permit renewal application as the current permit expires in September 1998. The three remaining city-issued air permits were closed in 1996. TDEC announced a public comment period for termination of the facility's RCRA Part B permit. The following have been completed: Radon survey, Lead-Based Paint survey, Radiological survey, Natural/Cultural Resources survey and Asbestos re-inspection. The two remaining permitted underground storage tanks were removed in July 1998 and actions are underway to close the permits. Actions are also underway by DDC to close the Nuclear Regulatory Commission permit for the facility.

CONSERVATION PROGRAM

Summary: No threatened or endangered species, protected habitats, wetlands, archeological, or Native American sites have been identified at the former DDMT facility. Twenty warehouses and three guard buildings built in 1942 have been determined to be eligible for placement on the National Register of Historic Places. The Army Material Command, Tennessee Historic Preservation Office and the Advisory Council for Historic Places signed the Memorandum of Agreement regarding preservation of these buildings.

FAST-TRACK CLEANUP SUMMARY

Summary: The BCT works very closely with the DRC to include reuse priorities in the decision-making process. The BCT also works very closely in determining appropriate investigation and remediation strategies. Issues are quickly discussed and consensus on appropriate items is obtained via monthly meetings and telephone conversations. BRAC sampling was completed in 9/7/2. The BCT reviewed the data, determined future actions and made many parcel category changes since 9/7/8. MDC sent EPA an updated CERFA uncontaminated parcels letter report dated July 28, 1998 documenting the latest parcel category changes. ATSDR continues to review sampling data in order to update the 1995 Public Health Assessment for the Defense Depot Memphis, Tennessee. Frontline Corporate Communications hired a full-time community relations specialist for the MDC who grew up in the neighborhood and whose parents still live here. The BCT hosted a Community Information Session in September 1998.

BCT CONCURRENCE

The BCP Abstract has been reviewed by the BCT.	YES	NO
DoD BEC: <u>Shawn Phillips</u>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Name		
US EPA BCT Member: <u>Turpin Ballard</u>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Name		
State BCT Member: <u>Jordan English</u>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Name		

ACRONYMS

<u>ACRONYM</u>	<u>DEFINITION</u>
ACM	Asbestos containing material
AMC	Army Materiel Command
AST	Aboveground storage tank
BCP	BRAC Cleanup Plan
BCT	BRAC Cleanup Team
BEC	BRAC Environmental Coordinator
bgs	Below ground surface
BRAC	Base Realignment and Closure
CAIS	Chemical Agent Identification Set
CEHNC	U.S. Army Corps of Engineers Engineering and Support Center, Huntsville
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act, as amended
CERFA	Community Environmental Response Facilitation Act
CESAM	U.S. Army Corps of Engineers South Atlantic Division - Mobile
CFR	Code of Federal Regulations
CWM	Chemical warfare materiel
CWMP	Chemical Warfare Management Plan
DA	Department of the Army
DDT	4,4'-Dichlorodiphenyltrichloroethane
DENIX	Defense Environmental Network Information Exchange
DSERTS	Defense Site Environmental Restoration Tracking System
DLA	Defense Logistics Agency
DLAM	Defense Logistics Agency memo
DOD	Department of Defense
DRC	Depot Redevelopment Corporation
DRMO	Defense Reutilization and Marketing Office
EA	Environmental assessment
EBS	Environmental baseline survey
EPA	Environmental Protection Agency
ER	Early removal
°F	Degrees Fahrenheit
FS	Feasibility study

ACRONYMS

HR	Hazardous substance release or disposal
HS	Hazardous substance storage
IRDMIS	Installation Restoration Data Management Information System
IRP	Installation Restoration Program
IRPIMS	Installation Restoration Program Information Management System
LBP	Lead-based paint
LRA	Local reuse authority
MDRA	Memphis Depot Redevelopment Agency
mg/kg	Milligrams per kilogram
mg/L	Milligrams per liter
NCP	National Oil and Hazardous Substances Pollution Contingency Plan
NEPA	National Environmental Policy Act
NFA	No further action
NPDES	National Pollutant Discharge Elimination System
OSHA	Occupational Safety and Health Administration
OU	Operable unit
PAH	Polycyclic aromatic hydrocarbon
PCB	Polychlorinated biphenyl
pCi/L	PicoCuries per liter
POL	Petroleum, oil and lubricants
ppm	Parts per million
PR	Petroleum release or disposal
PS	Petroleum storage
RAB	Restoration Advisory Board
RCRA	Resource Conservation and Recovery Act
RFA	RCRA facility assessment
RI	Remedial investigation
RI/FS	Remedial investigation/feasibility study
ROD	Record of decision
SARA	Superfund Amendments and Reauthorization Act
SPCC	Spill prevention, control and countermeasures
TDEC	Tennessee Department of Environment and Conservation
TRC	Technical Review Committee
USACE	U.S. Army Corps of Engineers

ACRONYMS

UST	Underground storage tank
UXO	Unexploded ordnance
VOC	Volatile organic compound

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SECTION ONE**INTRODUCTION AND SUMMARY****1.0 INTRODUCTION AND SUMMARY**

This Base Realignment and Closure (BRAC) Cleanup Plan (BCP) for the former Defense Distribution Depot Memphis, Tennessee was updated by the Memphis Depot Caretaker Environmental Division in October 1998.

Located in Memphis, Tennessee (Shelby County), the Depot is in the south-central section of the city and encompasses approximately 642 acres. In March 1995, the BRAC Commission recommended the mission at the Depot end by September 30, 1997 and called for the assumption of its responsibilities by other installations. All 642 acres have been identified for transfer.

As a result of past waste and resource management practices at the Depot, some areas are contaminated by various hazardous substances or wastes. Federal law requires federal agencies to investigate and clean up, as necessary, environmental contamination to support the release and reuse of the property. To address these past practices, a number of environmental restoration programs have been initiated at the Depot. Current waste and resource management practices are conducted in compliance with applicable environmental laws and regulations in order to protect human health and the environment.

This BCP is a planning document that presents the status, strategy and schedule for environmental restoration and compliance activities at the Depot. The BCP is based on the best information currently available. The information and schedules presented in this BCP were obtained from the BRAC Cleanup Team (BCT). Because it was necessary to make certain assumptions in preparing this BCP, implementation programs and cost estimates could be significantly altered if environmental conditions and/or administrative decisions change from those assumed. Such changes, if they occur, will be reflected in updates to the BCP.

The BCP is organized into the following sections and appendices in accordance with the BRAC Cleanup Plan Guidebook (DOD 1996):

- Section 1 describes environmental restoration program objectives; explains the purpose of the BCP; introduces the BCT and project team formed to review the program; provides a brief installation history; and summarizes the site environmental setting.

SECTION ONE**INTRODUCTION AND SUMMARY**

- Section 2 summarizes the current status of the Depot property disposal planning process, describes the relationship of the disposal process to other environmental programs, and summarizes potential and anticipated property transfer mechanisms.
- Section 3 summarizes the current status and past history of the Depot environmental restoration program, environmental compliance programs, natural and cultural resource programs, community relations activities that have occurred to date, and the environmental condition of the Depot property.
- Section 4 describes the Depot-wide strategy for environmental restoration, compliance, natural and cultural resources, and community involvement.
- Section 5 provides the master schedules of planned and anticipated activities to be performed throughout the duration of the environmental restoration program, including environmental restoration program activities and natural and cultural resources, and provides a BCT meeting schedule.
- Section 6 describes specific technical and/or administrative issues to be resolved and presents a strategy for resolving those issues.
- Section 7 lists the primary references used in preparation of the BCP

The following appendices are included in this document:

- Appendix A contains Table A-1 presenting funding requirements.
- Appendix B contains Table B-1 summarizing environmental restoration program and other associated technical documents in chronological order.
- Appendix C contains summaries of interim remedial and remedial action decision documents. (No remedial action decision documents have been completed.)
- Appendix D contains summaries of No Further Action decision documents, as well as Finding of Suitability to Lease (FOSL) and Finding of Suitability to Transfer (FOST) documents produced during this period. (No decision documents or FOSTs have been completed.)

SECTION ONE**INTRODUCTION AND SUMMARY**

- Appendix E presents working conceptual models for environmental restoration at BRAC sites and presents other materials relevant to the BCP, including a summary of issues related to environmental justice at Depot, an administrative record index, a letter of regulatory concurrence on the Community Environmental Response Facilitation Act (CERFA) report, the radiological survey reports, a transformer inventory and test results, and radon survey test results for the Depot.

1.1 ENVIRONMENTAL RESPONSE OBJECTIVES

The Environmental Division of the Memphis Depot Caretaker is responsible for the management and overall implementation of environmental programs at the Depot. The U.S. Army Corps of Engineers Engineering and Support Center, Huntsville (CEHNC), is managing remedial investigations/feasibility studies (RI/FSS) under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA). The CEHNC also manages Resource Conservation and Recovery Act (RCRA) facility investigations/corrective measures studies at the facility. In addition, the CEHNC is managing other environmental investigation, remedial design and corrective measures design activities. The U.S. Army Corps of Engineers South Atlantic Division - Mobile (CESAM) provides support to the CEHNC for remedial action and corrective measures implementation as well as compliance program support.

The combined objectives of the BCT, CEHNC and other supporting agencies for the environmental restoration and compliance program at the Depot are as follows.

- Protect human health and the environment;
- Continue compliance with existing statutes and regulations,
- Conduct ongoing environmental restoration program activities in accordance with CERCLA, as amended by the Superfund Amendments and Reauthorization Act (SARA); RCRA; the State of Tennessee regulations; and other applicable regulations;
- Meet Federal Facility Agreement schedules and deadlines;
- Continue efforts to identify all potentially contaminated areas and incorporate any new sites into the BCP, as appropriate;

SECTION ONE**INTRODUCTION AND SUMMARY**

- Establish priorities for environmental restoration and restoration-related compliance activities so that property disposal and reuse goals can be met;
- Complete the environmental restoration process as soon as practicable for each site, in an order of priority that takes into account both environmental concerns and redevelopment plans;
- Identify opportunities for selected removal actions to control, eliminate, or reduce risks to manageable levels;
- Continue to consider future land use when characterizing risks associated with releases of hazardous substances wastes;
- Conduct long-term remedial actions for groundwater and any necessary reviews to evaluate the progress of remediation,
- Establish interim and long-term monitoring plans for other Remedial Actions (RAs), as appropriate;
- Continue to identify and map the environmental condition of installation property with the intent of identifying areas suitable for transfer by deed;
- Conduct site-specific environmental baseline surveys (EBSs) as necessary to support transfer and lease of property,
- Meet requirements of the National Environmental Policy Act (NEPA) related to environmental restoration, property disposal, and reuse of the Depot; and
- Advise the Army Materiel Command (AMC) of property that is deemed suitable for transfer and properties that are not suitable for transfer because they are either not properly evaluated or pose an unacceptable human health or environmental risk.

1.2 BCP PURPOSE, UPDATES AND DISTRIBUTIONS

This BCP is intended to:

- Summarize the current status of the Depot's environmental restoration programs;

SECTION ONE**INTRODUCTION AND SUMMARY**

- Present a comprehensive strategy for implementing response actions necessary to protect human health and the environment; and
- Present schedules for restoration and compliance activities.

The strategy integrates activities being performed under the environmental restoration program and associated environmental compliance programs to support full restoration of the Depot.

This BCP was prepared with information available as of September 1998. Certain information presented in this BCP is derived from the final EBS, (November 1996), final Remedial Investigation Sites Letter Reports (May 1998), final Screening Sites Letter Reports (March 1998) and final BRAC Parcel Summary Reports (April 1998). Changes to information derived from these documents will be reflected in subsequent versions of the BCP. Additional information on the site history and environmental setting can be found in the EBS.

The BCP is a dynamic document that will be updated as needed to incorporate newly obtained information and reflect the completion or change in status of any cleanup actions. Updates of the BCP will be distributed to each member of the BCT, as well as to additional parties identified in Table 1-1.

1.3 BCT/PROJECT TEAM

The Depot BCT was established in December 1995, and meetings are coordinated by the Depot's BRAC Environmental Coordinator (BEC). The BCT rotates meeting facilitation responsibilities. BCT meetings are the means of conducting periodic program reviews and reaching consensus on decisions with federal and state regulators. The BCT includes the BEC, the U.S. Environmental Protection Agency (EPA) Region IV, and the State of Tennessee Department of Environment and Conservation (TDEC). The BCT is supported by a project team consisting of technical, operational, reuse and administrative specialists, as needed. A list of the BCT and project team members and their roles and responsibilities are provided in Table 1-1.

1.4 SITE DESCRIPTION AND HISTORY OF INSTALLATION

This section describes the site and operations history of the Depot.

SECTION ONE**INTRODUCTION AND SUMMARY****1.4.1 Site Description**

The Depot is located in the south-central section of Memphis in Shelby County, Tennessee (Figure 1-1). It comprises 642 acres (Figure 1-2), and can be divided into two geographical areas: the Main Installation and Dunn Field. The Main Installation consists of 578 acres, and Dunn Field consists of 64 acres.

The Depot was placed on the National Priorities List in October 1992. The Depot has conducted environmental investigations and plans to conduct further environmental investigations under the requirements of CERCLA and the National Oil and Hazardous Substances Pollution Contingency Plan (NCP). To assist further investigations at the Depot, representatives of the Depot, the CEHNC, EPA and TDEC divided the facility into four potential Operable Units (OUs) (Figure 1-2). The Main Installation is divided into three OUs (2 through 4). OU-2 is located in the southwestern quadrant of the Main Installation area of the Depot and is characterized as an industrial area where maintenance and repair activities took place. OU-3 is located in the southeastern quadrant of the Main Installation area and contains the entire southeastern watershed and golf course. OU-4 is located in the north-central section of the Main Installation area where material storage took place. Dunn Field, located north of the Main Installation and identified as OU-1, is the only known and documented burial area on the Depot. The local reuse authority (LRA), originally known as the Memphis Depot Redevelopment Agency (MDRA) and now the Depot Redevelopment Corporation (DRC), further subdivided the Depot property into parcels and further divided parcels into subparcels to delineate buildings and CERCLA sites.

1.4.2 Installation History and Mission

The 642 acres on which the Depot is located were originally used for producing cotton until purchased by the U.S. Army in 1940. The initial mission and function of the Depot was to provide stock control, storage and maintenance services for the Army Engineer, Chemical and Quartermaster Corps. The installation was originally named Memphis General Depot, but has also been known as Memphis Quartermaster Depot, Memphis Army Service Forces Depot and Memphis Army Depot.

During World War II, the Depot served as an internment center for 800 prisoners of war and performed supply missions for the Signal and Ordnance Corps. From 1963 until closure on September 30, 1997, the Depot was a principal distribution center for the Defense Logistics Agency (DLA) (formerly the Defense Supply Agency) for shipping and receiving a variety of materials.

SECTION ONE**INTRODUCTION AND SUMMARY**

including hazardous substances (pesticides, swimming pool chemicals, firearm cleaning and rust preventative chemicals), textile products, food products, electronic equipment, construction materials, and industrial, medical and general supplies. The Depot received, warehoused and distributed supplies common to all U.S. military services in the southeastern United States, Puerto Rico and Panama. Approximately four million line items were received and shipped by the Depot annually. The Depot shipped approximately 107,000 tons of goods a year (CH2M Hill 1995b).

1.5 OFF-BASE PROPERTY/TENANTS

There are no off-base properties or tenants associated with the Depot. For the EBS, an electronic records search of federal and state environmental databases was conducted for properties adjacent to the Depot. In addition, visual inspections by automobile were performed on properties and facilities adjacent to the Depot. Recent groundwater samples collected in a monitoring well upgradient from the Depot contained detectable chlorinated solvents. An investigation to identify the source of the chlorinated solvents is being planned.

1.6 ENVIRONMENTAL SETTING

This section describes the environmental setting of the Depot, including the physical setting, demographics, climatology, hydrology, geology, soils and hydrogeology.

1.6.1 Physical Setting

The Depot encompasses 642 acres in the south-central section of Memphis, 4 miles southeast of the Central Business District and 1 mile north of Memphis International Airport (Figure 1-1). The facility is located in a mixed residential, commercial and industrial land use area.

Generally, the Depot is described as consisting of two geographic areas—the Main Installation and Dunn Field. The Main Installation consists of 574 acres bordered by Airways Boulevard to the east, Perry Road to the west, Ball Road to the south and Dunn Road to the north. The Main Installation is highly developed and contains most of the buildings and material storage yards for the facility. There are approximately 118 buildings, 26 miles of railroad tracks and 28 miles of paved streets at the Depot. Approximately 126 acres are used for covered storage space and approximately 138 acres are used for open storage space. Dunn Field is located just to the north, across Dunn Road from the northwest

SECTION ONE**INTRODUCTION AND SUMMARY**

quadrant of the Main Installation. Dunn Field consists of 68 acres of mostly undeveloped land that has historically been used for storage of bauxite and fluorspar and for waste disposal.

1.6.2 Demographics

The Depot is located in an area of widely varying uses. Formerly a residential and agricultural area, the surrounding area is characterized by small commercial and manufacturing uses north and east of the Depot and single-family residences south and west of the Depot. Numerous small church buildings are scattered throughout the residential neighborhoods. Several schools are located in the neighborhoods as well as two neighborhood parks.

Airways Boulevard, located on the east border of the Main Installation, is the most heavily traveled thoroughfare in the vicinity. It is developed with numerous small, commercial establishments, particularly in the area from the Depot south to the Airways Boulevard interchange with Interstate 240. Businesses along Airways Boulevard are typical of highway commercial districts and include convenience stores, liquor stores, restaurants, used car dealers, and service stations. Other commercial establishments are located north, south, and west of the Depot. Most are small groceries or convenience stores that serve their immediate neighborhoods. Memphis Light, Gas, and Water operates a large substation located northwest of the Depot along Person Avenue.

The Frisco Railroad and Illinois Central Gulf Railroad rail lines are north of the Depot. A number of large industrial and warehousing operations are located along the rail lines in this area, including the Kellogg Company; Laramie Tires; Lanigan Storage and Van Company; the Kroger Company; the National Manufacturing Company, Incorporated; and United Uniforms. A triangular area located immediately north of the Depot along Dunn Road also contains several industrial firms.

Most of the land surrounding the Depot is highly developed; however, three relatively large, undeveloped sites exist in the general area. The largest site is located north of the Depot at Person Avenue and Kyle Street. The other undeveloped areas are located south of the Depot along Ball Road and Ketchum Road in the vicinity of the Orchid Manor Apartments, and east of the Depot along Dwight Street.

In Memphis, zoning controls and subdivision requirements are under the jurisdiction of the Memphis and Shelby County Office of Planning and Development. The Depot property is zoned Light

SECTION ONE**INTRODUCTION AND SUMMARY**

Industrial. This designation extends to several contiguous land parcels located east of the Depot along Airways Boulevard, in the vicinity of the Kellogg plant west past Rozelle Street. Several smaller areas adjacent to those mentioned above are zoned Heavy Industrial. Most of the remaining land in the vicinity of the Depot is zoned for residential use.

The 1990 census data for Memphis and for Shelby County is listed below (Memphis and Shelby County Division of Planning and Development 1993).

Location	1990 Census Data
City of Memphis	610,337
Shelby County	826,330

1.6.3 Climatology

The Depot is located in the West Tennessee Climatic Division of the United States (Law Environmental 1990b). This division experiences a typical continental climate with warm, humid summers and cold winters. The average temperatures are 40 degrees Fahrenheit (°F) in the winter and 80°F in the summer. The Memphis area has a 30-year annual precipitation average of 50 inches. Normally, precipitation is heaviest during the winter and early spring. A second, less significant rainfall period occurs as thundershowers during late spring and early summer. The one-year, 24-hour average rainfall for the area surrounding the Depot is 3.4 inches (Law Environmental 1990b). Prevailing winds are from the southwest.

1.6.4 Hydrology

Surface drainage at the Depot is accomplished by overland flow to swales, ditches, concrete-lined channels and a storm drainage system. The majority of surface drainage at Dunn Field is achieved by overland flow to a storm drainage system that flows west of the facility (Figure 1-4). The northeast quadrant of Dunn Field drains to a concrete-lined channel that flows north. The Main Installation's surface drainage is achieved by overland flow to a storm drainage system. The concrete-lined channels and storm drainage system are directed to Nonconnah Creek or to either Tarrant Branch or Cane Creek, tributaries of Nonconnah Creek. Nonconnah Creek drains into Lake McKellar, a tributary of the Mississippi River. Where exposed, undisturbed surface soils are predominantly grassed, fine-grained semi-cohesive materials that tend to promote large volumes of rapid runoff. Paved and built-up sections of the facility also tend to generate significant amounts of runoff.

SECTION ONE**INTRODUCTION AND SUMMARY**

Topographically, most of the Depot is generally level with or above the surrounding terrain; therefore, the Depot receives little or no run-on from adjacent areas.

Two permanent surface water bodies exist at the Depot. The larger is Lake Danielson at approximately four acres in size. Lake Danielson receives a significant amount of the facility's stormwater runoff, primarily from the area where the "20 Typicals" (Buildings 229, 230, 250, 329, 330, 349, 350, 429, 430, 449, 450, 529, 530, 549, 550, 629, 630, 649 and 650) are located. Lake overflow is channeled through a drop inlet at the dam through a concrete-lined channel to a culvert extending beneath N Street and Ball Road. The smaller surface water body is the golf course pond. It receives runoff from the surrounding golf course; the area where Buildings 249, 450, 251, 265, 270, 271 are located; and the south parking lot. Lake and pond overflow is directed to culverts extending beneath N Street and Ball Road and is then directed to Nonconnah Creek via unnamed tributaries.

1.6.5 Geology and Soils

Topographically, the Depot is situated in an area of gently rolling loess hills. Most of the Depot terrain is fairly uniform, with elevations ranging from 282 to 300 feet above mean sea level. Five distinct surface soil units have been mapped at the Depot: the Falaya Silt Loam, the Filled Land-Silty, the Graded Land, the Memphis Silt Loam, and the Memphis Silt Loam 2. Surface soils at the developed portion of the Main Installation primarily consist of filled land (CH2M Hill 1995b).

Geologically, the area around the Depot is located in the north-central part of the Mississippi embayment that is a broad, trough-like geologic structure that plunges to the south. The geologic units that have been identified at the Depot are: loess, which can contain "perched" water-bearing zones for short periods of time after a rainfall event; fluvial (terrace) deposits that contain the site's shallow aquifer; the Jackson Formation/Upper Claiborne Group that is a confining unit between aquifers; and the Memphis Sand that represents the region's most important source of water.

Subsurface soils at the Depot consist of moderately drained to well drained silty deposits. The soil in graded areas varies from clay to sandy silt. The permeability range for the soil is 4.4×10^{-4} to 1.4×10^{-3} centimeters per second (CH2M Hill 1995b). The upper strata at Dunn Field consists of a loess layer underlain by fluvial deposits of sand and gravel that includes a perched water element.

SECTION ONE**INTRODUCTION AND SUMMARY**

The Depot is situated approximately 40 miles southeast of Marked Tree, Arkansas where the abrupt termination of one of the two major deeply buried faults of the New Madrid region seismic zone is located. This places the Depot in one of the highest earthquake risk zones east of the Rocky Mountains. Three of the greatest earthquakes in American history occurred in the New Madrid seismic zone in 1811 and 1812. The recurrence of quakes of similar magnitude is estimated to be 600 to 800 years. Although thousands of microearthquakes are recorded, very few earthquakes have been felt in the Memphis/Shelby County area.

1.6.6 Hydrogeology

A layer of unsaturated loess, a firm silty clay or clayey silt that is approximately 20 to 30 feet thick, underlies the Depot. Where intact and undisturbed, the loess unit tends to limit precipitation infiltration (recharge) to significant underlying aquifers. Sandy zones within the loess may become seasonal perched water-bearing zones that contain water for short periods of time after rainfall events.

Terrace deposits underlie the loess. The lower, saturated portion of the terrace deposits is referred to as the Fluvial Aquifer and is the uppermost unconfined aquifer beneath the Depot. The saturated thickness of the Fluvial Aquifer varies from 5 to 7 feet to 18 feet at the Depot, and the water level top varies from 37 to 145 feet below ground surface (bgs) (CH2M Hill 1995b). The Fluvial Aquifer is not used as a drinking water source for Memphis.

The Memphis Sand Aquifer underlies the Fluvial Aquifer and is the primary source of drinking water for Memphis.

The Fluvial and Memphis Sand Aquifers are separated by the Jackson Formation/Upper Claiborne Group, which generally consists of a high-plasticity clay of variable thickness. The depth to the top of the confining clay unit at the Depot ranges from approximately 70 feet bgs on the east and west sides of OU-4 to approximately 160 feet bgs in the north-central portion of OU-4, where a structural depression in the top of the clay unit exists. The thickness of this confining stratum ranges from approximately 85 feet to less than 15 feet. The Memphis Sand Aquifer underlies the Depot at a depth of approximately 180 feet bgs and averages 500 feet in thickness. Some recharge is derived from overlying or hydraulically communicating units; however, most of its recharge is derived from the unit's outcrop area, located generally east of Memphis. The outcrop area consists of a broad band ranging in width from approximately 50 miles at the Tennessee-Mississippi border to less than 15 miles at the

Tennessee-Kentucky border (in Henry County, Tennessee). The southernmost part of the outcrop area in Tennessee begins in southeasternmost Shelby County, Tennessee, although the unit's outcrop continues south into Mississippi and north into Kentucky.

The Fort Pillow Sand Aquifer underlies the Depot at an approximate depth of 1,400 feet bgs. It averages approximately 200 feet in thickness. The unit contains groundwater under artesian (confined) conditions and derives most of its recharge from unit outcrop areas and hydrogeologic units in hydraulic communication (CH2M Hill 1995b).

Figure 1-5 presents the March 1998 potentiometric surface map of the Fluvial Aquifer at the Depot (CH2M Hill 1998a)

Two general groundwater flow regimes occur in the Fluvial Aquifer at the Depot. At Dunn Field, a west-southwest direction of flow is indicated by the contours. However, over the majority of the Main Installation, the direction of groundwater flow is toward the depression in the top of the clay-confining unit on the northern portion of OU-4 just south of the southwest corner of Dunn Field. This area of apparent convergent flows is suspected to be an area with hydraulic interconnection between the Fluvial Aquifer and the underlying Memphis Sand Aquifer. An investigation of the presence or absence of a hydraulic connection between the aquifers is planned as part of the ongoing RI/FS.

1.7 HAZARDOUS SUBSTANCES AND WASTE MANAGEMENT PRACTICES

Past activities conducted at the Depot include a wide range of storage, distribution, and maintenance practices. Historically Dunn Field was used as a landfill and for storage of mineral stockpiles and as a pistol range. The range house also was used for pesticide and herbicide storage. The mineral stockpiles have remained over the years and were managed by the Defense National Stockpile. These stockpiles have recently been sold to private industry and are being removed. The primary activities conducted at the Main Installation included material storage and shipping. Other activities conducted at the Main Installation included hazardous substance repackaging for storage or shipment; sandblasting and painting; vehicle maintenance; polychlorinated biphenyl (PCB) transformer storage; pesticide and herbicide storage and use; and treatment of wood products with pentachlorophenol. Prior to its construction, part of the golf course was used as a pistol range.

SECTION ONE**INTRODUCTION AND SUMMARY****1.7.1 Hazardous Substance Activities**

As a result of the Depot's complex site-utilization history, large quantities of industrial chemicals or hazardous substances were received, stored, repackaged and shipped. Some of these items were spilled, leaked or landfilled at Dunn Field.

The following types of hazardous substances were received, stored and shipped at the Depot:

- Flammable liquids
- Flammable solids
- Corrosives (acids and bases)
- Poisons (including insecticides)
- Compressed gases (nonflammable)
- Compressed gases (flammable)
- Class C explosives
- Oxidizers
- Low level radioactive materials (watch dials, compasses, smoke detectors, etc.)
- Other regulated substances

These substances were received as packaged commodities from manufacturers in containers that varied in size up to 55-gallon drums. While in storage, these substances were segregated by hazardous storage compatibility groups to assure optimum safety conditions were met (Harland Bartholomew & Associates, Inc. 1988).

Until 1985, mission chemical stock items in packages smaller than 55-gallon drums were stored in Building 629, which was constructed on a concrete foundation with seven bays separated by concrete walls and fire doors. Mission chemical stock items in 55-gallon drums were stored at open storage areas X03, X11, X12, X13 and X15. Some mission chemical stock items also were stored in Building 319, which became the hazardous waste storage area in 1994 for the Defense Reutilization and Marketing Office (DRMO). Building 319 had a concrete berm and was situated on a concrete foundation with no floor drains. In the past, cyanide compounds were stored in a mechanically

SECTION ONE**INTRODUCTION AND SUMMARY**

foundation with no floor drains. In the past, cyanide compounds were stored in a mechanically ventilated, separately bermed room, located in the west end of the building. The building was equipped with explosion-proof lighting and spill booths of similar construction to those in Building 629.

Hazardous substances requiring temperature-controlled environments and medical items classified as hazardous substances were stored in Building 359. Security control at Buildings 319 and 359 was stringent.

Beginning in 1985, the majority of mission chemical stock items in packages smaller than 55-gallon drums were stored in Building 835 until closure. This building was constructed on a concrete foundation without floor drains and contained five bays separated by concrete walls and fire doors. Spill booths containing absorbent materials and cleanup equipment were located in each bay area. The bays were marked to preclude incompatible chemicals being placed in the same bay.

The X25 area, located on the northwest side of the facility, was an open storage area with an earthen berm until a concrete bermed, concrete pad was built in approximately July 1976. The X25 area was used to store Class 1 flammable liquids. These liquids were usually stored in 55-gallon drums and included a wide range of industrial grade organic solvents. A tension-fabric roof structure was constructed over the bermed, concrete pad in 1986 and stored flammable liquids in 55-gallon drums. Building 925 was built in 1994 for the storage of flammable liquids in 55-gallon drums.

Nonflammable petroleum, oil and lubricant (POL) products were stored in open storage areas X07, X11, X12, X13 and X15. Building S873 was an open-sided shed for POL products, and for overflow mission chemical stock items were also stored in Building S873. Until construction of a hazardous substance recoupment facility in 1985, hazardous substances in damaged containers were stored and repackaged at the south end of Building S873. The existing hazardous substances recoupment facility is located in Building 865.

The Depot is a RCRA generator of hazardous wastes in the Tennessee under generator number TN 4210020570. The source of hazardous wastes at the Depot is the cleanup of small hazardous substances spills. Of the approximately 100,000 hazardous substances transfers conducted per year at the Depot, only an estimated 50 transfers per year result in a spill or release. More than 90 percent of these events resulted from packaging failures during transport. The remaining events were attributed to accidents during handling at the Depot (Harland Bartholomew & Associates, Inc. 1988).

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The former Defense Property Disposal Office was redesignated the Defense Reutilization and Marketing Organization (DRMO). The DRMO was a tenant of the Depot and provided property disposal services for hazardous substances and hazardous wastes generated by the Depot, the Memphis Naval Air Station and the Air Force Air National Guard. The Depot applied for a Part B permit from EPA to allow the storage of hazardous wastes for up to 180 days based on construction of a Conforming Storage Facility. Until construction of the facility, DRMO maintained 90-day storage in Building 308 under interim status. Construction of the Conforming Storage Facility did not occur prior to closure. Hazardous substances in the DRMO's possession were stored in Building 308 until 1994 when TDEC approved two bays of Building 319 for hazardous waste storage and DRMO moved their operations. The Depot applied for closure of the Part B permit in April 1997 and is awaiting approval by TDEC.

1.7.2 Waste Management Activities

The northwest section of the Dunn Field area was used as the landfill site for unusable, nonhazardous subsistence stocks from the early 1940s to mid 1960s. Additionally, small quantities of hazardous substances (e g., acids, mixed chemicals, and chemical agent identification sets) were buried in Dunn Field. The Depot used municipal landfills for sanitary solid waste disposal.



FIGURE 1-5
POTENTIOMETRIC SURFACE MAP
MARCH, 1998

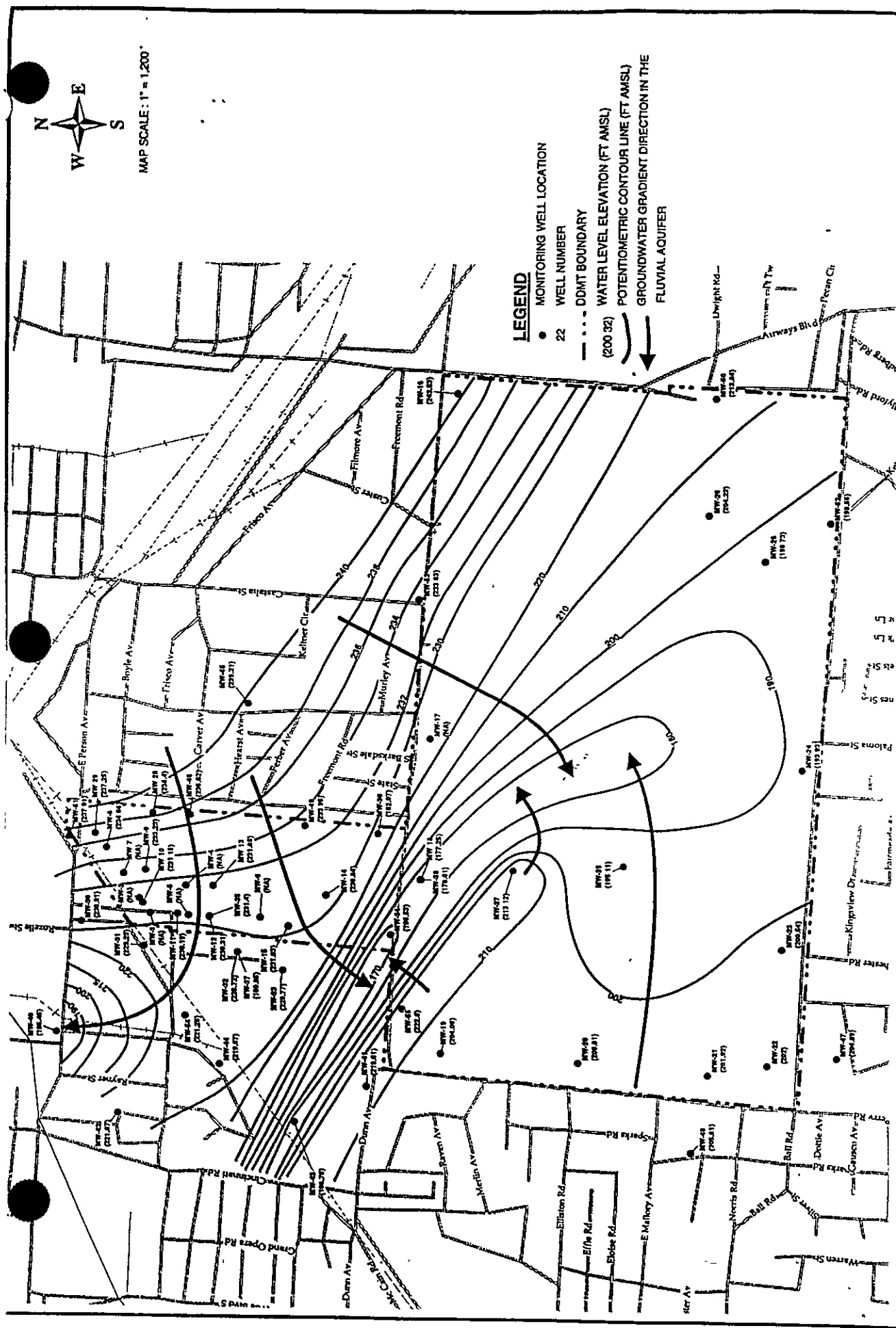


TABLE 1-1
BRAC CLEANUP TEAM/PROJECT TEAM MEMBERS

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NAME	AFFILIATION	TELEPHONE NUMBER	ROLE/RESPONSIBILITY
BRAC Cleanup Team Members			
Shawn Phillips	MDC	(901) 544-0611	BEC/DLA Representative
Jordan English	TDEC	(901) 368-7953	TDEC Representative
Turpin Ballard	EPA Region IV	(404) 562-8553	EPA Representative
Project Team Members (* indicates people on BRAC Cleanup Plan distribution list)			
Denise Cooper	MDC	(901) 544-0610	Env. Protection Assistant
Jack Kallal	MDC	(901) 544-0614	Env. Protection Specialist
Mike Lee	MDC	(901) 544-0612	Env. Protection Specialist
* Kurt Braun	CESAM	(334) 690-3415	Construction Program Manager
* Dorothy Richards	CEHNC	(205) 895-1463	IRP Program Manager
Steve Dunn	CEHNC	(205) 895-1144	CWM Program Manager
* Greg Underberg	CH2M Hill	(423) 483-9032	Investigation/Design Contractor PM
Vijaya Mylavarapu	CH2M Hill	(352) 335-7991	Risk Assessor
Steve Offner	OHM Corp.	(770) 326-2571	Construction Contracotor PM
John L. Stine	UXB International	(205) 430-2892	CWM Contractor PM
BRAC Cleanup Plan distribution list (in addition to BRAC Cleanup Team/Project Team)			
Richard Isaac	AEC	(410) 436-6823	AEC Representative
Jeanne Masters	DLA	(703) 767-2672	DLA BRAC Office
Karen Moran	DLA	(703) 767-6237	DLA Environmental Office
Mike Dobbs	DDC	(717) 770-6950	DDC Environmental Office
Ron Marichak	DDC	(717) 770-7760	DDC BRAC Office
Jeff McCauslin	DDSP	(717) 770-7421	Deputy Director of Installations
Phil Amido	MDC	(901) 544-0615	Site Manager
John DeBack	DODBTFO	(901) 544-0622	Base Transition Coordinator
Jim Covington	DRC	(901) 942-4939	President

Notes:

AEC.	Army Environmental Center
BEC	BRAC Environmental Coordinator
BRAC.	Base Realignment and Closure
CWM	Chemical warfare materiel
DDC:	Defense Distribution Center
DDSP	Defense Distribution Depot Susquehanna, Pennsylvania
DLA	Defense Logistics Agency
DODBTFO.	Department of Defense Base Transition Field Office
DRC	Depot Redevelopment Corporation
EPA	Environmental Protection Agency
IRP	Installation Restoration Program
PM	Project Manager
MDC	Memphis Depot Caretaker
TDEC.	Tennessee Department of Environment and Conservation

SECTION TWO**PROPERTY DISPOSAL AND REUSE****2.0 PROPERTY DISPOSAL AND REUSE**

This section describes the status and strategy for real property disposal, as well as the relationship between environmental cleanup efforts and anticipated or known property transfer methods.

2.1 STATUS OF DISPOSAL PLANNING PROCESS

In March 1995, the BRAC Commission recommended the following closure action at the Depot:

- Disestablish Defense Distribution Depot Memphis, Tennessee of the DLA and relocate the depot's functions and material to other defense distribution depots.

Pursuant to Public Law 101-510 and BRAC 95, the U.S. Army identified 642 acres at the Depot that would be excess to its needs following closure. The Depot ceased mission operations on September 30, 1997.

The U.S. Army and DLA have initiated the BRAC parcel transfer process for the Depot and coordinate actions with the Local Reuse Authority (LRA). This process involves three interrelated activities. (1) developing a redevelopment plan; (2) developing a disposal process; and (3) meeting requirements of the NEPA process. The design of this three-part disposal process integrates goals held by the U.S. Army, DLA, Memphis and Shelby County in order to provide for the efficient transfer of the Depot mission within DLA, and to minimize the impact of closure on the community.

2.1.1 Redevelopment Plan

The MDRA completed the redevelopment planning process for the Depot in April 1997 with completion and approval of the Depot Redevelopment Plan. The reuse process began in 1995 when the Department of Defense (DOD) and Office of Economic Adjustment (OEA) approached Memphis to form a reuse committee. Memphis and Shelby County created the MDRA as the LRA for the Depot to represent a broad spectrum of community interests in the reuse of the Depot.

In April 1997, the Depot Redevelopment Corporation (DRC) formed as a public corporation to implement the plan developed by the MDRA. The DRC is the legal government entity recognized under Tennessee law and by the federal government as the authority that can enter into agreements with the federal government for lease or conveyance of the Depot property.

SECTION TWO**PROPERTY DISPOSAL AND REUSE**

Memphis and Shelby County authorities approved the Depot Redevelopment Plan in March 1997. The BCT has reviewed this plan and uses it to make cleanup decisions. The Department of Housing and Urban Development (HUD) completed a review and approved the redevelopment plan for homeless consideration in September 1997. In addition to identifying the general land use for the future of the property, the Depot Redevelopment Plan provides a strategy for plan implementation by the DRC.

The MDRA set the following goals for redevelopment and the DRC continues to work towards these goals:

- Maintain overall community public health as the first priority in environmental remediation work;
- Maximize community employment, wages and capital investment through redevelopment of the Depot and the surrounding area, commencing immediately;
- Place highest priority on attracting new or expanding businesses to the Memphis market area rather than on relocating existing businesses already in the Memphis market area;
- Encourage new depot businesses to hire depot employees and local community residents,
- Improve the local quality of life by using depot facilities to meet community needs and by ensuring that redevelopment is compatible with the surrounding areas, and
- Generate early cash flow through interim leases and other means of support maintenance, improvements, and marketing efforts.

Prior to property transfer, the U.S. Army will work with the DRC to lease the Depot properties on an interim basis. The DRC and the Army entered into an interim master lease agreement in September 1997. As properties become available through an approved Finding of Suitability to Lease (FOSL), the DRC may sublease to private parties. The DRC entered into its first sublease agreement in October 1997 with a private manufacturer generating the first 200 reuse jobs. Since then the Memphis Police Department has opened a precinct and operates the Street Crime Abatement Team from the former facilities maintenance area. An additional 100 new jobs were created by this activity.

SECTION TWO**PROPERTY DISPOSAL AND REUSE**

The timing and conveyance of parcels to the private sector by the DRC may vary from parcel to parcel, depending on the requirements for access, condition of improvements within the right-of-way and demand for specific parcels.

2.1.2 Disposal Process

The disposal process has been completed for the Depot. The disposal process considered BRAC requirements and schedules, U.S. Army transfer goals and the redevelopment planning goals of the local community. The process incorporated relevant U.S. Army BRAC transfer hierarchy requirements established by Public Law 100-526 and the Federal Property and Administration Services Act, the Surplus Property Act, the Federal Property Management Regulations and the 1994 Defense Authorization Act.

The process included the following actions in the sequence listed: (1) offer facility to DOD agencies for use; (2) offer facility to other federal agencies; (3) offer facility under the 1994 Redevelopment Act (excluding property taken by DOD agencies) to sponsoring organizations and qualified homeless assistance providers; (4) offer facility to state and local government agencies through public benefit discount conveyance; (5) offer facility to a redevelopment agency at or below fair market value through an economic development conveyance; and (6) offer the property for negotiated or competitive bid sale to the private sector.

The Base Closure Community Redevelopment and Homeless Assistance Act of 1994, signed into law October 25, 1994, and Title XXIX of the 1994 Defense Authorization Act amended this process as it pertains to homeless, state, and local screening. These pieces of legislation exempt BRAC properties from screening under McKinney Act provisions. They do, however, require that the needs of the homeless be considered during the reuse planning process and that these needs be balanced with the need for further economic redevelopment. Approval of the Depot Redevelopment Plan by HUD in September 1997 concluded this requirement for homeless consideration.

2.1.3 National Environmental Policy Act Documentation

The NEPA does not apply to the BRAC decision process or closing action for an installation, but it does apply to property disposal (transfer) as a U.S. Army action and the reuse of property by the community as an indirect effect of disposal.

SECTION TWO**PROPERTY DISPOSAL AND REUSE**

To comply with NEPA, a disposal and reuse environmental assessment (EA) for the Depot was prepared by CESAM. The EA process began in April 1996 with a scoping meeting conducted on July 23, 1996. A scoping report was completed in October 1996. The final EA for master interim lease that included a description of the proposed disposal action and alternatives was completed in October 1996. The final EA for disposal and reuse was completed in February 1998, and the AMC signed a Finding of No Significant Impact (FONSI) on March 13, 1998. A public comment period began in March 1998 and, in response to a comment received, will be extended for another 30 days beginning in October 1998.

The EAs evaluated several disposal and reuse alternatives in accordance with current DA policy on the preparation of U.S. Army disposal and reuse documents. This policy established a broad framework for the formulation of unencumbered and encumbered disposal alternatives and reuse of installation property by other (non-U.S. Army) parties. The three disposal alternatives being considered in the disposal and reuse EA are as follows.

- **Unencumbered Disposal Alternative:** Disposal of the property as unencumbered means that the U.S. Army would not impose conditions on it. For example, the property transfers free of U.S. Army easements or continuing environmental mitigation measures.
- **Encumbered Disposal Alternative:** The U.S. Army would dispose of the property with encumbrances. The encumbrances may result in development constraints for the new property owners. Possible encumbrances include existing or proposed utility or infrastructure easements or property reuse limitations because of the presence of environmental contamination undergoing long-term remediation. An existing deed restriction could cause additional encumbrances.
- **Caretaker Alternative (No Action Alternative):** The U.S. Army would not dispose of the property under this alternative, but would maintain it indefinitely in caretaker status. After transfer of the caretaker cadre mission, the U.S. Army would maintain and preserve the vacated area. The property would be available for the U.S. Army use if needed.

SECTION TWO**PROPERTY DISPOSAL AND REUSE**

The U.S. Army fully supports community planned reuse of the Depot by the community. The DRC submitted the final Memphis Depot Redevelopment Plan to CESAM so the EA could consider the impacts of the proposed reuse actions. Following the proposed uses in the Memphis Depot Redevelopment Plan, the EA addressed a range of high, medium and low reuse intensities. The final Memphis Depot Redevelopment Plan has been appended to the final EA for disposal and reuse. Proposed reuses were cross-referenced to the reuse scenarios addressed in the final EA for disposal and reuse. The following three reuse scenarios were considered in the disposal and reuse EA:

- **High-Intensity Reuse Scenario:** This scenario assumes use at maximum feasible intensity for the Depot property. Under this scenario, more of the total acreage would be used for manufacturing and residential development and less would be used for parks, open space and warehousing.
- **Medium-Intensity Reuse Scenario:** This scenario assumes that each area of the Depot property would be used at a moderate level of intensity. This scenario most reflects the goals of the DRC.
- **Low-Intensity Reuse Scenario:** This scenario assumes that each area would be used at the lowest intensity within a feasible range. Existing open space areas would largely be preserved as open spaces made into parks or devoted to other low-intensity uses. The reuse of warehouses would be maximized because warehousing generally involves fewer vehicle trips and fewer employees than do residential or manufacturing uses.

2.1.4 Disposal/Reuse Progress

The disposal process at the Depot is under way, following disposal process guidelines and in a manner consistent with proposed community reuse goals. To date, the following actions have occurred:

- Closure actions at the Depot began immediately after the BRAC 95 decision and culminated with the cessation of mission operations on September 30, 1997. This was in response to congressional, state and community interest in early reuse of the Depot property.
- Several administration buildings were retained for caretaker staff until the property at the Depot would be available for transfer.

SECTION TWO**PROPERTY DISPOSAL AND REUSE**

- The DA prepared and published a report of excess.
- Federal screening to identify facility uses by other non-DOD entities was completed in March 1996.
- Homeless assistance screening was completed and HUD approved the redevelopment plan in September 1997.
 - This included four military housing units to be used by a local homeless provider and one warehouse (Building 972) to be used by a homeless assistance provider.

2.2 RELATIONSHIP TO ENVIRONMENTAL PROGRAMS

Disposal and reuse activities at the Depot are intimately linked to environmental investigation, restoration and compliance activities for two reasons:

- Federal property transfers to non-federal parties are governed by CERCLA Section 120(h)(3)(B)(i), Contents of Certain Deeds, and
- Residual contamination may remain on certain properties after remedial actions have been completed or put into place, thereby restricting or placing encumbrances on the future use of those properties.

Section 120(h)(3)(B)(i) of CERCLA requires deeds for federal transfer of previously contaminated property to contain a covenant that all remedial actions necessary to protect human health and the environment have been taken. The 1992 CERFA amendment to CERCLA provided clarification to the phrase "has been taken." This clarification stated that all remedial action has been taken if the construction and installation of an approved remedial design has been completed, and the remedy has been demonstrated to the Administrator to be operating properly and successfully. It further stated that the carrying out of long-term pumping and treating or operation and maintenance after the remedy has been demonstrated to the Administrator to be operating properly and successfully does not preclude the transfer of the property. Thus, any required remedial and/or removal response actions must be selected and implemented for such contaminated properties before transfers to private parties can occur. Also, CERCLA requires that deeds for property on which a hazardous substance was

SECTION TWO**PROPERTY DISPOSAL AND REUSE**

stored for more than one year, released, or disposed include disclosure information on the type, quantity and the time at which the storage or release occurred.

The requirement for complying with CERCLA Section 120(h), the possibility of residual contamination at the Depot, and the remediation of the site according to future use are factored into the property disposal and reuse process at the Depot. This is accomplished in the following manner:

- Because the Depot experienced releases of CERCLA hazardous substances, it is subsequently subject to CERCLA transfer restrictions as described above.
- The environmental restoration program at the Depot uses the investigative and restoration processes of the CERCLA remedial action program. These processes include the completion of a Remedial Investigation (RI) and risk assessment according to future land use (commercial and light industrial). The redevelopment plan prepared by MDRA and the description of proposed action and alternatives in the disposal and reuse EA provide the current, best estimation of the future land use scenarios at the Depot.
- The Depot is proceeding with the investigation phase of the environmental restoration program. An RI for OU-1 through OU-4 was completed in 1990, but did not fully define the nature and extent of impacts from hazardous substances releases. The 1990 RI also evaluated human health and ecological impacts at each suspected release site. The baseline risk assessment considered human health and ecological impacts of current and potential on-site and off-site receptors. Currently, RI field investigations continue on the Main Installation and Dunn Field to provide sufficient data for the BCT to make cleanup decisions. Future Feasibility Studies (FS) for the Depot will evaluate the effectiveness of remedial actions in mitigating risk according to the proposed reuses of the property.
- DLA solicited and will continue to solicit input from the community on proposed reuse scenarios and redevelopment plan implementation through communication with the DRC and participation in the Restoration Advisory Board (RAB) process (see Section 3.5). Future additional risk assessments as part of the ongoing RI will consider the most current reuse plans and activities.

SECTION TWO**PROPERTY DISPOSAL AND REUSE**

- The presence of residual contamination at the Depot after closure will be considered in the development of real estate transfer documentation. DLA anticipates that remediation of contaminated groundwater at the Depot may continue until well beyond the Depot's closure date of September 30, 1997. DOD will not transfer land until remediation is complete, or they will sell the land with a Statement of Condition specifying that remedial activities are under way, providing the expected time frame for completion and placing limits on reuse. Easements and conditions will be established to ensure access for DOD and regulators to the leased or conveyed property for remedial action, equipment operation and maintenance, and long-term monitoring.

The strategy and schedule for the Depot presented in this document are designed to streamline and expedite the necessary response actions associated with contaminated parcels identified at the Depot, in order to facilitate the earliest possible transfer and reuse activities. Because of the need to differentiate between areas suitable for transfer and those that are not, the Depot BCT has developed maps showing the environmental condition of property using data from the base-wide EBS (see text and figures in Section 3.4) and subsequent sampling results. The BCT will continue to update and refine the maps showing the environmental condition of property and property suitable for transfer for the Depot as data becomes available and as site restorations are completed.

The requirement for complying with CERCLA Section 120(h) and the possibility of residual contamination are two factors considered during the Depot property transfer and reuse. Table 2-1 summarizes information on the Depot parcels and provides an approximate timetable for transfer by deed of each parcel. The timetable for transfer of property by parcel was developed based on the DRC's priorities for property transfer and an estimated schedule to clean up the parcel. The Depot considers a parcel available for transfer on the date when the associated Finding of Suitability to Transfer (FOST) has been signed by AMC. In order for a FOST to receive EPA and AMC approval, restoration activities must be complete.

Currently, AMC plans to transfer property to the DRC through the economic development conveyance. Because this method of transfer is not from one federal agency to another, the transfer will be governed by CERCLA. Section 120(h)(3)(B)(i) of CERCLA requires deeds for federal transfer of previously contaminated property to contain a covenant that all remedial actions necessary to protect human health and the environment have been taken. This deed requirement applies only to property on which a hazardous substance was stored for one year or more or is known to have been

SECTION TWO**PROPERTY DISPOSAL AND REUSE**

disposed or released. Thus, any required remedial actions and/or removal response actions must be selected and implemented for such contaminated properties before transfer to a non-federal agency can occur.

2.3 PROPERTY TRANSFER METHODS

This section contains a brief description of planned or final transfer decisions in the EA for disposal and reuse as well as the Memphis Depot Redevelopment Plan accepted by the DA in September 1997. The various transfer methods being used or considered in the transfer process at the Depot are described in the sections below. These transfer methods were identified from U.S. Army BRAC disposal protocols established by Public Law 100-526, the Federal Property and Administration Services Act, the Surplus Property Act, the Federal Property Management Regulations and the 1994 Defense Authorization Act. The status of each of the transfer methods is identified. Transfer methods that are not currently being considered but that could be used in future disposal planning actions at the Depot are also identified.

2.3.1 Federal Transfer of Property

Screening of the Depot BRAC parcel for use by other federal agencies was completed in March 1996. No other federal agencies identified a need for the Depot property.

2.3.2 No-Cost Public Benefit Conveyance

State or local government entities may obtain property at no cost or less than fair market value when sponsored by a federal agency for uses that would benefit the public (e.g., health and education, parks and recreation, wildlife conservation, or public health).

As of October 1998, DA screened the Depot properties for eligible state and local interests. Formal requests were received from the Department of Education, Department of Justice, Department of Transportation and the Department of Interior/National Park Service (see Table 2-1).

2.3.3 Negotiated Sale

The U.S. Army may sell the property by negotiation to state or local agencies at fair market value. A sale could also be negotiated with private entities. As of October 1998, no negotiated sales have been initiated on any facilities or property at the Depot.

SECTION TWO**PROPERTY DISPOSAL AND REUSE****2.3.4 Widening of Public Highways**

There are two road widening projects associated with the Depot. Memphis has a project on Hayes Road (adjacent to Dunn Field) between Dunn Avenue and Person Road. Pending remediation of Dunn Field sites adjacent to Hayes Road preclude further consideration for this project. The objective of widening is to eliminate safety hazards and to provide improved roadways for the community. The DRC submitted a request to the Economic Development Agency (EDA), under the U.S. Department of Commerce, to widen "G" Street. This project will include the demolition of two large warehouses, some lesser facilities, and building of main utility corridors along a four lane divided roadway. This project encompasses property on the Depot from Airways Boulevard west to 6th Street. The objective of widening is to enhance traffic safety, improve access and improve utility services. The EDA approved the project in May 1998.

2.3.5 Donated Property

As of October 1998, DA screened excess properties for state and local interests, and no property donations have been initiated on any Depot properties.

2.3.6 Interim Leases

Predisposal use of facilities by a non-U.S. Army entity can be accomplished through the execution of leases, licenses or permits. The Military Leasing Act of 1956 (10 United States Code §2667), as amended, permits the U.S. Army to implement interim leasing of excess facilities if it is in the public interest. Under this provision, the lease cannot exceed five years but may be renewed annually by the U.S. Army for up to five options. A long-term lease may be instituted if it would promote national defense or be in the public interest. Prior to any leasing or permitting, the U.S. Army must complete a Finding of Suitability to Lease (FOSL) documenting that the property is safe to use. Leased properties may be transferred by deed to future owners after disposal decisions are made. To facilitate the reuse of surplus property, and in accordance with DA policy and the Memphis Depot Redevelopment Plan goals, the U.S. Army entered into a master lease with the DRC in September 1997.

2.3.7 Competitive Public Sale

Sale to the public would occur through either an invitation for bids or an auction. As of October 1998, no competitive public sale of facilities or property has been initiated at the Depot.

SECTION TWO**PROPERTY DISPOSAL AND REUSE****2.3.8 Economic Development Conveyance**

The 1994 Defense Authorization Act provides for the conveyance of property to an LRA at or below fair market value using flexible payment terms for recoupment in advance or over time. The economic development conveyance is intended to promote economic development and job creation in the local community. To qualify for this conveyance, an LRA must submit a request to DA describing its proposed economic development and job creation program. The DOD has recognized the DRC as the LRA for the Depot. The DA plans to transfer the majority of Depot property to the DRC through EDC.

2.3.9 Caretaker of Property Until Disposal

Now that the Depot's mission has ceased, utility systems not required for continued Depot operations or interim lessees will be privatized or placed in an inactive caretaker status until the property is transferred to new owners. Army Regulation 210-17, "Inactivation of Installations," requires that "Inactive facilities and areas will be maintained to the extent necessary to ensure, as applicable, weather-tightness, structural soundness, protection against fire and erosion, conservation of natural resources, and the prevention of major deterioration..." with "...the minimum required staffing to maintain an installation in a state of repair that maintains safety, security and health standards." Upon closure, a caretaker cadre of 56 personnel remained at the Depot to meet the requirements of AR 210-17 and PL 500-126 pending transfer of the properties

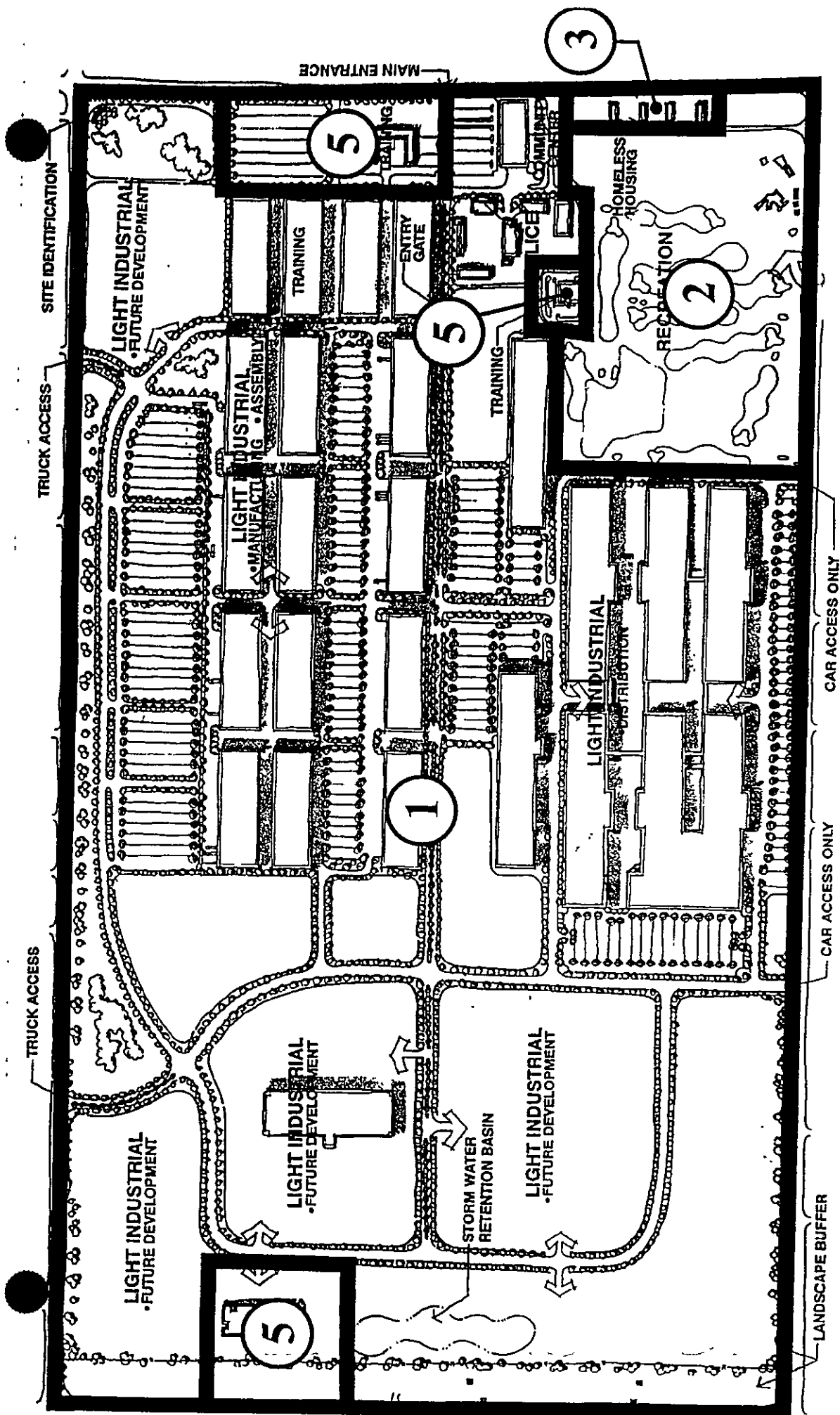


FIGURE 2-1
MEMPHIS DEPOT REDEVELOPMENT PLAN
 Memphis, Tennessee

- 1 Economic Development Conveyance
- 2 Parks & Rec. Public Benefit Transfer
- 3 Homeless Assistance Conveyance
- 4 Public Competitive Sale
- 5 Education Public Benefit Conveyance

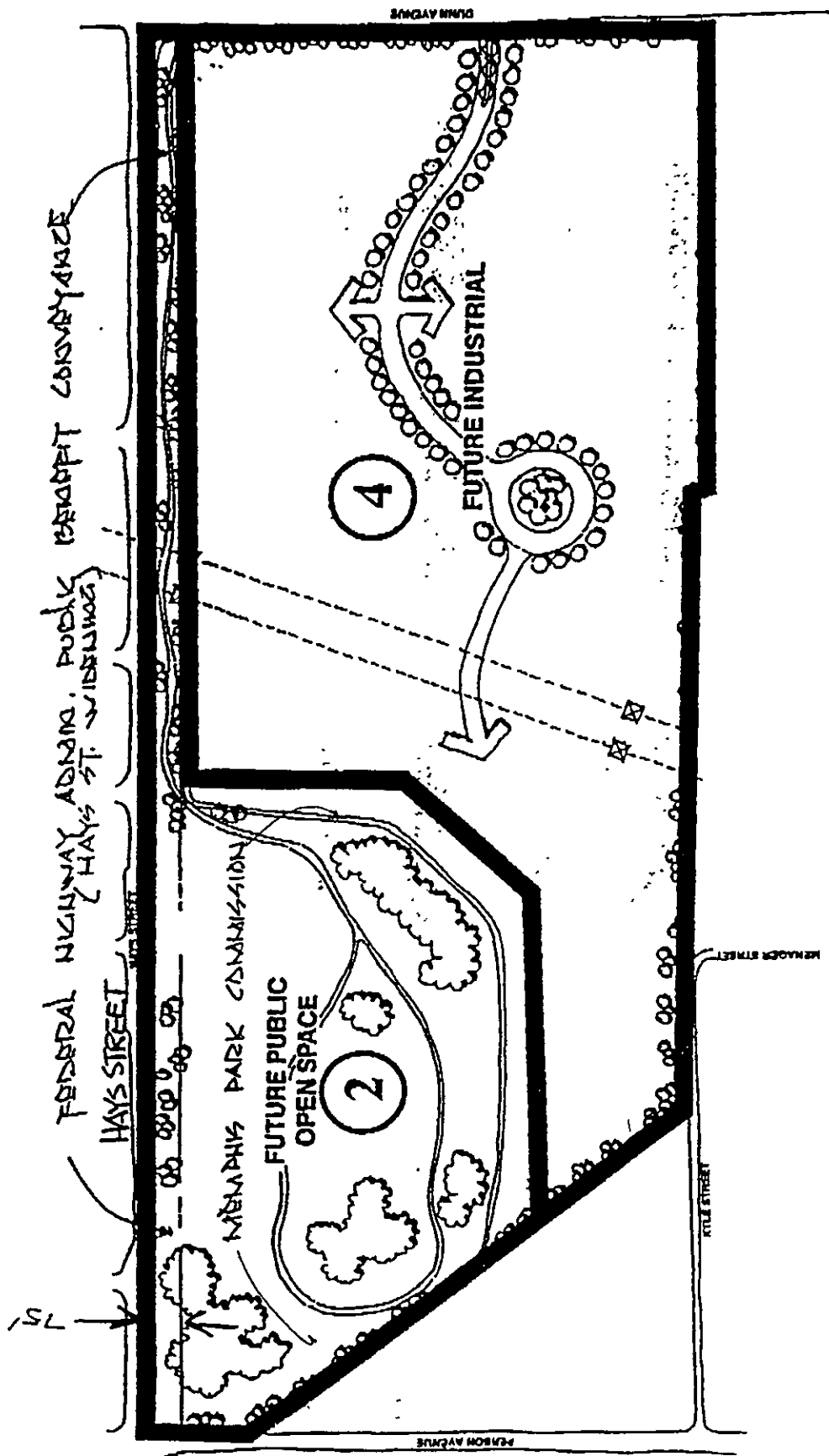


FIGURE 2-1
MEMPHIS DEPOT REDEVELOPMENT PLAN
Memphis, Tennessee

2 of 2

- 1 Economic Development Conveyance
- 2 Parks & Rec. Public Benefit Transfer
- 3 Homeless Assistance Conveyance
- 4 Public Competitive Sale
- 5 Education Public Benefit Conveyance

The Memphis Depot

BRAC Cleanup Plan Version 2 October 1998

TABLE 2-1
SUMMARY OF SUBPARCEL REUSE

SUBPARCEL NUMBER	AREA (acres)	POTENTIAL REUSE DESIGNATION	PROJECTED TRANSFER DATE ^a	TRANSFER MECHANISM	RECIPIENT
1.1	.01	Roadway	March 2000	EDC	DRC
1.2	.01	Security Gate	March 2000	EDC	DRC
1.3	<.01	TBD	March 2000	EDC	DRC
1.4	<.01	TBD	March 2000	EDC	DRC
1.5	.31	Office/College	March 2000	PBC (DoED)	State Tech Institute
1.6	.02	TDB	March 2000	EDC	DRC
1.7	<.01	TBD	March 2000	EDC	DRC
1.8	15.20	TBD	November 2003	EDC	DRC
2.1 - 2.7	2.38	Residential	March 2000	PBC (HUD)	MIFA
3.1 - 3.4	.14	Recreation	March 2000	PBC (DoI/NPS)	Memphis Park Commission
3.5 - 3.11	41.44	Recreation/Golf Course/Stormwater drainage	November 2003	PBC (DoI/NPS)	Memphis Park Commission
4.1 - 4.4, 4.8, 4.11 - 4.13	1.30	Police Precinct	March 2000	PBC (DoJ)	Memphis Police Department
4.5 - 4.7, 4.9, 4.10	5.36	Police Precinct	November 2003	PBC (DoJ)	Memphis Police Department
5.1	.49	Police Precinct	March 2000	PBC (DoJ)	Memphis Police Department
5.2	1.5	Education	November 2003	PBC (DoED)	State Tech Institute
6.1	4.4	Office/Light Industrial	November 2003	EDC	DRC
6.2 - 6.4	8.4	Office/Light Industrial	March 2000	EDC	DRC
7.1	1.5	Office/Light Industrial	November 2003	EDC	DRC
7.2	2.8	Office/Light Industrial	March 2000	EDC	DRC
8.1	6.4	Office/Light Industrial	November 2003	EDC	DRC
8.2 - 8.5	11.2	Office/Light Industrial	March 2000	EDC	DRC
9.1	6.3	Office/light Industrial	November 2003	EDC	DRC
9.2 - 9.5	11.2	Office/Light Industrial	March 2000	EDC	DRC
10.1, 10.4, 10.5, 10.6	11.2	Office/Light Industrial	March 2000	EDC	DRC
10.2, 10.3	8.95	Office/Light Industrial	November 2003	EDC	DRC
11.1	4.6	Office/Light Industrial	November 2003	EDC	DRC
11.2 - 11.4	8.4	Office/Light Industrial	March 2000	EDC	DRC
12.1	1.7	Office/Light Industrial	November 2003	EDC	DRC
12.2	2.8	Office/Light Industrial	March 2000	EDC	DRC

TABLE 2-1
SUMMARY OF SUBPARCEL REUSE

SUBPARCEL NUMBER	AREA (acres)	POTENTIAL REUSE DESIGNATION	PROJECTED TRANSFER DATE*	TRANSFER MECHANISM	RECIPIENT
13.1 - 13.4	5.5	Office/Light Industrial/Demolition	March 2000	EDC	DRC
13.5	3.9	Office/Light Industrial	November 2003	EDC	DRC
14.1	<.01	TBD	March 2000	EDC	DRC
14.2	10.5	TBD	November 2003	EDC	DRC
15.1, 15.2	01	Security Gate/Roadway	March 2000	EDC	DRC
15.3 - 15.6	47.79	Light Industrial/Demolition	November 2003	EDC	DRC
16.1	2.8	Roadway	November 2003	EDC	DRC
16.2	5.5	Demolition/Roadway	March 2000	EDC	DRC
17.1, 17.3	5.59	Demolition/Roadway	March 2000	EDC	DRC
17.2	3.7	Roadway	November 2003	EDC	DRC
18.1 - 18.2	6.6	Office/Light Industrial	March 2000	EDC	DRC
19	2.81	Parking/Light Industrial/Demolition	November 2003	EDC	DRC
20.1 - 20.4	15.46	Office/Light Industrial	March 2000	EDC	DRC
20.5 - 20.6	26.90	Office/Light Industrial	November 2003	EDC	DRC
21.1 - 21.4	15.93	Office/Light Industrial	March 2000	EDC	DRC
21.5	32.9	Office/Light Industrial	November 2003	EDC	DRC
22	1.24	Office/Light Industrial	November 2003	EDC	DRC
23.1 - 23.5	.33	Office/Parking	March 2000	EDC	DRC
23.6, 23.9 - 23.11	26.75	Parking/Roadway	November 2003	EDC	DRC
24	18.5	Light Industrial/Parking/Roadway/Demolition	November 2003	EDC	DRC
25.1	6.2	Light Industrial/Demolition	March 2000	EDC	DRC
25.2	12	Light Industrial/Demolition	November 2003	EDC	DRC
26.1	4.7	Light Industrial/Demolition	November 2003	EDC	DRC
26.2	6.2	Light Industrial/Demolition	March 2000	EDC	DRC
27.1	4.4	Light Industrial/Demolition	November 2003	EDC	DRC
27.2	6.3	Office/Light Industrial	March 2000	EDC	DRC
28.1	6.0	Light Industrial	March 2000	EDC	DRC

TABLE 2-1
SUMMARY OF SUBPARCEL REUSE

SUBPARCEL NUMBER	AREA (acres)	POTENTIAL REUSE DESIGNATION	PROJECTED TRANSFER DATE ^a	TRANSFER MECHANISM	RECIPIENT
28.2	6.31	Light Industrial/Demolition	November 2003	EDC	DRC
29.1	.01	Light Industrial/Demolition	March 2000	EDC	DRC
29.2, 29.3	30.53	Light Industrial/Parking	November 2003	EDC	DRC
30.1	1.4	Office/College	March 2000	PBC (DoED)	State Tech Institute
30.4	1.4	Light Industrial/Demolition	March 2000	EDC	DRC
30.2, 30.3, 30.5	6.97	Light Industrial/Parking	November 2003	EDC	DRC
31	23.7	Light Industrial/Demolition	November 2003	EDC	DRC
32.1, 32.2	8.2	Office/Light Industrial	March 2000	EDC	DRC
32.3	2.3	Light Industrial/Demolition	November 2003	EDC	DRC
33.1 - 33.6, 33.10 - 33.11	.66	Light Industrial/Demolition	March 2000	EDC	DRC
33.7 - 33.9	39.58	Light Industrial/Demolition	November 2003	EDC	DRC
34	6.7	Office/Light Industrial	March 2000	EDC	DRC
35	9.57	Light Industrial	November 2003	EDC	DRC
36 (along eastern fenceline)	0.50	Roadway	March 2000	PBC (DOT)	Memphis Highway Administration
36 (northeast corner)	TBD	Recreation	March 2000	PBC (DOI)/NPS	Memphis Park Commission
36 (remaining acreage)	TBD	TBD	March 2003	EDC	DRC

Note:

DRC: Depot Redevelopment Corporation
TBD: To be determined
EDC: Economic Development Conveyance
PBC: Public Benefit Conveyance
DoED: Department of Education
DoJ: Department of Justice
DoI: Department of Interior

NPS: National Park Service
HUD: Department of Housing and Urban Development
DoT: Department of Transportation
MIFA: Memphis Inter Faith Association

- a. The projected transfer date is the date the parcel has completed the Finding of Suitability to Transfer (FOST) approval process through the Army Materiel Command.

SECTION THREE INSTALLATION-WIDE ENVIRONMENTAL PROGRAM STATUS

3.0 INSTALLATION-WIDE ENVIRONMENTAL PROGRAM STATUS

This section summarizes the current status of environmental restoration projects and ongoing compliance activities at the Depot. It also summarizes the status of the cultural and natural resources program, community involvement to date, and the environmental condition and suitability for transfer of the Depot facility.

3.1 ENVIRONMENTAL PROGRAM STATUS

The BRAC Environmental Coordinator is responsible for establishing and maintaining all environmental programs, compliance programs and remediation efforts at the Depot. These programs are executed by the Depot's Environmental Division. Three principal U.S. Army components assist the Depot's effort: CEHNC provides support in areas including RI/FS, remedial design, remedial action and compliance programs; natural and cultural resource management programs are supported by USACE, Fort Worth District; and CESAM conducts BRAC activities at the installation and provides support for remedial action, remedial design and compliance. The Depot is a National Priorities List site. Regulatory oversight for the environmental restoration program is shared by TDEC and EPA.

Environmental restoration programs at the Depot are currently conducted under the BRAC and non-BRAC environmental restoration programs in compliance with DLA, DA, DOD, local, state and federal statutes and regulations and in accordance with a Federal Facilities Agreement. Environmental compliance programs at the Depot are conducted in compliance with applicable DA and DOD regulations and local, state and federal regulatory programs, including those administered under the Clean Air Act, Clean Water Act, Safe Drinking Water Act, RCRA, Toxic Substances Control Act and SARA.

An environmental restoration program has been in place at the Depot for approximately 15 years. An overview of some of the major milestones in the program and associated compliance programs for the installation is provided below.

- Several environmental assessments were conducted at the Depot, beginning with an initial Installation Assessment completed in 1981.
- The Depot is listed on the National Priorities List. A Federal Facilities Agreement was signed by the Depot, EPA and TDEC.

SECTION THREE INSTALLATION-WIDE ENVIRONMENTAL PROGRAM STATUS

- A RCRA Facility Assessment (RFA) completed in 1990 identified 49 solid waste management units and eight areas of concern.
- Multiple investigations have been completed or are ongoing at the Depot. Four CERCLA OUs have been designated installation-wide
- Several early actions and interim actions have been completed at the Depot. They include dieldrin-, pentachlorophenol- and petroleum-contaminated soil removals, underground and above ground storage tank removals and construction of the groundwater pump and discharge system at Dunn Field.
- The Depot has instituted programs to ensure compliance with other environmental programs. The Depot has an ongoing program to maintain USTs and aboveground storage tanks (ASTs).
- In 1995, the Generic Remedial Investigation/Feasibility Study Work Plan was prepared to indicate how the investigation and study would be accomplished; RI/FS field sampling plans were approved by EPA and TDEC for each OU (CH2M Hill 1995c, 1995d, 1995e, 1995f) and the Screening Sites (CH2M Hill 1995h), and a draft no-further-action report was prepared for 13 sites (CH2M Hill 1994).
- In 1996, a final ROD was approved by EPA for an Interim Remedial Action (IRA) for Groundwater at Dunn Field (CH2M Hill 1995g)
- In 1997, sampling of RI, Screening and BRAC sites occurred on the Main Installation. The BCT began reviewing this sampling data and changing the environmental condition of property categories for subparcels.
- In 1998, construction of the IRA pump and discharge system was completed and the system became operational. Addendums to the 1995 field sampling plans were completed for OUs 2, 3 and 4 as well as for groundwater at the Main Installation.

3.1.1 Restoration Sites

Past operations at the Depot have included the storage of various hazardous substances as well as the generation of various types of wastes from maintenance operations and their disposal and/or release

SECTION THREE INSTALLATION-WIDE ENVIRONMENTAL PROGRAM STATUS

across the installation. Efforts related to these sites under the environmental restoration program are described in this section.

The Depot was placed on the National Priorities List and must fulfill requirements under CERCLA and the NCP. The remedial process under CERCLA and the NCP requires the preparation of an RI/FS to determine the nature and extent of contamination, to evaluate public health risks, and to screen potential remedial actions. The RI/FS process is managed by the BCT. The Depot and CEHNC implement BCT decisions regarding the RI/FS process. To assist further investigations, representatives of the Depot, CEHNC, EPA, and TDEC divided the facility into four potential OUs, as shown on Figure 1-2 and listed below.

- OU-1: Dunn Field
- OU-2: Southwest Quadrant, Main Installation
- OU-3: Southeastern Watershed and Golf Course, Main Installation
- OU-4: North-Central Area, Main Installation

The following general criteria were used to define the OUs

- Geographic proximity of sites
- Similar contaminants of concern previously identified
- Similar investigation methods
- Scope and complexity of investigation
- Results of previous site studies
- Potential for off-site migration and exposure
- Relative threat to the Memphis drinking water supply
- Suspected mobility of contaminants

SECTION THREE INSTALLATION-WIDE ENVIRONMENTAL PROGRAM STATUS

In addition to the four OUs, sources of potential contamination at the Depot are further grouped into RI sites, proposed early removal (ER) sites, screening sites, proposed no further action (NFA) sites and Chemical Warfare Management Plan (CWMP) sites.

Remedial investigation sites are those sites for which an RI/FS will be conducted to evaluate the nature and extent of contamination and the risk to human health and the environment and to screen potential cleanup actions. Detailed field sampling plans have been developed for these sites for each OU. These sites will be characterized based on sampling and analysis results (CH2M Hill 1995b).

The goal of the ER program at the Depot is to remove contamination at selected ER sites as soon as possible, thus expediting clean up of potential sources of contamination. This concept uses an observational approach that includes a flexible design, in-process monitoring and as-needed adjustments throughout the restoration process. Certain elements of information are needed to reasonably scope, specify and identify contingencies for monitoring and controlling the work, no matter how flexible the design is. This essential design information must at least identify, to a reasonable degree, the location and size of the site, the scope of the work, the presence of obstructions, and special design and safety concerns for which the contractor must plan and bid (CH2M Hill 1995i).

Screening sites are those sites where additional information is needed to determine if an RI or NFA determination is warranted. The screening sites identified in the RFA (A.T. Kearney, Inc. 1990) and a 1990 remedial investigation report (Law Environmental 1990b) are: (1) areas where hazardous substances were managed and where there is potential for substance releases to have occurred, or (2) minor waste disposal areas used during past operations, based on historical records. A wide variety of sites are included in this category: stormwater drainage ditches, fuel storage areas, known and suspected spill areas, areas where hazardous substances were used and may have been released and areas where pesticides have been applied (railroad tracks and vegetation).

Thirteen sites are proposed for NFA for one or more of the following reasons:

- Hazardous substances were never managed or disposed of at the site
- The site is not a threat for releases because of past waste management activities
- Previous sampling results have shown no observed contamination

SECTION THREE INSTALLATION-WIDE ENVIRONMENTAL PROGRAM STATUS

- Extensive prior removal or remediation activities were conducted
- Current operational and structural features make NFA probable

A draft proposed NFA report was prepared by the Depot (CH2M Hill 1994) that has not yet received regulatory approval. A draft Basis for No Further Action Recommendations document was prepared in 1998 and is currently under review by EPA and TDEC. This report documents the available information on these sites and the rationale for the proposed NFA recommendation.

There are four documented locations within Dunn Field where chemical warfare material (CWM) was disposed. The documented CWM sites of concern at Dunn Field are listed below:

- Mustard bomb decommissioning site (Site 24)
- Ashes and metals burial site (Site 9)
- Chemical Agent Identification Sets (CAISs) burial site (Site 1)
- Food burial site reported to contain CAISs (Site 86)

Because CWM was disposed at Dunn Field at known and unknown locations, and because of the proximity of Dunn Field to residences, the Depot has requested assistance from agencies responsible for CWM investigation and disposition (1) CEHNC, (2) the U.S. Army Program Manager for Chemical Demilitarization and (3) the U.S. Army Technical Escort Unit.

These three agencies and the Depot have developed a strategy to evaluate the presence of CWM at the facility and to investigate sites where the potential for CWM exists (CH2M Hill 1995c). The strategy selected to accommodate both the CWM and the hazardous waste components of the project includes the three-phased approach described below.

1. Conduct an initial investigation focused on the known and suspected CWM sites at the facility to evaluate and delineate the presence, nature and extent of potential CWM contamination at Dunn Field and to provide information for CEHNC to prepare a Site Safety Submission for review by the Department of Health and Human Services. The field investigation activities were conducted by CEHNC in 1998.

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2. Prepare an addendum to the Remedial Investigation OU-1 Field Sampling Plan and Screening Site Field Sampling Plan to include data resulting from the CWM field investigation.
3. Conduct necessary CWM removal actions based on the results of the field investigation concurrent with remedial investigation and screening site field work at Dunn Field.

The following sections describe the potential contamination at the Depot by OU. For purposes of this report, references to site numbers correspond to the 1995 Generic RI/FS Work Plan site numbers (CH2M Hill 1995b).

OU-1: Dunn Field

Dunn Field, OU-1, is an open, unpaved area located north of and across Dunn Road from the Main Installation. Dunn Field is the only known and documented burial area on the Depot. Most of the potential contamination sites are associated with burial sites that may require similar investigation techniques. Operable Unit 1 includes the potential contamination sites shown on Table 3-1 and Figure 3-1

Installation records indicate that various types and quantities of wastes were buried at numerous sites in the northwest quadrant of Dunn Field. Twenty-five sites have been identified where the burial of wastes has been documented by the Depot, documented in other environmental studies or discovered during the 1990 remedial investigation (Law Environmental 1990b). Soil samples collected in Dunn Field during previous investigations indicated the presence of pesticides at concentrations up to 0.48 milligrams per kilogram (mg/kg) and polycyclic aromatic hydrocarbons (PAHs) at concentrations up to 220 mg/kg. Groundwater monitoring wells were installed in the uppermost (fluvial) aquifer in the area by the U.S. Army Environmental Hygiene Agency in 1982 and by Law Environmental during RI fieldwork conducted from 1989 through 1990. Groundwater monitoring data collected during the 1990 RI fieldwork and presented in the 1990 RI report (Law Environmental 1990b) have shown levels of volatile organic compounds (VOCs) at concentrations up to 5.1 milligrams per liter (mg/L) and metals at concentrations up to 35 mg/L (including chromium, lead, and mercury) that suggest contamination has migrated to groundwater. The individual source or sources of contamination have not been determined.

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During the 1990 RI fieldwork, monitoring wells were installed in the Fluvial Aquifer and the Memphis Sand Aquifer. Contaminants of concern in groundwater collected from the Dunn Field monitoring wells screened in the Fluvial Aquifer include the following:

- Volatile organic compounds
 - Carbon tetrachloride
 - 1,2-Dichloroethylene
 - 1,1,2,2-Tetrachloroethane
 - 1,1-Dichloroethylene
 - Tetrachloroethylene
 - Trichloroethylene
- Metals
 - Arsenic
 - Barium
 - Chromium
 - Lead
 - Nickel

The contaminants of concern found in the Fluvial Aquifer beneath Dunn Field were detected at concentrations above the established maximum contaminant levels and maximum contaminant level goals over the course of three sampling efforts conducted in 1989, 1990 and 1992. Contaminants of concern in the Fluvial Aquifer have not been detected in the Memphis Sand Aquifer groundwater samples.

In 1990, as part of Law Environment's remedial investigation, a preliminary risk assessment was performed. Potential exposure points for contaminated groundwater sources from the Dunn Field area were identified as:

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- Ingestion of groundwater through the public water supply
- Contact with potable water during bathing
- Inhalation of vapors from VOCs in potable water during household use

The Fluvial Aquifer, which is not used as a potable water supply, is the only aquifer where contaminants have been detected. However, locally the Fluvial Aquifer may be in hydrologic communication with the Memphis Sand Aquifer. This potential communication could provide a pathway for contaminants to migrate downward to the Memphis Sand Aquifer, the drinking water aquifer for the city of Memphis.

In 1993, an engineering design report was prepared for the Depot. The intent of the report was to meet all requirements of the engineering evaluation/cost analysis (EE/CA) under CERCLA and the NCP for a non-time critical removal. The report evaluated a variety of technologies previously presented in the 1990 Law Environmental RI/FS (Law Environmental 1990a, 1990b) that would treat contaminated groundwater in the Fluvial Aquifer to prevent human exposure.

In 1996, a final Record of Decision for the Interim Remedial Action of the Groundwater at Dunn Field (OU-1) was prepared for the Depot (CH2M Hill 1995g). The Depot received EPA concurrence on this ROD in May 1996.

The major components of the selected interim remedial action for groundwater at OU-1 include the following:

- Evaluation of aquifer characteristics that may include installation of a pump test well (a pump test was performed in 1992);
- Installation of additional monitoring wells to locate the western edge of the groundwater plume (the Depot completed this action in February 1996 with the addition of 16 monitoring wells);
- Installation of recovery wells along the leading edge of the plume (The recovery wells were installed along the western edge of Dunn Field to create a hydraulic barrier to prevent further migration and to remove contaminated groundwater. EPA, during BCT meeting IRA design discussions and via design reviews, approved the well

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locations. Construction was completed in September 1998 and the system is expected to be fully operational in October 1998);

- Obtaining a discharge permit for disposal of recovered groundwater to the T.E. Maxon Wastewater Treatment Plant publicly-owned treatment works or municipal sewer system (Permit obtained and pump system discharge connection to sanitary sewer completed in 1998);
- Operation of the system of recovery wells until the risk associated with the contaminants is reduced to acceptable levels or until the final remedy is in place;
- Chemical analysis to monitor the quality of the discharge in accordance with the city discharge permit requirements (the permit will include parameters to be monitored and frequency of monitoring);

Pretreatment of groundwater, if the water fails to meet discharge limitations established in the discharge permit.

Follow-up activities include characterizing and monitoring the groundwater plume migration. As the plume continues to be characterized, subsequent action may be taken to provide long-term definitive protection, including remediation of source areas.

OU-2: Southwestern Quadrant, Main Installation

Operable Unit 2 is geographically located in the southwestern quadrant of the Main Installation area of the Depot and is characterized primarily as an industrial area where maintenance and repair activities took place. The OU-2 boundaries are based on the geographic proximity of potential contamination sites and the maintenance activities that occurred. OU- 2 includes the potential contamination sites shown on Table 3-1 and Figure 3-2.

One soil boring (yielding three samples) and 15 surface soil samples were collected in OU-2 during previous investigations. These samples were collected in an effort to better characterize the former hazardous materials recoupment area, the maintenance shop and the sandblasting/painting areas. In general, sample analysis detected the presence of pesticides (up to 7.4 mg/kg), PCBs (up to 10 mg/kg) and PAHs (up to 8.1 mg/kg) at the sandblasting/painting area and pesticides (up to 0.052 mg/kg), solvents (up to 0.11 mg/kg) and PAHs (up to 18 mg/kg) in the area of the maintenance shop.

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Groundwater investigations in OU-2 have indicated the presence of solvents (up to 0.039 mg/L) and metals (up to 0.75 mg/L).

Additional soil and groundwater sampling will occur during 1998 to further define the source, nature and extent of groundwater contamination at the Main Installation. Addendums to the OU-2 Field Sampling Plans were provided to EPA and TDEC in August 1998 for review and comment.

During late calendar year 1996 and early 1997, sampling and analysis was conducted as prescribed by the 1995 OU-specific RI field sampling plans, the 1995 Screening Sites sampling plan and the Sampling and Analysis Recommendations report (Woodward-Clyde, 1997) prepared as part of the EBS process. Because the facility was divided into subparcels to facilitate property transfer, these sampling results are organized by subparcel and may be found in Section 3.4, Environmental Condition of Property. OU-2 consists of the following parcels in their entirety: 24, 25, 26, 27, 28 and 35. OU-2 consists of portions of parcels 23 and 29.

OU-3: Southeastern Watershed and Golf Course, Main Installation

The boundaries of Operable Unit 3 are based on its geographic location and a desire to encompass the entire southeastern watershed. OU-3 contains the only surface water bodies on the Depot, so it was practical to keep the majority of the sampling and analysis associated with surface water and sediments within the same OU. OU-3 includes the potential contamination sites shown on Table 3-1 and Figure 3-3.

In general, soil samples collected in OU-3 (seven surface soil samples) were insufficient to characterize individual sites or sources. Groundwater analysis in OU-3 detected VOCs (up to 0.01 mg/L) and metals (up to 1.96 mg/L). Surface water and sediment samples were collected from Lake Danielson, the golf course pond and from storm drainage ditches. Surface water samples collected in the drainageways generally indicated slightly higher levels of pesticides (up to 0.0022 mg/L) than did samples from either Lake Danielson or the golf course pond. Sediments collected from both Lake Danielson and the golf course pond indicated the presence of pesticides (up to 2.9 mg/kg) and PAHs (up to 2.4 mg/kg).

During late calendar year 1996 and early 1997, sampling and analysis was conducted as prescribed by the 1995 OU-specific RI field sampling plans, the 1995 Screening Sites sampling plan and the Sampling and Analysis Recommendations report (Woodward-Clyde, 1997) prepared as part of the EBS process. Because the facility was divided into subparcels to facilitate property transfer, these

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sampling results are organized by subparcel and may be found in Section 3.4, Environmental Condition of Property. OU-3 consists of the following parcels in their entirety: 1, 2, 3, 4, 5, 6, 7, 8, 9, 16, 17, 18, 19, 20, 21, 22 and 34. OU-3 consists of portions of parcels 10, 11 and 23.

OU-4: North-Central Area, Main Installation

Operable Unit 4 is located in the north-central section of the Main Installation. The boundaries of OU-4 are based on the material storage activities that occurred and the central location of the area. In addition to the potential contamination site investigations being conducted at OU-4, an investigation of the groundwater at the Main Installation and of the potential communication in OU-4 between the Fluvial Aquifer and the Memphis Sand Aquifer is currently ongoing. Operable Unit 4 includes the potential contamination sites shown on Table 3-1 and Figure 3-4.

The most prominent feature of OU-4 is the former hazardous materials warehouse (Building 629), designated as Site 57. Pesticides (up to 59 mg/kg), PAHs (up to 280 mg/kg) and VOCs (up to 970 mg/kg) were detected in soil samples near Site 57 during the 1990 RI (Law Environmental 1990b). OU-4 also contained the former pentachlorophenol dip vat area sites (near Building 737). Remediation conducted during 1985 and 1986 at this site included the removal of the pentachlorophenol dipvat, associated underground storage tank and surrounding soils. This area was then used for storage and mixing of pesticides, herbicides and insecticides (Building 737) as well as storage of transformers (PCB and non-PCB containing) used for facilities maintenance.

Surface and subsurface soil samples collected and analyzed in 1990 revealed the presence of pesticides (up to 0.079 mg/kg) and solvents (up to 0.005 mg/kg). Surface and subsurface soil samples were also collected from areas where past spills had occurred. Sample results indicated the presence of PAHs (up to 17 mg/kg), pesticides (up to 5.9 mg/kg) and metals (up to 2,420 mg/kg). The results of groundwater samples collected in OU-4 indicated the presence of solvents (up to 0.12 mg/L), pesticides (up to 0.0021 mg/L) and metals (up to 0.91 mg/L).

During late calendar year 1996 and early 1997, sampling and analysis was conducted as prescribed by the 1995 OU-specific RI field sampling plans, the 1995 Screening Sites sampling plan and the Sampling and Analysis Recommendations report (Woodward-Clyde, 1997) prepared as part of the EBS process. Because the facility was divided into subparcels to facilitate property transfer, these sampling results are organized by subparcel and may be found in Section 3.4, Environmental Condition

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of Property. OU-4 consists of the following parcels in their entirety: 12, 13, 14, 15, 30, 31, 32, and 33. OU-4 consists of portions of parcels 10, 11, and 29.

3.1.2 Installation-Wide Source Discovery and Assessment Status

Several installation-wide assessments have been conducted to identify the presence of contamination and contamination sources at the Depot, as discussed in Section 3.1.1. Spill response sites are potential contamination sites where hazardous substances were spilled during handling, or storage containers leaked. Table 3-2 summarizes the sites that were identified through a review of the Spill Response Checklists provided by Depot personnel and in the database search report.

The status of most of these sites is addressed in Section 3.1.1. However, accidental spills or leaks of hazardous substances have occurred since the RFA was completed in 1990. The most recent assessments, on-site visual inspections and a records review were conducted in 1996 as part of the BRAC EBS process. The additional sources of potential contamination are listed in Table 3-3.

Several other installation-wide surveys related to environmental compliance programs have also been conducted at the Depot. These include asbestos, PCB, radon, and radiological surveys. The results of these surveys and the current status of these environmental programs are described in Section 3.2.

Bottom-up reviews conducted by the BCT as part of the BRAC environmental restoration process have revealed the following additional areas of concern: soil at the former military family housing units, soil at the golf course and soil south of Building 873. These new areas of concern were addressed according to the strategy described in Section 4.

3.2 COMPLIANCE PROGRAM STATUS

Compliance activities at the Depot are conducted in coordination with the Depot's environmental restoration program. General compliance activities address the management of USTs, hazardous materials, asbestos, PCBs, and air and water discharges. Compliance-related restoration actions at the Depot include removal of USTs and abatement of friable asbestos.

The statutory/regulatory basis for environmental restoration activities at the Depot is CERCLA. Compliance-related management and restoration activities are differentiated from CERCLA because

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they are regulated primarily under other statutory programs. These include RCRA Subtitles C, D and I, the Clean Water Act, Clean Air Act, Toxic Substances Control Act and NEPA.

Compliance actions at the installation can be divided into two categories: (1) current mission- and operational-related compliance projects and (2) closure-related compliance projects. Mission- and operational-related projects are those which have been or would be conducted for the normal operation of the Depot and are unrelated to activities necessitated by property closure under BRAC. Conversely, closure-related compliance projects are those conducted specifically as a result of environmental compliance and restoration activities related to BRAC closure and property transfer.

Several compliance-related activities at the Depot were completed in order to reduce or eliminate potential contamination at the Depot. These actions involved UST removal/closure, PCB transformer removal and asbestos abatement.

The Depot has maintained various permits and registrations with federal, state and local agencies in compliance with environmental regulations. These include UST permits, hazardous waste generator activities permit, an industrial wastewater discharge agreement, a stormwater permit and air emission permits. The stormwater permit and industrial wastewater discharge agreement are still active at the Depot. The last of the Depot's air permits were closed in May 1997. Closure processes were initiated for the Depot's hazardous waste generator/storage permit in 1997 and for the remaining two UST permits in 1998. The Depot does not plan to transfer permits to future tenants, but will address this issue if desired by future tenants.

A more detailed description of the various environmental compliance programs being implemented for the Depot is provided in the following subsections.

3.2.1 Storage Tanks

Both USTs and ASTs at the Depot have historically been used to store petroleum products for heating purposes, vehicle and equipment fueling, and maintenance operations. Compliance and environmental restoration activities related to these storage tanks are described in this section.

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USTs

The EPA has delegated the management of the RCRA UST program to the State of Tennessee. The TDEC, Division of Underground Storage Tanks, has primary responsibility for implementation of the state UST program. Two USTs are currently regulated under the TDEC program.

Tank fitness testing was performed on installation USTs in 1993. Based on results of tank tightness and associated piping tightness tests and a review of current and future mission requirements at the depot, all but two regulated USTs on the Depot were removed or closed in place. All soil contamination discovered during removal/closure of the tanks was removed.

In 1998, the two remaining regulated USTs were removed. Closure applications are currently under review by TDEC.

A complete inventory of the USTs on the Depot is provided in Table 3-4. The table includes information on the location, size, contents and status of each UST.

ASTs

The AST compliance programs at the Depot are conducted under federal requirements including 40 Code of Federal Regulations (CFR) Parts 110, 112 and 116, and TDEC oil pollution prevention regulations.

There are five ASTs present on the Depot. An inventory of the ASTs on the facility including tank size, contents and status is provided in Table 3-5.

In compliance with 40 CFR Part 112 and TDEC oil pollution regulations, the Depot maintains a spill prevention, control and countermeasures (SPCC) plan. The SPCC plan identifies the location of storage areas and outlines control measures to be taken in the event that a release should occur.

3.2.2 Hazardous Substance Management

Maintenance activities conducted on the Depot involve the management of a variety of hazardous substances. These substances include solvents, battery acid, paints and thinners. Small amounts of pesticides, groundskeeping chemicals, boiler treatment chemicals, janitorial supplies, and other hazardous substances are also used at the Depot.

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Hazardous substances present at the Depot are managed in compliance with federal requirements outlined in the Emergency Planning and Community Right-to-Know Act, Executive Order 12385, the SPCC requirements in 40 CFR Parts 110 and 112, Defense Logistics Agency memo (DLAM) 6050.1, and other applicable federal, state and local regulations.

Extremely hazardous substances as specified in SARA, Title II, Section 302, were stored in sufficient quantities at the Depot to require reporting under SARA Title III, Section 312 (Tier reporting), and SARA Title III, Section 313 (Toxic Chemical Release Form R reporting).

The Depot maintains material safety data sheets as required by the Occupational Safety and Health Administration (OSHA) for all hazardous substances used by Depot personnel.

Use and storage of operations-related hazardous substances decreased due to closure of the Depot. Prior to closure on September 30, 1997, the Depot conducted close-out survey program established for facilities being vacated. Hazardous substances found abandoned during these close-out surveys were identified, and arrangements were made for the proper disposal of the materials in compliance with regulatory requirements.

Mission-related hazardous substances were transferred from the Depot to other DLA storage depots or were turned into the DRMO for proper disposal.

Since closure, mission operations have ceased, but facilities maintenance activities continue requiring a few hazardous substances such as paint and boiler chemicals. These are stored in accordance with all applicable federal, state and local regulations as well as DLA guidance.

3.2.3 Lead-based Paint

Lead-based paint (LBP) at the Depot is currently managed in accordance with the DOD memorandum entitled "Asbestos, Lead Paint, and Radon Policies at BRAC Properties," dated October 31, 1994. The DOD policy related to LBP at BRAC properties was developed to comply with Title X (The Residential Lead-Based Paint Hazard Reduction Act of 1992) of Public Law 102-550. Title X applies to BRAC properties to be transferred after January 1, 1995. The DOD policy specifies the following:

- Target housing is defined as "any U.S. Army housing constructed before 1978 in which any child less than 6 years of age resides or is expected to reside."
- Target housing constructed after 1960 and before 1978 must be inspected for LBP and LBP hazards. The results of the inspection must be provided to prospective purchasers or transferees of the BRAC subparcel, identifying the presence of LBP and LBP hazards on a surface-by-surface basis. In addition, prospective transferees must be provided a lead hazard information pamphlet and the contract for sale or lease must include a lead warning statement.
- Target housing constructed on or before 1960 must be inspected for LBP and LBP hazards, and such hazards must be abated. There is no federal LBP hazard abatement requirement for such property. The results of the LBP inspection and a description of the abatement measures taken must be provided to prospective purchasers or transferees of the BRAC subparcel. Prospective transferees must also be provided with the lead hazard information pamphlet, and the contract for transfer must include a lead warning statement.

A comprehensive LBP survey was conducted at the Depot in 1995. Lead-based paint abatement occurred at the former military family housing area in 1997 and 1998.

3.2.4 Hazardous Waste Management

Hazardous waste compliance programs at the Depot are conducted under DLAM 6050.1 and the federal requirements found in RCRA Subtitle C, 40 CFR 260 through 269, 40 CFR 117, 49 CFR 171 et seq. and TDEC hazardous waste management rules. The EPA has delegated responsibility for the RCRA Subtitle C program to TDEC. The state program is administered by the TDEC Division of Solid Waste Management.

The Depot was classified as a large quantity generator of hazardous waste (producer of 1,000 kilograms or more of hazardous waste or more than 1 kilogram of acutely hazardous waste per month). The Depot has been reclassified as a small quantity generator and continues to operate under EPA identification number TN4210020570.

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The Depot's waste management practices are conducted in accordance with the installation hazardous waste management plan, which was last revised in January 1996. The plan identifies responsibilities and outlines operational requirements for the storage, disposal, treatment and transportation of hazardous waste.

There are no over-90-day hazardous waste storage locations within Depot property. Hazardous waste is accumulated at designated shop accumulation areas. Wastes are held for less than 90 days, then transported offsite for recycling/disposal via a contracted licensed waste vendor.

Used oil continues to be generated at the Depot. Used oil from vehicle maintenance operations is stored in appropriate drums and transported offsite for recycling via a contracted licensed waste vendor.

3.2.5 Solid Waste Management

Solid waste management compliance programs at the Depot are conducted under DLAM 6050.1 and the federal requirements found in 40 CFR 240-246 and 40 CFR 257-258, Department of Transportation regulations and TDEC solid waste regulations.

Municipal solid waste currently generated at the Depot is collected and transported to the Browning-Ferris Industries North Shelby or South Shelby Sanitary Landfill for disposal

3.2.6 Polychlorinated Biphenyls

The PCB management compliance programs at the Depot are conducted under DLAM 6050.1, the federal requirements found in 40 CFR 761, Department of Transportation regulations and TDEC PCB regulations. The PCB management practices at the Depot also are conducted in accordance with the installation's PCB management plan, last revised in January 1995.

In 1993, a PCB survey was performed to identify all regulated transformers located at the Depot. Appendix E provides a comprehensive inventory of these regulated transformers. Since 1993, the Depot has removed all PCB-containing transformers and disposed the equipment through a DRMO waste contract.

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3.2.7 Asbestos

Asbestos-containing material (ACM) is regulated by the EPA, OSHA and the Memphis/Shelby County Health Department. ACM at the Depot is also being managed in compliance with the DA guidance and the DOD memorandum entitled "Asbestos, Lead Paint, and Radon Policies at BRAC Properties," dated October 31, 1994

An asbestos survey (The Pickering Firm, 1993a through c, 1994a through k) was performed at the Depot. The survey included the results for suspected ACM and recommendations for management based on the condition of the ACM.

The information reported in this survey is summarized in Appendix E, and includes the subparcel where the surveyed building is located; the building number (from either the Asbestos Identification Survey report or the separate facility listing); the facility use (as described in the Asbestos Information Survey report), the year of construction (obtained from a separate facility listing); the results of the survey; and the Asbestos Information Survey report documenting the results.

In Appendix E, buildings that had positive test results confirming the presence of ACM were given an "A," indicating ACM is present. Buildings for which test results or visual surveys indicated ACM was not present were given an "N." Buildings not included in the Asbestos Information Survey, but which are on the facility list, are included in the summary in Appendix E. They were designated with an "NA" if they were thought to no longer exist or were built after the 1993 survey. If the date of construction for any building not surveyed was prior to 1985, an "A(P)" designation was given, indicating that the potential for ACM exists

3.2.8 Radon

Based on the results of the radon testing conducted in 1995, radon levels in structures at the Depot are below the EPA action level; therefore, no further testing or abatement is planned. The results of the survey are provided in Appendix E.

3.2.9 RCRA Facilities

The RCRA units at the Depot are managed under the installation hazardous waste management program and environmental restoration program in accordance with DOD directives, CERCLA and

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TDEC hazardous waste regulations. Specific investigation and restoration requirements for solid waste management units at the Depot are included in the CERCLA environmental restoration process

A complete description of the status of these environmental restoration activities is provided in Section 3.1 of this plan. A description of RCRA hazardous waste management activities at the Depot is provided in Section 3.2.3.

3.2.10 Wastewater Discharges

Point source wastewater discharges generated at the Depot are regulated under the federal Water Pollution Control Act, Clean Water Act, National Pollutant Discharge Elimination System (NPDES) permit program (40 CFR Parts 122, 125, and 136), TDEC wastewater discharge permit regulations, and two city of Memphis industrial wastewater discharge agreements - one for domestic sewage discharge and one interim remedial action for groundwater at Dunn Field discharge. Sanitary wastewater and domestic sewage are discharged to the city's treatment facilities.

3.2.11 Oil/Water Separators

Three oil/water separators operated at the Depot. The oil/water separators were managed under the installation's SPCC program; in accordance with applicable federal regulations including Section 313(a) of the Clean Water Act and 40 CFR Parts 110, 112, and 122, TDEC oil pollution prevention regulations; and DOD directives. The separators were cleaned regularly and the wastewater from the units was pumped and discharged to the city's wastewater lagoon. The discharge from the unit was sampled regularly to ensure proper operation and compliance with regulatory requirements.

3.2.12 Pollution Prevention

Pollution prevention at the Depot was managed through the installation hazardous waste minimization and pollution prevention plan. The plan was developed in January 1992 in accordance with the pollution prevention requirements of Title 40 of RCRA, TDEC hazardous waste management rules and DLAM 6050.1. Plan elements included source reduction through hazardous substance product substitution and conservation, operational changes, and the implementation of good operating practices such as loss prevention, waste stream segregation, and material handling improvements. Wastes collected for off-site recycling included used oil, batteries, old tires, paper, aluminum and plastic.

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3.2.13 Medical Waste

Medical waste generated from storage of medical items was disposed of as special waste in the local sanitary landfill

3.2.14 Unexploded Ordnance

The properties to be offered for reuse at the Depot have not been used regularly for the storage, maintenance or demilitarization of explosive ordnance. There are three areas at the Depot that were identified as having potential concerns related to unexploded ordnance (UXO). Two areas were used as pistol ranges. One pistol range was located near the ninth hole of the golf course. The second pistol range was located in the Dunn Field area. The third area, an ordnance burn area, was also located in the Dunn Field area.

3.2.15 NEPA

To comply with NEPA, an EA for Master Interim Lease for the Depot was completed in September 1996 by the CESAM. An EA for Disposal and Reuse was completed in February 1998 by CESAM. A Finding of No Significant Impact resulting from disposal and reuse of the Depot was signed by AMC in March 1998. The EA for Disposal and Reuse is currently in the public review and comment process. A more complete description of the disposal and reuse scoping process is provided in Section 2.1.

3.2.16 Air Emissions

The Depot maintained air permits from the Memphis/Shelby County Health Department to operate three air emission sources at the Depot. These sources included two paint spray booths and one sand blast unit. These air emission permits were closed in May 1997.

3.3 STATUS OF NATURAL AND CULTURAL RESOURCES

The following is a brief summary of natural and cultural resources at the Depot. For more information, refer to the EA for Disposal and Reuse for the Depot completed in February 1998.

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3.3.1 Vegetation

The Depot is highly developed. Very little native vegetation exists except as associated with Lake Danielson, the golf course pond or with undisturbed areas at Dunn Field. In addition, landscaping programs have concentrated decorative plantings around Lake Danielson, the golf course and the former military family housing area.

3.3.2 Wildlife

Because the Depot is in a highly developed area it offers limited habitat. Ducks and geese have been observed at the golf course pond and Lake Danielson. Dunn Field is the only undisturbed open area on the site. Animals that have been observed at Dunn Field include squirrels, red foxes, quail, mourning doves and turtles.

3.3.3 Wetlands

A wetland survey of the Depot was completed by the USACE, Memphis District in July 1996. Survey results indicated that there are no regulated wetlands on the Depot.

3.3.4 Designated Preservation Areas

There are no designated preservation areas at the Depot.

3.3.5 Rare, Threatened, and Endangered Species

No federally listed or proposed threatened or endangered species have been observed on the Depot (Law Environmental 1990b, Harland Bartholomew & Associates, Inc. 1988).

3.3.6 Cultural and Historical Resources

Archaeological Resources

No archaeological sites are known to be located within the immediate vicinity of the Depot, although the area was occupied by a variety of Native American groups. In May 1997, USACE, Ft. Worth District conducted an archeological survey of two parcels identified in "A Cultural Resources Inventory and Assessment at the Defense Distribution Depot Memphis, Tennessee" as having the

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potential for archeological sites. These parcels, the golf course area and Dunn Field, were found to contain no archeological resources (Prewitt & Associates, Inc 1997)

Historical Resources

There are currently no sites or structures located on the Depot property that are listed on the National Register of Historic Places (Harland Bartholomew & Associates, Inc. 1988). In April 1997, USACE, Ft. Worth District conducted a cultural resources survey. The final report entitled "A Cultural Resources Inventory and Assessment at the Defense Distribution Depot Memphis, Tennessee," dated June 6, 1997, indicated that the World War II era warehouses known as the 20 Typicals were eligible for inclusion on the National Register of Historic Places (NRHP). The Tennessee State Historic Preservation Officer (TNSHPO) agreed with the report's assessment on the 20 Typicals and also determined that three World War II era guard stations were also eligible for inclusion on the NRHP. No nominations to the NRHP have been made

In June 1998, a Memorandum of Agreement regarding these NRHP-eligible buildings was signed by AMC, TNSHPO and the Advisory Council on Historic Places and received DRC concurrence.

3.4 ENVIRONMENTAL CONDITION OF PROPERTY

During the EBS, the Depot was divided into subparcels to facilitate decision-making regarding the environmental condition of specific areas. As defined in the EBS, a subparcel is an area of BRAC property that can be segregated from its surrounding areas, based on the environmental condition of the property. The subparcels and corresponding categorizations are identified on Figure 3-5, Environmental Condition of Property map. Areas containing or potentially containing non-CERCLA substances are identified and delineated separately with the letter "Q" as qualified subparcels. Qualified subparcels may be precluded from transfer or lease for unrestricted use and overlay all "environmental condition of property" categories (Categories 1 through 7)

The seven standard "environmental condition of property" categories, as defined in the CERFA guidance and the Revised DOD BCP Guidebook (September 1996), are as follows:

Category 1. Areas where no release or disposal of hazardous substances or petroleum products has occurred (including no migration of these substances from adjacent areas)

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Category 2. Areas where only release or disposal of petroleum products has occurred.

Category 3. Areas where release, disposal and/or migration of hazardous substances has occurred, but at concentrations that do not require a removal or remedial action

Category 4. 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.

Category 5. Areas where release, disposal and/or migration of hazardous substances has occurred, and removal or remedial actions are under way, but all required remedial actions have not yet been taken.

Category 6. Areas where release, disposal and/or migration of hazardous substances has occurred, but required actions have not yet been implemented.

Category 7. Areas that are not evaluated or require additional evaluation.

Each subparcel was given a number to which appropriate descriptive labels are attached. The numbers consist of a unique subparcel identification number and an environmental condition of property category number. The labels consist of a designation describing the type release or storage, if applicable. The following designations are used to indicate the type of release or storage present in a subparcel:

PS = Petroleum storage
 PR = Petroleum release or disposal
 HS = Hazardous substance storage
 HR = Hazardous substance release or disposal

A one-acre grid coordinate system is overlaid to facilitate the following subparcel discussion by geographically locating the various subparcels. Subparcel boundaries were drawn using the best available information regarding the extent of contamination and do not follow map grid lines. Small areas of release or storage, such as USTs, were delineated by circular 0.25-acre subparcels centered on the area, as stipulated in DOD guidance. For consistency and to facilitate the summation of acreages, subparcel acreages were calculated to two decimal places using the digitized map and AutoCad Release 13. This method is not meant to imply an accuracy to one one-hundredth of an acre.

SECTION THREE INSTALLATION-WIDE ENVIRONMENTAL PROGRAM STATUS

Table 3-6 summarizes the BRAC subparcel descriptions. The BRAC subparcels in this table have been presented in order by CERFA category. A brief summary of subparcels is provided in the following sections.

3.4.1 Areas Where No Release or Disposal Has Occurred

Woodward-Clyde's survey and subsequent parcelization of the Depot identified 38 subparcels, totaling 6.2 acres, as uncontaminated, Category 1 subparcels. Review by the BRAC Cleanup Team from August 1997 through September 1998 has identified several additional Category 1 subparcels, bringing the total to 56 subparcels and the acreage to 57.43 acres of Category 1 subparcels. These subparcels are areas where there has been no documented release or disposal, or migration from an adjacent property of hazardous substances or petroleum products. The designated Category 1 subparcels are summarized in Table 3-7.

3.4.2 Areas Where Only Petroleum Release or Disposal Has Occurred

The Category 2 subparcels listed below are areas where only release or disposal of petroleum products has occurred. A total of 3 subparcels, totaling 6.80 acres, have been designated as Category 2.

Parcel Number and Label 26.2(2)

CERFA Map Location 6,4

This subparcel is associated with Building S970. An oil fired generator that had leaked oil onto the concrete pad was observed at Building S970, Section 6, during the EBS visual inspection. This release consisted of only petroleum products. Absorbent was applied and the residue disposed in accordance with federal, state and local regulations. In October 1997, the BCT concurred that this subparcel change to a Category 2.

Parcel Number and Label 33.6(2)HR

CERFA Map Location 13,13

This subparcel is associated with the open land area outside Building 737 and proposed No Further Action Site 44 (Former Wastewater Treatment Unit). A 50-gallon mineral oil (<1 ppm PCB) spill was reported on November 9, 1995, outside of Building 737. The Spill Team responded, excavated contaminated material and disposed it in accordance with federal, state and local regulations. This subparcel became a Category 2 due to the category definition change that occurred after the November

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1996 Environmental Baseline Survey categorized this subparcel as a Category 4. At the October 1997 meeting, the BCT concurred that this subparcel change to a Category 2 based on the new parcel definitions

Parcel Number and Label 33.11(2)

CERFA Map Location 14,9

This subparcel is associated with the 1,000-gallon diesel above ground storage tank outside Building 756. The original 1,000-gallon underground storage tank supplying the emergency generator in Building 756 was removed in June 1994. Soil was sampled for Total Petroleum Hydrocarbons and found to be less than 20 ppm. No remediation is required.

3.4.3 Areas Where Release, Disposal and/or Migration Has Occurred, but No Remedial Action is Required

The Category 3 subparcels listed below are areas where release, disposal and/or migration of hazardous substances has occurred, but at concentrations that do not require removal or remedial action. Information regarding releases was obtained from the Depot's Spill Response Checklists maintained by the Environmental Division. Eighteen subparcels, encompassing 57.28 acres, have been identified as Category 3.

Parcel Number and Label 4.4(3)PS/PR/HS/HR

CERFA Map Location 30,9

This subparcel is associated with Building 260, proposed No Further Action Site 41 (Satellite Drum Accumulation Area) and proposed No Further Action Site 30 (Safety Kleen Units). The RCRA Facility Assessment visual inspection noted staining on the floor in the sign shop of this building. The Safety Kleen unit was removed prior to closure. Absorbent was applied to released Safety Kleen solvent and disposed in accordance with federal, state and local regulations.

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Parcel Number and Label 4.8(3)

CERFA Map Location 30,9

This subparcel is associated with Building 263, which has been used as attendants' room for the dispensing of petroleum, oil and lubricant to vehicles and as a vehicle grease rack since the 1940s, and to Screening Site (SS) 68 (POL-Building 263). Records do not indicate any release, disposal or migration. In addition, this building was fumigated. Air sampling conducted during the BRAC sampling effort indicated no human health hazards from fumigation. Soil borings were sampled during the Screening Site Sampling Program. Sample results indicate no levels that exceeded BCT screening criteria (CH2M Hill, 1998c). After the December 1997 BCT decision to change fumigated buildings to Category 1, the BCT conferred and concurred via telephone calls that this subparcel would become a Category 3 based on the concern that petroleum products and antifreeze may have been released (CH2M Hill, 1998c). In June 1998, the BCT again concurred that this subparcel change to a Category 3.

Parcel Number and Label 5.1(3)

CERFA Map Location 29,7

This subparcel is associated with Building T272 and the open land area surrounding buildings in Parcel 5. Based on interviews with Depot personnel, the surface soil has the potential for pesticide contamination. One Remedial Investigation (associated with Site 58 - Pad 267) soil sample and one BRAC soil sample were collected. Sample results indicated no levels that exceeded the BCT screening criteria (CH2M Hill, 1998c). At the September 1997 meeting, the BCT concurred that this subparcel change to a Category 3.

Parcel Number and Label 6.2(3)HR

CERFA Map Location 29,11

This subparcel is associated with Building 250 and may have been fumigated. Air sampling conducted during the BRAC sampling effort indicated no human health hazards from fumigation (CH2M Hill, 1998c). Staining due to acid leaks from batteries in the fork lift area were observed during the EBS visual inspection. After the December 1997 BCT decision to change fumigated buildings to Category 1, the BCT conferred and concurred via telephone calls that this subparcel would become a Category 3 based on the release of battery acid. In June 1998, the BCT again concurred that this subparcel change to a Category 3.

SECTION THREE INSTALLATION-WIDE ENVIRONMENTAL PROGRAM STATUS**Parcel Number and Label 6.4(3)HR****CERFA Map Location 26,11**

This subparcel is associated with Building 350 and may have been fumigated. Air sampling conducted during the BRAC sampling effort indicated no human health hazards from fumigation (CH2M Hill, 1998c). Staining due to acid leaks from batteries in the fork lift area were observed during the EBS visual inspection. After the December 1997 BCT decision to change fumigated buildings to Category 1, the BCT conferred and concurred via telephone calls that this subparcel would become a Category 3 based on the release of battery acid. In June 1998, the BCT again concurred that this subparcel change to a Category 3.

Parcel Number and Label 9.3(3)HR**CERFA Map Location 23,13**

This subparcel is associated with Building 430 and may have been fumigated. Air sampling conducted during the BRAC sampling effort indicated no human health hazards from fumigation (CH2M Hill, 1998c). Staining due to acid leaks from batteries in the fork lift area were observed during the EBS visual inspection. After the December 1997 BCT decision to change fumigated buildings to Category 1, the BCT conferred and concurred via telephone calls that this subparcel would become a Category 3 based on the release of battery acid. In June 1998, the BCT again concurred that this subparcel change to a Category 3.

Parcel Number and Label 10.1(3)HR**CERFA Map Location 16,12**

This subparcel is associated with Building 649. A 1-gallon hydraulic fluid spill was reported on August 11, 1995, inside Building 649, Section 5. In addition, leaking containers of paint/lube oil/insecticide and other oil were reported on May 16, 1990, outside Building 649. The Spill Team responded, applied absorbent and disposed of all residue in accordance with federal, state and local regulations.

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This subparcel is associated with Building 550 and may have been fumigated. Air sampling conducted during the BRAC sampling effort indicated no human health hazards from fumigation (CH2M Hill, 1998c). Staining due to acid leaks from batteries in the fork lift area were observed during the EBS visual inspection. After the December 1997 BCT decision to change fumigated buildings to Category 1, the BCT conferred and concurred via telephone calls that this subparcel would become a Category 3 based on the release of battery acid. In June 1998, the BCT again concurred that this subparcel change to a Category 3.

Parcel Number and Label 11.2(3)**CERFA Map Location 19,15**

This subparcel is associated with Building 529 and may have been fumigated. Air sampling conducted during the BRAC sampling effort indicated no human health hazards from fumigation (CH2M Hill, 1998c). Antifreeze, firefighting foam and photographic chemicals were stored in the west end of the building. Records indicate several spills of firefighting foam. The Spill Team responded, applied absorbent and disposed of all residue in accordance with federal, state and local regulations. Staining due to acid leaks from batteries in the fork lift area were observed during the EBS visual inspection. After the December 1997 BCT decision to change fumigated buildings to Category 1, the BCT conferred and concurred via telephone calls that this subparcel would become a Category 3 based on the release of battery acid and firefighting foam. In June 1998, the BCT again concurred that this subparcel change to a Category 3.

Parcel Number and Label 15.2(3)**CERFA Map Location 26,18**

This subparcel is associated with S308 and Screening Site 35 (Building 308 - Hazardous Waste Storage). Low Environmental surface soil sample SS-4 (100 feet downslope and southeast of Bldg. S308) detected PAHs, dieldrin and arsenic in surface soil and total chromium and lead in subsurface soil. Three Screening site soil borings taken from around the building were sampled. Sample results indicated arsenic in surface soil below the BCT screening criteria as well as chromium and lead in subsurface soil near background levels. All levels appear to be naturally occurring. SS 35 does not exhibit waste accumulation-related contamination. The Preliminary Risk Evaluation indicates SS 35 does not pose a human health concern for industrial or residential scenarios and recommends the

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subparcel change to a Category 3 (CH2M Hill, 1998c). Also, air sampling conducted in this building to assess the impact from storage of hazardous materials indicated no human health hazards. At the September 1997 meeting, the BCT reviewed the data and determined that no levels exceeded BCT screening criteria, but no category change mentioned. At the June 1998 meeting, the BCT concurred that this subparcel change to Category 3.

Parcel Number and Label 18.2(3)**CERFA Map Location 19,8**

This subparcel is associated with the open land area in Parcel 18 surrounding Building 560. This subparcel contains railroad tracks that were historically sprayed with pesticides, herbicides and waste oil containing PCP. One BRAC soil sample was collected. Sample results indicated no levels that exceeded the BCT screening criteria. At the September 1997 meeting, the BCT concurred that this subparcel change to a Category 3.

Parcel Number and Label 20.1(3)PR**CERFA Map Location 21,5**

This subparcel is associated with Building 489. A 1-gallon oil spill was reported on November 3, 1995 at the north dock of Building 489, Section 4. The Spill Team responded, applied absorbent and disposed of the residue in accordance with federal, state and local regulations.

Parcel Number and Label 23.6(3)**CERFA Map Location 12,2**

This subparcel is associated with open land areas south of Buildings 690 and 490 including parking lots and grassy areas, the open land area surrounding Buildings 787 and Gate 8 as well as Screening Site (SS) 82 (Flammables - Building 783 and 793). This subparcel contains grassed areas with the potential for pesticide contamination. Four screening site surface soil, four screening site subsurface soil and one BRAC surface soil samples were collected. Sample results indicate arsenic levels in surface soil (20.2 and 24.3 mg/kg) near the range of background levels (20 mg/kg), but below BCT screening criteria. In October 1997, the BCT concurred that this subparcel change to a Category 3 (CH2M Hill, 1998c).

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This subparcel is associated with a gasoline spill reported on September 13, 1993 adjacent and to the northwest of Building S995. The Spill Team responded, applied absorbent, removed stained soil and disposed of it in accordance with federal, state and local regulations. One BRAC soil boring and surface soil sample was collected from the center of the suspected spill area. Petroleum hydrocarbons were detected at 3.2 mg/kg, well below the Tennessee clean-up level of 100 mg/kg. In October 1997, the BCT concurred that this subparcel change to a Category 3 (CH2M Hill, 1998c).

Parcel Number and Label 23.10(3)**CERFA Map Location 8,2**

This subparcel is associated with the open land area south of Buildings 873 and 875 in area X01, which was once a small lake. The sediments were possibly contaminated with PCB and pesticide/herbicide residues. One BRAC surface soil sample and one BRAC soil boring were collected. Sample results indicate that no levels exceeded the BCT screening criteria. In October 1997, the BCT concurred that this subparcel remain a Category 3 (CH2M Hill, 1998c).

Parcel Number and Label 28.1(3)**CERFA Map Location 2,7**

This subparcel contains the open storage area X04 north of Building 1089. This subparcel contains railroad tracks that were historically sprayed with pesticides, herbicides and waste oil containing PCP. According to DDMT personnel, this area was used for the storage of feed stock material and not hazardous materials. Four BRAC soil samples, two surface and two subsurface, were collected. Sample results indicate aluminum and iron in surface soil near the range of the BCT screening criteria and lead within the background value range. The Preliminary Risk Evaluation indicated that carcinogenic risks were below acceptable levels for both industrial worker and residential scenarios of one in a million, noncarcinogenic risks were above one in a million due to the inorganic chemicals aluminum and iron in both subsurface and surface, but the concentrations of these constituents in surface soils only did not pose significant health risks. In October 1997, the BCT concurred that this subparcel change to a Category 3.

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Parcel Number and Label 32.1(3)

CERFA Map Location 9,14

This subparcel is associated with Parcel 32 and contains open storage areas X02, X13, and X15 that are to the west and north of Building 835. This subparcel contains railroad tracks that were historically sprayed with pesticides, herbicides and waste oil containing PCP. Four BRAC soil samples (two surface and two subsurface) were collected. Sample results indicate that no levels exceeded the BCT screening criteria. In October 1997, the BCT recommended this subparcel change to a Category 3 (CH2M Hill, 1998c)

Parcel Number and Label 34.2(3)

CERFA Map Location 24,7

This subparcel is associated with Parcel 34 and contains railroad tracks that were historically sprayed with pesticides, herbicides and waste oil containing PCP. One BRAC soil sample was collected. Sample results indicate chlordane at levels that exceeded the BCT screening criteria. The Preliminary Risk Evaluation indicated that the carcinogenic and noncarcinogenic risks were well below the acceptable levels for both industrial worker and residential scenarios of one in a million. In October 1997, the BCT concurred that this subparcel change to a Category 3 (CH2M Hill, 1998c).

3.4.4 Areas Where Release, Disposal and/or Migration Has Occurred and All Remedial Actions Have Been Taken

The Category 4 subparcels listed below are areas where release, disposal and/or migration of hazardous substances has occurred, and all removal or remedial actions necessary to protect human health and environment have been taken. Information regarding releases was obtained from the Depot's Spill Response Checklists maintained by the Environmental Division. Sixteen subparcels, encompassing 58.89 acres, have been designated as Category 4

Parcel Number and Label 4.12(4)HS/HR

CERFA Map Location 31,10

This subparcel is associated with Building 251 that has a floor drain connected to the sanitary sewer. One surface soil sample was taken from the sump beneath the floor drain. Results indicate elevated concentrations of many metals and poly aromatic hydrocarbons. The Preliminary Risk Evaluation indicated these concentrations had a risk ratio above acceptable levels for residential and industrial

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worker scenarios. In December 1997, the BCT recommended that the sump be cleaned and, if appropriate, grouted closed and that upon completion of this action, the subparcel should change to a Category 4. The action was completed in January 1998.

Parcel Number and Label 4.13(4)HS/HR

CERFA Map Location 31,8

This subparcel is associated with Building 265 that has a floor drain that is connected to the sanitary sewer. One surface soil sample was taken from the sump beneath the floor drain. Results indicate elevated concentrations of many metals and poly aromatic hydrocarbons. The Preliminary Risk Evaluation indicated these concentrations had a risk ratio above acceptable levels for residential and industrial worker scenarios. In May 1998, the BCT recommended that the sump be cleaned and, if appropriate, grouted closed and that upon completion of this action, the subparcel should change to a Category 4. The action was completed in June 1998.

Parcel Number and Label 7.2(4)HS/HR

CERFA Map Location 29,12

This subparcel is associated with Building 249 that was formerly used as a storage facility for clothing treated with impregnite (XXCC-3), a chemical used as a preventive to the effects of chemical warfare agents on skin. A battery acid spill was reported on April 15, 1993, at Building 249, North dock. The Spill Team responded, applied sodium bicarbonate and disposed of all residue in accordance with federal, state and local regulations. This building may have been fumigated. Air sampling conducted during the BRAC sampling effort indicated no human health hazards from fumigation (CH2M Hill, 1998c). After the December 1997 BCT decision to change fumigated buildings to Category 1, the BCT conferred and concurred via telephone calls that this subparcel would become a Category 4 based on the cleanup of the battery acid. In June 1998, the BCT again concurred that this subparcel change to a Category 4.

Parcel Number and Label 12.2(4)HS/HR

CERFA Map Location 16,15

This subparcel is associated with Building 629 - the former hazardous materials storage building (DDT, herbicides, solvents, oxidizers, and toxic/corrosive materials). A 6-gallon nitric acid spill was reported on April 23, 1990, inside Building 629, Section 1. The Spill Team responded, applied sodium bicarbonate and disposed of all residue in accordance with federal, state and local regulations. The soil

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surrounding Building 629 is associated with Remedial Investigation Site 57 and will be further evaluated during the Remedial Investigation process. This building may have been fumigated. Air sampling conducted during the BRAC sampling effort indicated no human health hazards from fumigation. After the December 1997 BCT decision to change fumigated buildings to Category 1, the BCT conferred and concurred via telephone calls that this subparcel would become a Category 4 based on the cleanup of the nitric acid. In January 1998, the BCT again concurred that this subparcel change to a Category 4.

Parcel Number and Label 17.3(4)HS/HR

CERFA Map Location 25,9

This subparcel is associated with Building 359 and proposed No Further Action Site 49 (Medical Waste Storage Area). This building was used for storage of medical supplies, medical supply waste (expired shelf life medical supplies), sodium chloride, petroleum products and low level radiological items (watch dials, lantern mantels and compasses). The 1997 Radiological Survey concluded this building was available for unrestricted use as no evidence of radiological contamination was found. A sulfuric acid spill was reported on August 27, 1993 inside Building 359, Section 2. The Spill Team responded, applied sodium bicarbonate and disposed of all residue in accordance with federal, state and local regulations. An out of service incinerator is also located in this building. This building was fumigated. Air sampling conducted during the BRAC sampling effort indicated no human health hazards from fumigation. After the December 1997 BCT decision to change fumigated buildings to Category 1, the BCT conferred and concurred via telephone calls that this subparcel would become a Category 4 based on the cleanup of the sulfuric acid. In June 1998, the BCT again concurred that this subparcel change to a Category 4.

Parcel Number and Label 18.1(4)HS/HR

CERFA Map Location 17,8

This subparcel is associated with Building 560. Two spills (5 gallons and 15 gallons) of aqueous film-forming foam were reported on October 17, 1995 and November 14, 1995 inside Building 560, Section 3. The Spill Team responded, applied absorbent and disposed of all residue in accordance with federal, state and local regulations.

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This subparcel is associated with Building 670. Significant corrosion was observed during the EBS visual inspection due to acid leaks at the battery charging station. Sodium bicarbonate was applied and disposed in accordance with federal, state and local regulations. A 1-gallon spill of hydraulic fluid was reported on August 30, 1995, inside Building 670, Section 1. The Spill Team responded, applied absorbent and disposed of all residue in accordance with federal, state and local regulations

Parcel Number and Label 20.3(4)HS/HR**CERFA Map Location 20,7**

This subparcel is associated with Building 470. Corrosion was observed during the EBS visual inspection due to acid spills at the battery charging station. Sodium bicarbonate was applied and disposed in accordance with federal, state and local regulations

Parcel Number and Label 20.4(4)HS/HR**CERFA Map Location 21,5**

This subparcel is associated with Building 489. Corrosion was observed during the EBS visual inspection due to acid spills at the battery charging station. Sodium bicarbonate was applied and disposed in accordance with federal, state and local regulations.

Parcel Number and Label 21.2(4)PS/HS/HR**CERFA Map Location 23,3**

This subparcel is associated with Building 490 and proposed No Further Action Site 40 (Safety Kleen Units). The Safety Kleen unit was removed prior to closure. Corrosion was observed during the EBS visual inspection due to acid spills at the battery charging station. Sodium bicarbonate was applied and disposed in accordance with federal, state and local regulations. A 1-gallon spill of sulfuric acid/battery acid was reported on December 15, 1995, inside Building 490, Section 5. The Spill Team responded, applied sodium bicarbonate and disposed of all residue in accordance with federal, state and local regulations. Petroleum products and microfiche developing chemicals were stored and used in Building 490.

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Parcel Number and Label 21.3(4)HS/HR

CERFA Map Location 15,5

This subparcel is associated with Building 689, Screening Site 78 (Alcohol, Acetone, Toluene, Naphtha, Hydrofluoric Acid Spills) and proposed No Further Action Site 40 (Safety Kleen Units). Building 689 historically staged alcohol, acetone, toluene, and hydrofluoric acid before transport. The Safety Kleen unit was removed prior to closure. Eleven spills are documented from May 8, 1990 through November 16, 1995 and included nitric acid, corrosion removing compound, hydraulic fluid, oil and sulfuric acid. The Spill Team responded, took the appropriate action and disposed of all residue in accordance with federal, state and local regulations. Four soil borings were taken from the concrete parking lot immediately adjacent to and outside of Building 689. Cadmium was detected in one sample and appeared to be an isolated occurrence. TCE was detected at depths of 1 to 20 feet in one sample and may require further investigation for groundwater impacts.

Parcel Number and Label 21.4(4)HS/HR

CERFA Map Location 15,4

This subparcel is associated with Building 685. Corrosion was observed during the EBS visual inspection due to acid spills at the battery charging station. Sodium bicarbonate was applied and disposed in accordance with federal, state and local regulations.

Parcel Number and Label 25.1(4)HS/HR

CERFA Map Location 9,4

This subparcel is associated with Building S873 and Remedial Investigation Site 27 (Former Recoupment Area - Building S873). Building S873 stored hazardous materials such as chlorinated solvents, corrosives, petroleum, oils and lubricants. The southern end of the building and the gravel area east of the building were used as the hazardous materials recoupment area (remove hazardous materials from damaged containers then repackage the materials) until the current Recoup Building was constructed in 1987/1988. Thirteen spills are documented from March 10, 1990 through November 29, 1993 and included tetrachloroethylene, sulfuric acid, hydraulic fluid and descaling compound. The Spill Team responded, took the appropriate action and disposed of all residue in accordance with federal, state and local regulations. Samples associated with RI Site 27 were taken outside of the building and will be further evaluated through risk assessment or the Remedial Investigation process. At the September 1997 meeting, the BCT concurred that this subparcel change to a Category 4 based on the cleanup of the spills.

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Parcel Number and Label 27.2(4)

CERFA Map Location 4,4

This subparcel is associated with Building S972 and Screening Site 84 (Flammables, Solvents, Waste Oil - Building S972). The building once stored flammable materials, solvents and waste oil as an open shed building. S972 was converted to a closed building and stored and constructed wooden packing materials, which involved the use of petroleum products (oils and lubricants), paints and spray adhesives. Small operational spills occurred and were cleaned when they occurred. In addition, oil stained areas were observed in the building during the EBS visual inspection. The building has been recently retrofitted with floor cleaning and relining involved, which removed the stains. Screening site soil samples were taken outside the building and will require further evaluation. At the October 1997 meeting, the BCT concurred that this subparcel change to a Category 4 based on the cleanup of operational spills.

Parcel Number and Label 30.1(4)

CERFA Map Location 4,14

This subparcel is associated with Building 925. This building served as the Bulk Flammable Materials warehouse and stored 55-gallon drums of flammable materials such as xylene, toluene, acetone, methyl ethyl ketone, methanol and ethanol. Prior to construction of Building 915, this area was a bermed open storage location (X25) for petroleum products and flammable materials. A fabric tension structure was erected over this bermed area and warehoused flammable materials. On January 19, 1988, the fabric tension structure collapsed during a storm resulting in about 325 gallons of flammable materials being released in the bermed area and mixing with about 30,000 gallons of rainwater. The Spill Team and the Memphis Fire Department responded. The material was contained and removed to an appropriate disposal facility. The containment and clean up of this spill has been documented by the Depot and the Memphis Fire Department. The current Building 925 was constructed after this incident over a portion of the original fabric tension structure area. At the September 1997 meeting, the BCT concurred that this subparcel change to a Category 4 based on the spill not occurring in the current building and the volatilization of any spilled material over the past nine years. Additional sampling will occur in the spill area south of Building 925 (Parcel 30 2).

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Parcel Number and Label 32.2(4)

CERFA Map Location 9,13

This subparcel is associated with Building 835. Thirteen spills were reported from March 9, 1991 to May 26, 1995 for Building 835. Materials spilled include battery acid, hydrochloric acid, sulfuric acid, herbicide, muratic acid, and transmission fluid. Also, air sampling conducted in this building to assess the impact from storage of hazardous materials indicated no human health hazards. At the September 1997 meeting, the BCT concurred that this subparcel change to a Category 4 based on cleanup of these spills and air sample results.

3.4.5 Areas Where Release, Disposal and/or Migration Has Occurred and Action is Under Way but Not Final

The Category 5 subparcel listed below is associated with an area where release, disposal or migration of hazardous substances has occurred, and removal or remedial actions are under way, but all required actions have not yet been implemented. Information regarding releases was obtained from the Depot's Spill Response Checklists maintained by the Environmental Division. The Category 5 subparcel encompasses 2.0 acres.

Parcel Number and Label 24.1(5)HR

CERFA Map Location 10,3

This subparcel is associated with the southeastern corner of Building S873, the gravel area to the east and Remedial Investigation (RI) Site 27 (Former Recoupment Area - Building S873). The gravel area east of the building was used as the hazardous materials recoupment area (remove hazardous materials from damaged containers then repackage the materials) until the current Recoup Building was constructed in 1987/1988. Remediation of soil contamination from previous spills (DDT, DDE, and aldrin) took place in 1985. Three RI surface soil and five RI soil boring samples were collected. Sample results indicated elevated levels of vanadium and poly aromatic hydrocarbons. PAHs will be addressed in the sitewide risk evaluation. The subparcel should be a Category 5 based on a removal action that occurred, but further investigation is required.

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3.4.6 Areas Where Release, Disposal and/or Migration Has Occurred, but Required Response Actions Have Not Been Taken

The Category 6 subparcels listed below are areas where release, disposal and/or migration of hazardous substances have occurred, but the required removal or remedial actions have not yet been taken. Information regarding releases was obtained from the Depot's Spill Response Checklists maintained by the Environmental Division. Nine subparcels, encompassing 30.91 acres, have been identified as Category 6.

Parcel Number and Label 2.7(6)

CERFA Map Location 33,6

This subparcel is associated with the open land area surrounding the Family Housing Units and garages in Parcel 2. Four BRAC soil samples were collected (CH2M Hill, 1998c). Samples indicated levels of chlorinated hydrocarbon pesticides (dieldrin, DDE, DDT and gamma-chlordane) above BCT screening criteria. At the September 1997 meeting, the BCT changed this subparcel to a Category 6 due to the presence of pesticides, particularly dieldrin and the Depot Redevelopment Corporation's high priority for reuse of this subparcel. An early removal project has begun to remove soils.

Parcel Number and Label 4.6(6)

CERFA Map Location 29,9

This subparcel is associated with Building 254 and a portion of the open land area/underground storage tank (UST) field west of the building. The EBS visual inspection noted that petroleum products, oils, lubricants and antifreeze were stored in this building as well as leaking drums and ground staining. In addition, a 5-gallon diesel spill was reported on March 20, 1995, from a tank outside the southwest corner of Building 254. The Spill Team responded, applied absorbent and disposed of all residue in accordance with federal, state and local regulations. A 1,110-gallon gasoline tank was removed in December 1989 from the UST field. Two USTs are scheduled for removal in 1998 from the UST field behind Building 254. At the September 1997 meeting, the BCT changed this subparcel to a Category 6 due to the scheduled underground storage tanks removal project.

SECTION THREE INSTALLATION-WIDE ENVIRONMENTAL PROGRAM STATUS

Parcel Number and Label 4.7(6)

CERFA Map Location 28,10

This subparcel is associated with Building 257 and Screening Site 67. Building 257 was fumigated in the past. Air sampling conducted during the BRAC sampling effort in the winter of 1997 indicated no human health hazards from fumigation. Several spills are reported for this building, including: one 2-gallon gasoline spill reported on April 20, 1990, outside of Building 257, leaking tank at gasoline station reported on August 11, 1993; and gasoline release from tank pressure tube reported on August 31, 1993. The Spill Team responded, took the appropriate action and disposed of all residue in accordance with federal, state and local regulations. In addition, fuel dispensing and storage have been ongoing at Building 257 since 1942 (two 1,000-gallon ASTs are located at this building and a 2,580-gallon gasoline tank was removed December 1989). One soil sample taken during the 1990 Law RI detected PAHs, dieldrin and metals. During Screening Site sampling, two surface soil and two shallow soil boring samples were collected (CH2M Hill, 1998c). Samples indicated arsenic and dieldrin in surface soils at levels that exceeded BCT screening criteria. Samples also indicated benzene and total xylenes in subsurface soils at levels the Preliminary Risk Evaluation determined to be of potential threat to groundwater. There are also two underground storage tanks (18,000 and 20,000 gallons) scheduled for removal in 1998 in the open land area south of Bldg. 257. At the September 1997 meeting, the BCT changed this subparcel to a Category 6 due to the scheduled underground storage tanks removal project.

Parcel Number and Label 5.2(6)

CERFA Map Location 29,7

This subparcel is associated with Building 274 and Remedial Investigation Site 48 (The former PCB Transformer Area). Building 274 was constructed after transformer storage ceased. 1990 Law RI soil samples detected PAHs and DDT (and breakdown products). A groundwater sample (CH2M Hill 1995b, 1995e) in MW-26 detected tetrachloroethane and carbon tetrachloride. In 1997, five Remedial Investigation surface soil samples were collected (CH2M Hill, 1998c) from the grassy areas directly outside of Building 274. Sample results indicated levels of PCBs and dieldrin exceeding BCT screening levels. The Depot Redevelopment Corporation has identified this subparcel as a high priority for reuse. In August 1997, the BCT agreed this subparcel should undergo early removal of surface soils. At the September 1997 meeting, the BCT concurred that this subparcel change to a Category 6.

SECTION THREE INSTALLATION-WIDE ENVIRONMENTAL PROGRAM STATUS

Parcel Number and Label 7.1(6)

CERFA Map Location 29,13

This subparcel is associated with the open land area surrounding Building 249 and Screening Site (SS) 65 (XXCC-3, Building 249). Five surface soil samples and three soil borings associated with SS 65 were collected (CH2M Hill, 1998c). Samples indicated levels of PAHs (particularly Benzo(a)anthracene, Benzo(a)pyrene, Benzo(b)fluoranthene, Benzo(k)fluoranthene and Indeno(1,2,3-cd)pyrene) that exceeded BCT screening criteria. At least one detection of each of these PAHs were two orders of magnitude above the risk based concentration. The high levels of PAHs were found on the south side of Building 249 near the railroad tracks. One sample detected levels of DDE and DDT. In September 1997, the BCT concurred that this subparcel should change to a Category 6 due to PAHs. PAHs, DDE and DDT will be further addressed in the upcoming sitewide risk evaluation.

Parcel Number and Label 15.5(6)

CERFA Map Location 23,18

This subparcel is associated with the open land area around Buildings 308, 309 and 720, Screening Site 36 (DRMO Hazardous Waste Concrete Storage Pad); Screening Site 37 (DRMO Hazardous Waste Gravel Storage Pad); Screening Site 38 (DRMO Damaged/Empty Hazardous Materials Drum Storage Area), and Screening Site 39 (DRMO Damaged/Empty Lubricant Container Area). One 1990 Law RI surface soil sample taken just outside this subparcel boundary detected PAHs, dieldrin and metals. During the 1997 Screening Site Sampling Program, thirteen soil boring samples were taken. Sample results indicated PAHs no longer occurring, arsenic at risk ratios above 1 in a million for both industrial and residential scenarios, and levels of 1,1,2,2-tetrachloroethane, DDT and other metals. At the September 1997 meeting, the BCT concurred that this subparcel should change to a Category 6.

Parcel Number and Label 25.2(6)

CERFA Map Location 8,7

This subparcel is associated with Building S875, the open land area surrounding S875 and S873, and Remedial Investigation (RI) Site 27 (Former Recoupment Area/Building S873). This subparcel also contains railroad tracks that were historically sprayed with pesticides, herbicides and waste oil containing PCP. A 1,000-gallon heating oil tank was closed in place in July 1994 outside Building 875. One BRAC and two RI surface soil samples and one BRAC soil boring were collected from this subparcel (CH2M Hill, 1998c). The RI samples were taken from south of Building 873. The RI sample results indicated levels of poly aromatic hydrocarbons (PAHs) that exceeded the BCT.

SECTION THREE INSTALLATION-WIDE ENVIRONMENTAL PROGRAM STATUS

screening criteria. This area of Parcel 25.2 is an early removal candidate, or could go through a risk assessment due to the moderate level of PAHs. The BRAC sample results indicated chlordane in the surface soils and lead at a depth of zero to 4 feet, and the Preliminary Risk Evaluation indicated carcinogenic and non-carcinogenic risk ratios of less than 1 in one million. At the September 1997 meeting, the BCT concurred that this subparcel should change to a Category 6.

Parcel Number and Label 28.2(6)

CERFA Map Location 3,5

This subparcel is associated with Building 1089, the open land area surrounding Building 1089 and Screening Site (SS) 89 (Acids - Building 1089). Building 1089 was used to store acids, paints and cleaning solvents. Eight SS surface soil samples and four SS soil borings were collected. Surface soil sample results indicated lead, arsenic and chromium levels that exceeded BCT screening criteria. Subsurface soil samples indicated no levels that exceeded BCT screening criteria. Monitoring well 21 (MW-21) is also associated with this subparcel. Groundwater samples taken from MW-21 detected VOCs and metals. Due to the presence of metals in surface soils, this subparcel requires further Remedial Investigation or should proceed through an early removal. At the October 1997 meeting, the BCT concurred that this subparcel should change to a Category 6.

Parcel Number and Label 35.5(6)

CERFA Map Location 2,2

This subparcel is associated with Buildings S1091 and S1088 as well as the open land area surrounding these buildings but not included in Parcels 35.1 through 35.4. This subparcel is also associated with Remedial Investigation (RI) Site 32 (Sandblasting Waste Accumulation Area). Fourteen surface soil samples (five samples were associated with Screening Site 33 which is included in Parcel 35.4) and three soil borings (one associated with SS 33) were collected in Parcel 35.5. Sample results associated with RI site 32 indicated levels of chromium, lead, arsenic, and poly aromatic hydrocarbons (PAHs) that exceeded BCT screening criteria. Surface soil sample results associated with Screening Site 33 indicated levels of metals and PAHs that exceeded BCT screening criteria. PCBs were detected in Site 33 samples taken during the Law Environmental study in 1991. PCBs were not detected in Site 33 samples taken during the screening site sampling in the winter of 1997. Due to the presence of metals, PAHs and PCBs, this subparcel requires additional investigation or should become an early removal candidate. At the October 1997 meeting, the BCT concurred that this subparcel should change to a Category 6.

SECTION THREE INSTALLATION-WIDE ENVIRONMENTAL PROGRAM STATUS**3.4.7 Unevaluated Areas or Areas Requiring Additional Evaluation**

The Category 7 subparcels listed below are areas that have not been evaluated or require additional evaluation. Information regarding releases was obtained from the Depot's Spill Response Checklists maintained by the Environmental Division. Eighty four subparcels, encompassing 428.90 acres, have been designated as Category 7.

Parcel Number and Label 1.8(7)**CERFA Map Location 33,12**

This subparcel is associated with Parcel 1. Both the North and South Parking Lots in this subparcel are the location of former housing units. These housing units were demolished and the potential impacts from these units are unknown. Additionally, based on an interview with DDMT personnel, the surface soil surrounding the buildings at the installation has the potential for pesticide contamination. A 4-gallon motor oil spill was reported on March 22, 1995 for the Gate 1 parking lot. In addition, a diesel spill was reported on October 28, 1993 in the street at Gate 1. The precise location of the spills are unknown. Based on BRAC sample results, this subparcel will remain a Category 7 and will be addressed in the upcoming sitewide risk assessment for dieldrin.

Parcel Number and Label 3.5(7)**CERFA Map Location 29,4**

This subparcel is associated with Parcel 3. Based on an interview with DDMT personnel, the surface soil in the Golf Course Area has the potential for pesticide contamination. Based on BRAC sample results, this subparcel will remain a Category 7 and will be addressed in the upcoming sitewide risk assessment for Dieldrin. This subparcel should also be evaluated for arsenic in surface soils.

Parcel Number and Label 3.6(7)**CERFA Map Location 26,6**

Lake Danielson is located in the northwest corner of the Golf Course and receives stormwater runoff from the central portion of DDMT. Surface water samples detected DDT and sediment samples detected chlordane and metals. Additional evaluation is necessary to determine the environmental condition of this subparcel.

SECTION THREE INSTALLATION-WIDE ENVIRONMENTAL PROGRAM STATUS**Parcel Number and Label 3.7(7)****CERFA Map Location 26,4**

Lake Danielson outlet ditch receives stormwater flow from surrounding areas and intermittent flow from the lake. Surface water samples SW-9 and SW-12 detected pesticides and metals. Groundwater sample from MW-25 detected VOCs and metals. Additional evaluation is necessary to determine the environmental condition of this subparcel.

Parcel Number and Label 3.8(7)**CERFA Map Location 32,5**

Golf Course Pond receives surface water runoff from the golf course and southeast portion of the installation. Sediment samples detected metals, DDT, and pesticides. Additional evaluation is necessary to determine the environmental condition of this subparcel.

Parcel Number and Label 3.9(7)**CERFA Map Location 30,3**

Golf Course Pond outlet ditch receives stormwater flow from surrounding areas and intermittent flow from the pond. Surface water samples SW-10 and SW-11 detected pesticides and metals. Surface soil sample SS-13 detected PAHs. Additional evaluation is necessary to determine the environmental condition of this subparcel.

Parcel Number and Label 3.10(7)**CERFA Map Location 30,6**

A 1947 installation map shows a pistol range directly behind where Building 271 now stands, near the 9th hole of the golf course. Soil samples indicate arsenic and dieldrin levels that exceeded BCT screening criteria. Additional evaluation is necessary to determine the environmental condition of this subparcel.

Parcel Number and Label 3.11(7)**CERFA Map Location 30,6**

This area is within the Golf Course and was used to test flame-thrower fuels. Firefighting techniques were also practiced at this site after ignition of the fuel. Soil samples indicate dieldrin and

SECTION THREE INSTALLATION-WIDE ENVIRONMENTAL PROGRAM STATUS

benzo(a)pyrene at levels similar to those found elsewhere on the Depot. This area will be further evaluated for these substances on a site-wide basis

Parcel Number and Label 4.5(7)**CERFA Map Location 30,8**

This subparcel is associated with Parcel 4. Based on an interview with Depot personnel, the surface soil surrounding buildings at the installation has the potential for pesticide contamination

Two 12,000-gallon and one 20,000-gallon gasoline USTs were removed in 1986 south of Building 257. These tanks were replaced by one 18,000-gallon and one 20,000-gallon gasoline UST. The actual location of these two existing USTs (18,000 and 20,000 gallon tanks) is within Parcel 4.6. These tanks were removed in June 1998. Soil sampling conducted in accordance with TN UST removal procedures indicated no release of gasoline or diesel. A 5,000-gallon heating oil tank was removed in July 1994 outside of Building 253. Additional evaluation is necessary to determine the environmental condition of this subparcel.

Parcel Number and Label 4.9(7)**CERFA Map Location 29,8**

Pad 267 is a concrete slab, the site of the former pesticide shop (Building T-267). This building was used for storage/mixing of pesticides/herbicides. Rinse water from pesticide/herbicide spraying operation was reportedly dumped on the ground near the facility. Surface soil samples indicated dieldrin at levels below BCT screening criteria. Additional evaluation is necessary to determine the environmental condition of this subparcel.

Parcel Number and Label 4.10(7)**CERFA Map Location 31,7**

Building 273 was used for mixing golf course pesticides and herbicides. Surface soil samples (SS-37 and SS-50) detected VOCs, PAHs and pesticides. Soil samples indicated dieldrin at levels above BCT screening criteria. This area will be further evaluated under the site-wide dieldrin study.

SECTION THREE INSTALLATION-WIDE ENVIRONMENTAL PROGRAM STATUS**Parcel Number and Label 6.1(7)****CERFA Map Location 28,11**

This subparcel is associated with Parcel 6. This subparcel contains railroad tracks that were historically sprayed with pesticides, herbicides and waste oil containing PCP. Based on an interview with Depot personnel, the surface soil surrounding the buildings at the installation has the potential for pesticide contamination. Soil samples indicate dieldrin and PCB 1260 at levels above the BCT screening criteria. Additional evaluation is necessary to determine the environmental condition of this subparcel.

Parcel Number and Label 8.1(7)**CERFA Map Location 28,14**

This subparcel is associated with Parcel 8. This subparcel contains railroad tracks that were historically sprayed with pesticides, herbicides and waste oil containing PCP. Based on an interview with Depot personnel, the surface soil surrounding the buildings at the installation has the potential for pesticide contamination. Soil samples indicated levels of dieldrin above the BCT screening criteria. Dieldrin will be evaluated on a site-wide basis

Parcel Number and Label 9.1(7)**CERFA Map Location 23,13**

This subparcel is associated with Parcel 9. Based on an interview with Depot personnel, the surface soil surrounding the buildings at the installation has the potential for pesticide contamination. Soil samples indicated levels of dieldrin above the BCT screening criteria. Dieldrin will be evaluated on a site-wide basis.

Parcel Number and Label 10.2(7)**CERFA Map Location 18,11**

This subparcel is associated with Parcel 10. This subparcel contains railroad tracks that were historically sprayed with pesticides, herbicides and waste oil containing PCP. Based on an interview with Depot personnel, the surface soil surrounding the buildings at the installation has the potential for pesticide contamination. Soil samples indicated levels of dieldrin above the BCT screening criteria. Dieldrin will be evaluated on a site-wide basis

SECTION THREE INSTALLATION-WIDE ENVIRONMENTAL PROGRAM STATUS**Parcel Number and Label 10.3(7)****CERFA Map Location 17,10**

A battery acid and hydraulic fluid spill were reported on March 18, 1993 between Buildings 550 and 650. The precise location of the spill is unknown. Additional evaluation is necessary to determine the environmental condition of this subparcel.

Parcel Number and Label 11.1(7)**CERFA Map Location 18,14**

This subparcel is associated with Parcel 11. This subparcel contains railroad tracks that were historically sprayed with pesticides, herbicides and waste oil containing PCP. Based on an interview with Depot personnel, the surface soil surrounding the buildings at the installation has the potential for pesticide contamination. Soil samples indicated levels of dieldrin above the BCT screening criteria. Dieldrin will be evaluated on a site-wide basis. Additional evaluation is necessary to determine the environmental condition of this subparcel.

Parcel Number and Label 12.1(7)**CERFA Map Location 17,15**

This subparcel is associated with Parcel 12. This subparcel contains railroad tracks that were historically sprayed with pesticides, herbicides and waste oil containing PCP. Based on an interview with Depot personnel, the surface soil surrounding the buildings at the installation has the potential for pesticide contamination. Soil samples indicated levels of PAH compounds and dieldrin above the BCT screening criteria. PAHs and dieldrin will be evaluated on a site-wide basis. Additional evaluation is necessary to determine the environmental condition of this subparcel.

Parcel Number and Label 13.5(7)**CERFA Map Location 33,16**

This subparcel is associated with Parcel 13. This subparcel contains railroad tracks that were historically sprayed with pesticides, herbicides and waste oil containing PCP. Based on an interview with Depot personnel, the surface soil surrounding the buildings at the installation has the potential for pesticide contamination. Soil samples indicated levels of dieldrin above the BCT screening criteria. Dieldrin will be evaluated on a site-wide basis. Additional evaluation is necessary to determine the environmental condition of this subparcel.

SECTION THREE INSTALLATION-WIDE ENVIRONMENTAL PROGRAM STATUS**Parcel Number and Label 14.2(7)****CERFA Map Location 33,17**

This subparcel is associated with Parcel 14. This subparcel contains railroad tracks that were historically sprayed with pesticides, herbicides and waste oil containing pentachlorophenol. Soil samples indicated levels of dieldrin above the BCT screening criteria. Dieldrin will be evaluated on a site-wide basis. In addition, this subparcel is associated with a 12,000-gallon heating oil tank that was located outside of Building 209 but was removed in July of 1994 (The Pickering Firm 1993d). There has been no documented release associated with this tank, and no evidence was found of disposal or of migration from an adjacent property of hazardous substances or petroleum products. Additional evaluation is necessary to determine the environmental condition of this subparcel.

Parcel Number and Label 15.3(7)**CERFA Map Location 26,16**

Building 319 was a storage facility for various hazardous substances including flammables and toxics (cyanide). Low-level radioactive materials were also stored in the western bay of Building 319. In 1997, approximately 8 feet of wall space within the western bay was remediated for low-level radioactive impacts. Beginning in 1994, the eastern end of Building 319 was used for hazardous waste storage by DRMO. In addition, a xylene spill was reported on November 18, 1991, inside Building 319, Section 4. Soil samples indicated chromium and lead at levels well below the 1 in a million risk ratio for both residential and industrial scenarios. Additional evaluation is necessary to determine the environmental condition of this subparcel.

Parcel Number and Label 15.4(7)**CERFA Map Location 14,18**

This subparcel is associated with Screening Site 79, adjacent to Building S702. Building S702 was demolished in February 1998. A soil boring at Site 79 indicated elevated levels of PAHs, dieldrin and chromium. The BCT determined at its September 1997 meeting that Site 79 required a risk assessment to determine future actions. PAHs and dieldrin will be evaluated on a site-wide basis.

Parcel Number and Label 15.6(7)**CERFA Map Location 18,17**

This subparcel is associated with Parcel 15, which consists of Open Storage Yards X09, Y10 and Y50, Buildings 301, 304, 305, 306, 307, S309, T416, T417 and 701, and includes three Screening Sites.

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The DRMO East Stormwater Runoff Canal (Screening Site 54) and the DRMO North Stormwater Runoff Canal (Screening Site 55) are canals that collect stormwater runoff from the DRMO Yard and other Depot facilities. No previous sampling has been conducted at these sites (CH2M Hill 1995h). Screening Site 72 (Property Disposal Office Yard) is associated with an area that was treated with waste oil for dust control. Other soil and groundwater samples from within this subparcel detected metals, pesticides and methylene chloride (CH2M Hill 1995h). During the EBS visual inspection of this area, spills of a dark liquid were observed on the concrete pad (Real Property 88015) located south of Building 702 and west of Building 629. In addition, this subparcel contains railroad tracks that were historically sprayed with pesticides, herbicides and waste oil containing pentachlorophenol. Soil samples indicated levels of dieldrin above the BCT screening criteria. Dieldrin will be evaluated on a site-wide basis. In addition, this subparcel is associated with a 4,000-gallon heating oil tank that was located outside of Building 319 but was removed in July of 1994 (The Pickering Firm 1993d). There has been no documented release associated with this tank, and no evidence was found of disposal or of migration from an adjacent property of hazardous substances or petroleum products. This subparcel is also associated with a 30-gallon solvent spill south of Building 309 that was reported on December 2, 1991. The precise location of the spill is unknown. The contaminated soils associated with this release have been removed, and no further removal or remedial actions are required for this release (DDMT 1992). Additional evaluation is necessary to determine the environmental condition of this subparcel.

Parcel Number and Label 16.1(7)**CERFA Map Location 21,9**

This subparcel is associated with Parcel 16. This subparcel contains storage facilities. Based on an interview with Depot personnel, the surface soil surrounding buildings at the installation has the potential for pesticide contamination. In addition, this subparcel contains railroad tracks that were historically sprayed with pesticides, herbicides and waste oil containing pentachlorophenol. Soil samples indicated levels of dieldrin above the BCT screening criteria. Dieldrin will be evaluated on a site-wide basis. Additional evaluation is necessary to determine the environmental condition of this subparcel.

Parcel Number and Label 17.2(7)**CERFA Map Location 22,9**

This subparcel is associated with Parcel 17. Based on an interview with Depot personnel, the surface soil surrounding buildings at the installation has the potential for pesticide contamination. In addition,

SECTION THREE INSTALLATION-WIDE ENVIRONMENTAL PROGRAM STATUS

this subparcel contains railroad tracks that were historically sprayed with pesticides, herbicides and waste oil containing pentachlorophenol. Soil samples indicated levels of dieldrin above the BCT screening criteria. Dieldrin will be evaluated on a site-wide basis. In addition, this subparcel is associated with the following tanks:

- A 12,000-gallon and a 500-gallon fuel oil tank that were located at Building 359 and were closed in place in July 1994 and September 1995, respectively (The Pickering Firm 1993d)
- A 1,000-gallon fuel oil tank and a 500-gallon diesel tank that were located at Building 359 but were removed in 1993 (The Pickering Firm 1993d; Facilities Engineering Division DDMT 1993)
- A 12,000-gallon and a 500-gallon fuel oil tank that were located at Building 359, but were removed in 1993 (The Pickering Firm 1993d; Facilities Engineering Division DDMT 1993)

There have been no documented releases associated with these tanks, and no evidence was found of disposal or of migration from an adjacent property of hazardous substances or petroleum products. Additional evaluation is necessary to determine the environmental condition of this subparcel.

Parcel Number and Label 19.1(7)

CERFA Map Location 21,8

This subparcel is associated with Parcel 19. This subparcel contains storage facilities. Based on an interview with Depot personnel, the surface soil surrounding buildings at the installation has the potential for pesticide contamination. In addition, this subparcel contains railroad tracks that were historically sprayed with pesticides, herbicides and waste oil containing pentachlorophenol. In addition, this subparcel is associated with a 1,000-gallon oil/water separator that is located at Building S465 (The Pickering Firm 1993d). There has been no documented release associated with this oil/water separator, and no evidence was found of disposal or migration from an adjacent property of hazardous substances or petroleum products. Additional evaluation is necessary to determine the environmental condition of this subparcel.

SECTION THREE INSTALLATION-WIDE ENVIRONMENTAL PROGRAM STATUS**Parcel Number and Label 19.2(7)****CERFA Map Location 22,7**

This subparcel is associated with Building S465 a vehicle wash rack. In September 1997, the BCT recommended performing a building walk-through to assess whether hazardous materials have been spilled. Additional evaluation is necessary to determine the environmental condition of this subparcel.

Parcel Number and Label 19.3(7)**CERFA Map Location 22,8**

This subparcel is associated with proposed NFA Sites 40 and 41 at Building 469, which is used for storage of sulfuric acid, hydraulic fluid and lubrication oil. In addition, according to an interview, a PCB spill took place in this building that has not been investigated. Additional evaluation is necessary to determine the environmental condition of this subparcel.

Parcel Number and Label 20.5(7)**CERFA Map Location 19,6**

This subparcel is associated with Parcel 20. This subparcel contains grassy, paved and gravel areas around warehouse buildings (Buildings 670, 470 and 489). Based on an interview with Depot personnel, the surface soil surrounding buildings at the installation has the potential for pesticide contamination. In addition, this subparcel contains railroad tracks that were historically sprayed with pesticides, herbicides and waste oil containing pentachlorophenol. Soil samples indicated levels of dieldrin above the BCT screening criteria. Dieldrin will be evaluated on a site-wide basis. Additional evaluation is necessary to determine the environmental condition of this subparcel.

Parcel Number and Label 20.6(7)**CERFA Map Location 20,4**

This subparcel is associated with the location of a sulfuric acid spill that was reported on June 10, 1993, on the south dock of Bay 5, Building 489. (DDMT 1993). Sodium bicarbonate was applied to the material, all spill residue was gathered and disposed in accordance with local, state and federal regulations. Soil samples indicated levels of arsenic, PAH compounds and metals above the BCT screening criteria. PAHs will be evaluated on a site-wide basis. Additional evaluation is necessary to determine the environmental condition of this subparcel.

SECTION THREE INSTALLATION-WIDE ENVIRONMENTAL PROGRAM STATUS

Parcel Number and Label 21.5(7)

CERFA Map Location 19,3

This subparcel is associated with Parcel 21. Based on an interview with Depot personnel, the surface soil surrounding buildings at the installation has the potential for pesticide contamination. Soil samples indicated levels of dieldrin above the BCT screening criteria. Dieldrin will be evaluated on a site-wide basis. Additional evaluation is necessary to determine the environmental condition of this subparcel.

Parcel Number and Label 22.1(7)

CERFA Map Location 18,4

This subparcel is associated with Parcel 22. This subparcel contains storage facilities. Based on an interview with Depot personnel, the surface soil surrounding buildings at the installation has the potential for pesticide contamination. Soil samples indicated levels of PAH compounds above the BCT screening criteria. PAHs will be evaluated on a site-wide basis. Additional evaluation is necessary to determine the environmental condition of this subparcel.

Parcel Number and Label 22.2(7)

CERFA Map Location 17,4

This subparcel is associated with Screening Site 77, which is a battery recharge area located in Building 685 between Buildings 689 and 690. Site 77 is located outside the building between the docks for Buildings 689 and 690. Soil samples indicated levels of PAH compounds above the BCT screening criteria. PAHs will be evaluated on a site-wide basis. Additional evaluation is necessary to determine the environmental condition of this subparcel.

Parcel Number and Label 23.7(7)

CERFA Map Location 11,5

This subparcel is associated with Building 783, which is part of Screening Site 82. This building was previously designated for the storage of flammable items and ordnance material and is the location of the former Depot recoupment facility. Soil samples indicated levels of arsenic and dieldrin above the BCT screening criteria. Dieldrin will be evaluated on a site-wide basis. Additional evaluation is necessary to determine the environmental condition of this subparcel.

SECTION THREE INSTALLATION-WIDE ENVIRONMENTAL PROGRAM STATUS

Parcel Number and Label 23.8(7)

CERFA Map Location 11,3

This subparcel is associated with Building 793, which is part of Screening Site 82. Building 793 was previously designated for the storage of flammable items and ordnance material and is the location of the former Depot recoupment facility. Soil samples indicated levels of arsenic, chromium, lead and dieldrin above the BCT screening criteria. Dieldrin will be evaluated on a site-wide basis. Additional evaluation is necessary to determine the environmental condition of this subparcel.

Parcel Number and Label 23.11(7)

CERFA Map Location 6,2

This subparcel is associated with the western portion of Parcel 23. Based on an interview with Depot personnel, the surface soil surrounding buildings at the installation has the potential for pesticide contamination. Soil samples indicated levels of lead slightly above background levels. Additional evaluation is necessary to determine the environmental condition of this subparcel.

Parcel Number and Label 24.2(7)

CERFA Map Location 11,6

This subparcel is associated with area X03, which was used for storage of flammable materials in 55-gallon drums until 1988. The area then became steel storage. In addition, this subparcel contains railroad tracks that were historically sprayed with pesticides, herbicides and waste oil containing pentachlorophenol. Soil samples indicated levels of arsenic above the BCT screening criteria. Additional evaluation is necessary to determine the environmental condition of this subparcel.

Parcel Number and Label 24.3(7)

CERFA Map Location 11,7

This subparcel is associated with RI Site 34 and proposed NFA Sites 30, 40 and 41 at Buildings 770 and T771. The EBS visual inspection noted that hazardous materials (antifreeze, paint, solvents, Safety Kleen) and petroleum products were stored in Building 770. Several spills have been reported for this area: an oil spill was reported on August 23, 1993, outside Building 770 (northeast corner), a 50-gallon spill of PCB-containing liquid was reported on July 9, 1990, and a 55-gallon spill of petroleum was reported on November 7, 1991 outside Building 770 (west side). Reportedly, the contaminated material associated with these releases was removed, and no further removal or remedial

SECTION THREE INSTALLATION-WIDE ENVIRONMENTAL PROGRAM STATUS

actions are required (DDMT 1992; 1993). Several tanks have been removed (The Pickering Firm 1993d; Facilities Engineering Division DDMT 1993), including:

- A 11,155-gallon diesel tank removed in July 1994
- A 11,155-gallon fuel oil tank removed in July 1994
- A 10,000-gallon fuel oil tank removed in July 1994
- A 440-gallon gasoline tank removed in December 1989
- Two 1,000-gallon used motor oil tanks removed in December 1989

Building 770 has an oil/water separator that is pumped out quarterly and a floor drain. Surface soil samples (SS-38 and SS-39) detected PAHs, VOCs, pesticides, and metals (CH2M Hill 1995d). The EBS visual inspection noted oil staining on the floor of Building T771. Soil samples indicated levels of metals and PAH compounds above the BCT screening criteria. PAHs will be evaluated on a site-wide basis. Additional evaluation is necessary to determine the environmental condition of this subparcel.

Parcel Number and Label 26.1(7)

CERFA Map Location 6,9

This subparcel is associated with Parcel 26. Based on an interview with Depot personnel, the surface soil surrounding buildings and railroad tracks at the installation has the potential for pesticide contamination. In addition, this subparcel contains railroad tracks that were historically sprayed with pesticides, herbicides and waste oil containing pentachlorophenol. Subsurface soil sampling indicated no levels above BCT screening criteria; however, surface soil samples must be collected to determine the environmental condition of this subparcel.

Parcel Number and Label 27.1(7)

CERFA Map Location 4,9

This subparcel is associated with Parcel 27. This subparcel contains storage facilities. Based on an interview with Depot personnel, the surface soil surrounding buildings and railroad tracks at the installation has the potential for pesticide contamination. In addition, this subparcel contains railroad tracks that were historically sprayed with pesticides, herbicides and waste oil containing pentachlorophenol. Soil samples indicated levels of chromium, PAH compounds and chlorinated pesticides above the BCT screening criteria. PAHs will be evaluated on a site-wide basis. Additional evaluation is necessary to determine the environmental condition of this subparcel.

SECTION THREE INSTALLATION-WIDE ENVIRONMENTAL PROGRAM STATUS**Parcel Number and Label 29.2(7)****CERFA Map Location 4,18**

This subparcel is associated with Parcel 29, which contains open storage areas X27 and X30. Based on an interview with Depot personnel, the open storage areas have the potential for hazardous materials to have been released. In addition, this subparcel contains railroad tracks that were historically sprayed with pesticides, herbicides and waste oil containing pentachlorophenol. Soil samples indicated levels of dieldrin and chromium above the BCT screening criteria. Dieldrin will be evaluated on a site-wide basis. Additional evaluation is necessary to determine the environmental condition of this subparcel.

In addition, this subparcel is associated with a 1.25-gallon hydraulic fluid spill that was reported on September 12, 1995 in the street. The spill reportedly spread north, through Gate 15, and across Dunn Avenue (DDMT 1995). The precise location of the spill is unknown. Application of absorbent was sufficient to contain the spill, and no further remedial action was deemed necessary.

Parcel Number and Label 29.3(7)**CERFA Map Location 2,11**

This subparcel is associated with Screening Site 56, the west stormwater drainage canal that collects the stormwater runoff from the pentachlorophenol tank area and the western portion of the Main Installation. Surface water samples SW-2 and SW-14 detected 2-butanone and metals (CH2M Hill 1995b). Soil samples indicated levels of dieldrin above the BCT screening criteria. Dieldrin will be evaluated on a site-wide basis. Additional evaluation is necessary to determine the environmental condition of this subparcel.

Parcel Number and Label 30.2(7)**CERFA Map Location 4,13**

This subparcel is associated with proposed NFA Site 53, a spill between Buildings 925 and P949 of 325 gallons of flammable solvents. The spill occurred on January 19, 1988. The material associated with the spill was removed. Additional evaluation is necessary to determine the environmental condition of this subparcel.

SECTION THREE INSTALLATION-WIDE ENVIRONMENTAL PROGRAM STATUS**Parcel Number and Label 30.3(7)****CERFA Map Location 4,15**

This subparcel is associated with Parcel 30, which contains open storage area X23. Based on an interview with Depot personnel, the open storage areas have the potential for hazardous materials to have been released. In addition, this subparcel contains railroad tracks that were historically sprayed with pesticides, herbicides and waste oil containing pentachlorophenol. Additional evaluation is necessary to determine the environmental condition of this subparcel.

Parcel Number and Label 30.5(7)**CERFA Map Location 4,10**

This subparcel is associated with Screening Site 83, which is adjacent to the south side of Building P949. This location was apparently used for outside spray painting and sandblasting, and some dried paint residues remain. Surface soil sample SS-20 taken in 1990 during the Law Environmental study exhibited metals, pesticides, VOCs, and semi-volatile organic compounds (SVOCs) (CH2M Hill 1995h). Soil samples taken in 1997 indicated levels of metals above the BCT screening criteria. Additional evaluation is necessary to determine the environmental condition of this subparcel.

Parcel Number and Label 31.1(7)**CERFA Map Location 6,13**

This subparcel is associated with Parcel 31, which contains open storage areas X17, X19, X20 and X21. Based on an interview with Depot personnel, the open storage areas have the potential for hazardous materials to have been released. In addition, this subparcel contains railroad tracks that were historically sprayed with pesticides, herbicides and waste oil containing pentachlorophenol. Soil samples indicated levels of metals adjacent to the railroad tracks. Additional evaluation is necessary to determine the environmental condition of this subparcel.

Parcel Number and Label 32.3(7)**CERFA Map Location 9,10**

This subparcel is associated with Screening Site 28, Building 865, the Recoup Building, which is a hazardous materials and waste handling area used to transfer materials from damaged or leaking containers into undamaged containers. The site includes the entire building. No previous sampling has been performed for the site. A small fenced-in area is located on the southwest side of Building 865. This area contained various drums (5-, 10-, 15-, and 55-gallon) of old chemicals (oil, methyl ethyl

SECTION THREE INSTALLATION-WIDE ENVIRONMENTAL PROGRAM STATUS

ketone, isopropanol), some with protruding rusting tops (CH2M Hill 1995h) Soil samples indicated levels of arsenic and lead above the BCT screening criteria. Additional evaluation is necessary to determine the environmental condition of this subparcel

Parcel Number and Label 33.7(7)

CERFA Map Location 13,7

This subparcel is associated with Screening Site 81, Building 765, a fuel oil AST removed in 1994. Soil samples indicated levels of PAH compounds and pesticides at the railroad tracks. PAHs and pesticides at railroad tracks will be evaluated on a site-wide basis. Additional evaluation is necessary to determine the environmental condition of this subparcel.

Parcel Number and Label 33.8(7)

CERFA Map Location 10,10

This subparcel is associated with Building S863. The EBS visual inspection noted considerable oil stains on the concrete floor of Building S863. Additional evaluation is necessary to determine the environmental condition of this subparcel.

Parcel Number and Label 33.9(7)

CERFA Map Location 12,14

This subparcel is associated with Screening Sites 42, 43, 46 and 80, which include storage areas X05, X06, X07, X08, X10, X11 and X12. These areas formerly contained drums with flammable contents. The pentachlorophenol dip vat (Site 42) and UST (Site 43) near Building 737 were remediated. Building 737 is currently used for storing and mixing pesticides. The former pentachlorophenol pallet drying area is Site 46. Building 720 (Site 80) was used for dispensing fuel and cleaners. Surface soil sample SS-24 detected VOCs, PAHs, DDT, and metals. Soil boring STB-4 detected 2-butanone (CH2M Hill 1995b, CH2M Hill 1995h). Soil samples indicated levels of metals, PAHs and PCBs above the BCT screening criteria. In addition, this subparcel is associated with a 12,000-gallon diesel AST that was located at Building 720, but was removed in June 1996 (Facilities Engineering Division DDMT 1993; CH2M Hill 1995h). There have been no documented releases associated with these tanks, and no evidence was found of disposal or of migration from an adjacent property of hazardous substances or petroleum products. Additional evaluation is necessary to determine the environmental condition of this subparcel.

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Parcel Number and Label 35.1(7)

CERFA Map Location 3,3

This subparcel is associated with Building S1090, a paint storage igloo. The EBS visual inspection documented the storage of paint thinner, lubricating oil, P-19 preservation oil and corrosion prevention compound inside this building. Additional evaluation is necessary to determine the environmental condition of this subparcel.

Parcel Number and Label 35.2(7)

CERFA Map Location 3,5

This subparcel is associated with three proposed ER sites: Site 88 is an old concrete grease rack and storage area for POL located at former Building 1085; Site 29 was a UST associated with the grease rack that was removed in 1988; Site 87 (Building 1084) was once used for storage of DDT and other pesticides (CH2M Hill 1995i). Soil samples indicated levels of arsenic, chromium, lead, cadmium, dieldrin and petroleum above the BCT screening criteria. Dieldrin will be evaluated on a site-wide basis. Additional evaluation is necessary to determine the environmental condition of this subparcel.

Parcel Number and Label 35.3(7)

CERFA Map Location 3,5

This subparcel is associated with proposed NFA Site 30 at Building 1086, which contained a permitted-spray paint booth and was used to store hazardous materials from 1959 through 1984. The EBS visual inspection noted that this building has a sump. Additional evaluation is necessary to determine the environmental condition of this subparcel.

Parcel Number and Label 35.4(7)

CERFA Map Location 3,3

This subparcel is associated with RI Site 32, which is next to Building 1088, and Screening Sites 31 and 33. Building 1087 (Screening Site 31) is the former location of a spray paint booth used to conduct major stock primer and enamel spray painting operations. Screening Site 33 is an open-sided, metal roof shed with a gravel floor adjacent to Building 1088, which was historically used to store 55-gallon drums containing spent sandblasting material. Surface soil samples taken in 1990 during the Law Environmental study detected toluene, PAHs, pesticides, PCBs, metals and VOCs. A groundwater sample from MW-22 contained VOCs, SVOCs and metals (CH2M Hill 1995d, 1995h). Soil samples taken in 1997 indicated levels of PAH compounds and dieldrin above the BCT screening

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criteria. PAHs and dieldrin will be evaluated on a site-wide basis. Additional evaluation is necessary to determine the environmental condition of this subparcel.

Parcel Number and Label 36.1(7)

CERFA Map Location 30,9

This subparcel is associated with proposed ER Site 2. A 7-pound jug of ammonia hydroxide and a 1-gallon bottle of acetic acid were buried at this location. Existing data are not adequate to assess if a release has occurred (CH2M Hill 1995j). Additional evaluation is necessary to determine the environmental condition of this subparcel.

Parcel Number and Label 36.2(7)

CERFA Map Location 30,9

This subparcel is associated with proposed ER Site 3. Three thousand quarts of unknown chemicals and 5 cubic feet of orthotoluidine dihydrochloride are buried here. Existing data are not adequate to assess if a release has occurred (CH2M Hill 1995j). Additional evaluation is necessary to determine the environmental condition of this subparcel.

Parcel Number and Label 36.3(7)

CERFA Map Location 30,9

This subparcel is associated with proposed ER Sites 4 and 4.1. Forty-five 55-gallon drums of discarded oil, grease, paints, and thinner are buried in these two adjacent trenches. Existing data are not adequate to assess if a release has occurred (CH2M Hill 1995j). Additional evaluation is necessary to determine the environmental condition of this subparcel.

Parcel Number and Label 36.4(7)

CERFA Map Location 30,9

This subparcel is associated with proposed ER Site 5. Three cubic feet of methyl bromide are buried in an unidentified container or containers. Existing data are not adequate to assess if a release has occurred (CH2M Hill 1995j). Additional evaluation is necessary to determine the environmental condition of this subparcel.

SECTION THREE INSTALLATION-WIDE ENVIRONMENTAL PROGRAM STATUS**Parcel Number and Label 36.5(7)****CERFA Map Location 30,8**

This subparcel is associated with proposed ER Site 7. Approximately 1,700 quart bottles of nitric acid are buried here. Existing data are not adequate to assess if a release has occurred (CH2M Hill 1995j). Additional evaluation is necessary to determine the environmental condition of this subparcel.

Parcel Number and Label 36.6(7)**CERFA Map Location 30,8**

This subparcel is associated with proposed ER Site 8. Approximately 3,768 one-gallon cans of methyl bromide are buried at a depth of approximately 7 feet. Existing data are not adequate to assess if a release has occurred (CH2M Hill 1995j). Additional evaluation is necessary to determine the environmental condition of this subparcel.

Parcel Number and Label 36.7(7)**CERFA Map Location 31,9**

This subparcel is associated with proposed ER Site 11. Eleven gallons, in 1,433 one-ounce bottles, of trichloroacetic acid are buried at a depth of approximately 6 feet. Existing data are not adequate to assess if a release has occurred (CH2M Hill 1995j). Additional evaluation is necessary to determine the environmental condition of this subparcel.

Parcel Number and Label 36.8(7)**CERFA Map Location 27,8**

This subparcel is associated with proposed ER Sites 12 and 12.1. Thirty pallets of discarded acid containers are buried in three locations to a depth of approximately 8 feet. Existing data are not adequate to assess if a release has occurred (CH2M Hill 1995j). Additional evaluation is necessary to determine the environmental condition of this subparcel.

Parcel Number and Label 36.9(7)**CERFA Map Location 28,8**

This subparcel is associated with proposed ER Site 13. Approximately 32 cubic yards of mixed chemicals and acids and 8,100 pounds of unnamed solids were buried at a depth of approximately 8 feet. Existing data are not adequate to assess if a release has occurred (CH2M Hill 1995j). Additional evaluation is necessary to determine the environmental condition of this subparcel.

SECTION THREE INSTALLATION-WIDE ENVIRONMENTAL PROGRAM STATUS**Parcel Number and Label 36.10(7)****CERFA Map Location 28,8**

This subparcel is associated with proposed ER Sites 16 and 16.1. Unknown amounts of an unnamed acid were buried at these sites. Existing data are not adequate to assess if a release has occurred (CH2M Hill 1995j). Additional evaluation is necessary to determine the environmental condition of this subparcel.

Parcel Number and Label 36.11(7)**CERFA Map Location 28,8**

This subparcel is associated with proposed ER Site 17. An unknown amount of chemicals and medical supplies was buried at this site. Existing data are not adequate to assess if a release has occurred (CH2M Hill 1995j). Additional evaluation is necessary to determine the environmental condition of this subparcel.

Parcel Number and Label 36.12(7)**CERFA Map Location 23,11**

This subparcel is associated with proposed ER Site 62. It contains one above-grade bauxite pile. Existing data are not adequate to assess if a release has occurred (CH2M Hill 1995i). Additional evaluation is necessary to determine the environmental condition of this subparcel.

Parcel Number and Label 36.13(7)**CERFA Map Location 27,11**

This subparcel is associated with proposed ER Site 62. It contains two above-grade bauxite piles. Existing data are not adequate to assess if a release has occurred (CH2M Hill 1995i). Additional evaluation is necessary to determine the environmental condition of this subparcel.

Parcel Number and Label 36.14(7)**CERFA Map Location 31,11**

This subparcel is associated with proposed ER Sites 60 and 85. ER Site 60 is a former pistol range and impact area, and ER Site 85 is Building 1184. Building 1184 was previously used as a range shed and is now used for temporary pesticide storage. Existing data are not adequate to assess if a release

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has occurred (CH2M Hill 1995i). Additional evaluation is necessary to determine the environmental condition of this subparcel.

Parcel Number and Label 36.15(7)

CERFA Map Location 29,10

This subparcel is associated with the fluvial aquifer groundwater contamination identified at Dunn Field. An interim remedial action addressing the contamination has been proposed (CH2M Hill 1995g). In addition, this subparcel contains railroad tracks that were historically sprayed with pesticides, herbicides and waste oil containing pentachlorophenol. Additional evaluation is necessary to determine the environmental condition of this subparcel.

Parcel Number and Label 36.16(7)

CERFA Map Location 29,9

This subparcel is associated with CWMP Site 1. Nine CAIS's (containing mustard gas and lewisite) were buried at this site. Existing data are not adequate to assess whether a release has occurred (CH2M Hill 1995c). Additional evaluation is necessary to determine the environmental condition of this subparcel.

Parcel Number and Label 36.17(7)

CERFA Map Location 30,9

This subparcel is associated with CWMP Site 9. Ashes and metals from the former burn site, Screening Site 64, were buried here. Existing data are not adequate to assess if a release has occurred (CH2M Hill 1995c). Additional evaluation is necessary to determine the environmental condition of this subparcel.

Parcel Number and Label 36.18(7)

CERFA Map Location 28,9

This subparcel is associated with a portion of CWMP Site 86. Food items with expired shelf lives and, reportedly, CAIS's were buried here. Existing data are not adequate to assess if a release has occurred (CH2M Hill 1995c). Additional evaluation is necessary to determine the environmental condition of this subparcel.

SECTION THREE INSTALLATION-WIDE ENVIRONMENTAL PROGRAM STATUS**Parcel Number and Label 36.19(7)****CERFA Map Location 28,9**

This subparcel is associated with a portion of CWMP Site 86. Food items with expired shelf lives and, reportedly, CAIS's were buried here. Existing data are not adequate to assess if a release has occurred (CH2M Hill 1995c). Additional evaluation is necessary to determine the environmental condition of this subparcel.

Parcel Number and Label 36.20(7)**CERFA Map Location 31,9**

This subparcel is associated with RI Site 6. There were 40,037 units of eye ointment buried here in 1955. No data exist to assess if a release has occurred (CH2M Hill 1995c). Additional evaluation is necessary to determine the environmental condition of this subparcel.

Parcel Number and Label 36.21(7)**CERFA Map Location 30,8**

This subparcel is associated with RI Site 10. This site was discovered during the installation of monitoring well 10. Charred debris was encountered. No data exist to assess what was buried at the site or if a release has occurred (CH2M Hill 1995c). Additional evaluation is necessary to determine the environmental condition of this subparcel.

Parcel Number and Label 36.22(7)**CERFA Map Location 28,8**

This subparcel is associated with RI Site 14. This is a municipal waste burial site that reportedly contains paper, food, and other unnamed materials. No data exist to assess if a release has occurred (CH2M Hill 1995c). Additional evaluation is necessary to determine the environmental condition of this subparcel.

Parcel Number and Label 36.23(7)**CERFA Map Location 28,8**

This subparcel is associated with RI Sites 15, 15.1, and 15.2. Records indicate that one pallet each of sodium and sodium phosphate containers and an unknown quantity of sodium, sodium phosphate, acid, chlorinated lime, and medical supplies were buried here in 1970. No data exist to assess if a release has

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occurred (CH2M Hill 1995c). Additional evaluation is necessary to determine the environmental condition of this subparcel.

Parcel Number and Label 36.24(7)**CERFA Map Location 28,11**

This subparcel is associated with Screening Site 19. This site was used for the disposal of sanitary wastes, construction debris, smoke pots, and tear gas canisters from 1955 to 1960. No sampling data have been collected for this site (A.T. Kearney, Inc. 1990). Additional evaluation is necessary to determine the environmental condition of this subparcel.

Parcel Number and Label 36.25(7)**CERFA Map Location 30,10**

This subparcel is associated with Screening Site 20. Reportedly, asphalt and roofing gravel were dumped in a surface fill at this location until 1981, when the debris was removed. Existing data are not adequate to assess if a release has occurred (A.T. Kearney, Inc. 1990). Additional evaluation is necessary to determine the environmental condition of this subparcel.

Parcel Number and Label 36.26(7)**CERFA Map Location 31,13**

This subparcel is associated with Screening Site 21. It is reported that XXCC-3 impregnate is buried here in two trenches at unknown depths. No data exist to assess if a release has occurred (A.T. Kearney, Inc. 1990). Additional evaluation is necessary to determine the environmental condition of this subparcel.

Parcel Number and Label 36.27(7)**CERFA Map Location 31,12**

This subparcel is associated with Screening Site 50. This site has a concrete-lined drainage ditch that collects stormwater runoff from surrounding areas. Surface water samples have been collected (during stormwater runoff), however, not enough data exist to assess the impact from this site (A.T. Kearney, Inc. 1990). Additional evaluation is necessary to determine the environmental condition of this subparcel.

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Parcel Number and Label 36.28(7)

CERFA Map Location 30,9

This subparcel is associated with Screening Site 61. This site is a drain that was installed in the mid-1950s and is used for stormwater conveyance. No data exist to assess if a release has occurred (A.T. Kearney, Inc. 1990). Additional evaluation is necessary to determine the environmental condition of this subparcel.

Parcel Number and Label 36.29(7)

CERFA Map Location 23,9

This subparcel is associated with CWMP Site 24 and Screening Site 64. This area is a current fluorspar storage area that historically was a bauxite storage area and mustard gas, smoke pot, and cyanide grenades and ordnance burn area (1946). No data exist to assess if a release has occurred (A.T. Kearney, Inc. 1990; CH2M Hill 1995c). Additional evaluation is necessary to determine the environmental condition of this subparcel.

Parcel Number and Label 36.30(7)

CERFA Map Location 28,12

This subparcel is associated with Dunn Field, excluding the areas that were previously parcelized. This subparcel contains railroad tracks that were historically sprayed with pesticides, herbicides and waste oil containing pentachlorophenol. No sampling has been performed in this area to confirm the absence of contamination. Additional evaluation is necessary to determine the environmental condition of this subparcel.

3.4.8 Qualified Parcels

In determining the qualified subparcels, Woodward-Clyde observed the following guidelines

- If a building was not included in the 1993 asbestos survey, but was constructed prior to 1985 it was assumed to contain ACM. An "A(P)" for the possible presence of asbestos was used to qualify the subparcel.
- Since a LBP survey for non-residential reuse buildings has not been conducted, then buildings constructed prior to 1978 were assumed to contain LBP. An "L(P)" for the possible presence of LBP was used to qualify the subparcel.

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- Parcels were qualified for ACM, LBP, PCBs, radon and radiological sources based on information gathered through records reviews, interviews and visual inspections.
- Areas used as firing ranges and impact areas have the potential to contain UXO and ammunition components (e.g., metal casings from small arms). An "X(P)" for the possible presence of UXO and ammunition components was used to qualify these areas.

There are 106 subparcels, totaling approximately 153 98 acres, identified as qualified subparcels as described in Table 3-8. When a qualified subparcel is associated with a building/facility, the acreage presented corresponds to the footprint of the building/facility. The qualified subparcels are labeled as follows on Table 3-8:

Parcel - Building Number or Area Q - Qualifier

For example, 1.1-1Q-A/L(P) represents Subparcel 1.1, Building 1, and asbestos and possible LBP qualifiers

3.4.9 Suitability of Installation Property for Transfer by Deed

Superfund Amendments and Reauthorization Act Title 1, Section 120 to CERCLA addresses the transfer of federal property on which any hazardous substance was stored during any one-year period or was released or disposed of. Section 120 also requires any deed for the transfer of such federal property to contain, to the extent such information is available from a complete search of agency files, the following information.

- A notice of the type and quantity of any hazardous substance storage, release or disposal;
- Notice of the time at which such storage, release or disposal took place,
- A description of what, if any, remedial action has occurred, and
- A covenant warranting that appropriate remedial action will be taken

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Under SARA Title 1, Section 120 to CERCLA, those subparcels which are Category 1, 2, 3, 4 or 5 (if the remedy in place has been approved by the Administrator) meet the CERCLA criterion of being suitable for transfer to a non-federal entity. Category 6 and 7 properties, which may have unknown environmental impacts or may involve releases of hazardous substances as defined by CERCLA, cannot be transferred to a non-federal entity under CERCLA until environmental restoration is initiated. The categorization process also provides valuable information regarding which property is available for unrestricted reuse because it has no environmental restrictions (Category 1 through 4), and which property is undergoing remedial action and may therefore have property reuse restrictions (Category 5).

The Depot has subparcels totaling approximately 180.4 acres classified as CERFA Category 1 through 4. These subparcels, described in Sections 3.4.1 through 3.4.4, are suitable for immediate transfer to a non-federal entity according to CERCLA. Approximately 461.81 acres of the Depot, discussed in Sections 3.4.5 through 3.4.7, are classified as CERFA Category 5 through 7 subparcels. Category 6 and 7 subparcels cannot be transferred to a non-federal entity under CERCLA until environmental restoration is initiated. Category 5 subparcels may be transferred but not until the remedy is in place.

Although not regulated by SARA Title 1, Section 120, non-CERCLA substances delineating qualified subparcels also affect the suitability of BRAC property for transfer. The DOD has prepared guidance for dealing with the transfer of qualified subparcels, stating that issues relating to the presence of non-CERCLA substances, such as asbestos, LBP and UXO, will be fully addressed prior to transfer of the property.

3.5 STATUS OF COMMUNITY INVOLVEMENT

Community involvement activities occurring at the Depot include activities relating to BRAC, the environmental restoration program, and the environmental compliance program. These activities include:

- **Information Repositories.** Information repositories are places where documents and information pertaining to the facility are stored and made available for public inspection and copying. The Depot has established information repositories at the Memphis/Shelby County Public Library (Main Branch and Cherokee Branch) and the Memphis/Shelby County Health Department Pollution Control Division. The

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repositories contain information about environmental activities at the Depot. A Community Reading Room has been created in the Environmental Division's office area. The room includes computers linked to the Internet and various BRAC, environmental restoration and environmental compliance reference material. The Depot has established an Information Repository within this room.

- **Administrative Record.** An administrative record has been established for the Depot in accordance with CERCLA requirements. The administrative record is maintained by Depot personnel.
- **Technical Review Committee.** A technical review committee (TRC) was formed in February 1994 to review and comment on the Depot's actions related to releases or threatened releases of hazardous substances at the installation. The TRC meetings served as working sessions of the involved Depot, CEHNC, EPA and TDEC remedial project managers to discuss progress and scheduling of investigations and cleanup actions with city and county officials, local health department officials, and Memphis Light, Gas and Water officials. The TRC evolved into the RAB.
- **Restoration Advisory Board.** On July 21, 1994, the Depot hosted the first RAB meeting. The Depot created the RAB to promote increased public involvement and enable continued flow of information, concerns, and needs between the community and the Depot. At the Depot, the RAB includes city council members, county commissioners, the Memphis/Shelby County Health Department, Memphis Light, Gas and Water, EPA, TDEC, local environmental groups, concerned citizens, and Depot. The RAB holds monthly meetings to discuss environmental restoration and reuse issues. The public is encouraged to attend these meetings.
- **Community Relations Plan.** A draft final Community Relations Plan (September 1998) was prepared for the installation. The Community Relations Plan identifies issues of community concern and proposes site-specific activities to address these concerns.

TABLE 3-1
POTENTIAL CONTAMINATION SITES ASSOCIATED
WITH OPERABLE UNITS

INSTALLATION RESTORATION SITE NUMBER	DSERTS SITE NUMBER	SUBPARCEL NUMBER	DESCRIPTION	CURRENT DISPOSITION OF SITE
Operable Unit 1: Dunn Field				
1	1	36 16	Mustard and Lewisite Training Sets (9 sets) Burial Site (1955)	CWMP
2	2	36 1	Ammonia Hydroxide (7 pounds) and Acetic Acid (1 gallon) Burial (1955)	Proposed ER
3	3	36.2	Mixed Chemical Burial Site (orthotoluidine dihydrochloride) (1955)	Proposed ER
4	4	36 3	POL Burial Site (thirteen 55-gallon drums of oil, grease, and paint)	Proposed ER
4 1	90	36 3	POL Burial Site (thirty-two 55-gallon drums of oil, grease, and thinner) (1955)	Proposed ER
5	5	36.4	Methyl Bromide Burial Site A (3 cubic feet) (1955)	Proposed ER
6	6	36 20	40,037 units ointment (eye) Burial Site (1955)	RI
7	7	36.5	Nitric Acid Burial Site (1,700 quart bottles) (1954)	Proposed ER
8	8	36 6	Methyl Bromide Burial Site B (3,768 1-gallon cans) (1954)	Proposed ER
9	9	36.17	Ashes and Metal Burial Site (burning pit refuse) (1955)	CWMP
10	10	36.21	Solid Waste Burial Site (near MW-10) (metal, glass, trash, etc)	RI
11	11	36 7	Trichloroacetic Acid Burial (1,433 1-ounce bottles) (1965)	Proposed ER
12 & 12.1	12	36.8	Sulfuric and Hydrochloric Acid Burial (1967)	Proposed ER
13	13	36 9	Mixed Chemical Burial (Acid, 900 pounds; unnamed solids, 8,100 pounds)	Proposed ER
14	14	36 22	Municipal Waste Burial Site B (near MW-12) (food, paper products)	RI
15	15	36 23	Sodium Burial Sites (1968)	RI
15 1	91	36 23	Sodium Phosphate Burial (1968)	RI
15 2	92	36.23	14 Burial Pits: Na ₂ PO ₄ , sodium, acid, medical supplies, and chlorinated lime	RI
16	16	36 10	Unknown Acid Burial Site (1969)	Proposed ER
16 1	93	36.10	Acid, date unknown	Proposed ER
17	17	36 11	Mixed Chemical Burial Site C (1969)	Proposed ER
18	18	36 30	Plane Crash Residue (Dunn Field)	Proposed NFA
19	19	36.24	Former Tear Gas Canister Burn Site (Dunn Field)	Screening
20	20	36 25	Probable Asphalt Burial Site (Dunn Field)	Screening
21	21	36 26	XXCC-3 Burial Site (Dunn Field)	Screening
22	22	36 30	Hardware Burial Site (nuts and bolts) (Dunn Field)	Proposed NFA
23	23	36 30	Construction Debris and Food Burial Site (Dunn Field)	Proposed NFA
24	24	36.29	Former Burn Site (1946)	CWMP
50	50	36.27	Dunn Field Northeastern Quadrant Drainage Ditch	Screening
60	60	36 14	Pistol Range Impact Area/Bullet Stop	Proposed ER
61	61	36.28	Buried Drain Pipe (Northwestern Quadrant of Dunn Field)	Screening
62	62	36.12/36.13	Bauxite Storage (Northeastern Quadrant of Dunn Field)	Proposed ER
63	63	36 30	Fluorspar Storage (Southeastern Quadrant of Dunn Field)	Proposed NFA
64	64	36.29	Bauxite Storage (Southwestern Quadrant of Dunn Field) (1942 to 1972)	Proposed ER
85	85	36 14	Old Pistol Range Building 1184/Temporary Pesticide Storage	Proposed ER
86	86	36.18/36.19	Food Supplies (Dunn Field), possible CWM test kits	CWMP
Operable Unit 2: Southwestern Quadrant, Main Installation				
27	27	24 1	Former Recoupment Area (Building S873)	RI
29	29	35 2	Former Underground Waste Oil Storage Tank	Proposed ER
30	30	24 3	Paint Spray Booths (2 of 3 total, Buildings 770 and 1086)	Proposed NFA
31	31	35 4	Former Paint Spray Booth (Building 1087)	Screening

TABLE 3-1
POTENTIAL CONTAMINATION SITES ASSOCIATED
WITH OPERABLE UNITS

376 116

INSTALLATION RESTORATION SITE NUMBER	DSERTS SITE NUMBER ¹	SUBPARCEL NUMBER	DESCRIPTION	CURRENT DISPOSITION OF SITE
32	32	35.4	Sandblasting Waste Accumulation Area	RI
33	33	35.4	Sandblasting Waste Drum Storage Area (metal shed south of Building 1088)	Screening
34	34	24.3	Building 770 Underground Oil Storage Tanks	RI
40	40	24.3	Safety Kleen Units - 5 of 9 total (all located in Building 770)	Proposed NFA
41	41	24.3	Satellite Drum Accumulation Areas - 1 of 4 total (vicinity Building 770)	Proposed NFA
47	47	33.6	Former Contaminated Soil Drum Storage Area (300 feet west of Building 689, removed 1988)	Proposed NFA
71	71	Multiple	Herbicide (All railroad tracks) (used to clear tracks)	Screening
82	82	23.7/23.8	Flammables (Buildings 783 and 793)	Screening
84	84	27.2	Flammables, Solvents, Waste Oil, etc (Building 972)	Proposed NFA
87	87	35.2	DDT, banned pesticides (Building 1084)	Proposed ER
88	88	35.2	POL (Building 1085)	Proposed ER
89	89	28.2	Acids (Building 1089)	RI/Proposed ER
Operable Unit 3: Southeastern Watershed And Golf Course, Main Installation				
25	25	3.8	Golf Course Pond	RI
26	26	3.6	Lake Danielson	RI
30	30	4.4	Paint Spray Booths (1 of 3 total - Building 260)	Proposed NFA
40	40	4, 19, and 21	Safety Kleen Units - 4 of 9 total units (Buildings 253, 469, 490, and 689)	Proposed NFA
41	41	4 and 19	Satellite Drum Accumulation Areas - 2 of 4 total areas (Buildings 260 and 469)	Proposed NFA
48	48	5.2	Former PCB Transformer Storage Area	Proposed ER
49	49	17.3	Medical Waste Storage Area	Proposed NFA
51	51	3.7	Lake Danielson Outlet Ditch	Screening
52	52	3.9	Golf Course Pond Outlet Ditch	Screening
58	58	4.9	Pesticides, Herbicides (Pad 267)	RI
59	59	4.10	Pesticides, Cleaners (Building 273)	RI
65	65	7.2	XXCC-3 (Building 249)	Proposed NFA
66	66	4.11	POL (Building 253)	Proposed NFA
67	67	4.7	MOGAS (Building 257)	Proposed NFA
68	68	4.8	POL (Building 263) (20 by 40 feet)	Proposed NFA
69	69	3.11	2,4-D, M2A1, and M4 Flamethrower Liquid Fuels (surface application)	RI
73	73	Multiple	2,4-Dichlorophenoxyacetic Acid (all grassed areas)	Screening
75	75	21.5	Unknown Wastes near Building 689	Screening
76	76	21.5	Unknown Wastes near Building 690	Screening
77	77	22.2	Unknown Wastes near Buildings 689 and 690	Screening
78	78	21.3	Alcohol, Acetone, Toluene, Naphtha; Hydrofluoric Acid Spill	Screening
Operable Unit 4: North-Central Area, Main Installation				
28	28	32.3	Recoupment Area (Building 865)	Screening
35	35	15.2	DRMO Building S308 - Hazardous Waste Storage	Proposed NFA
36	36	15.5	DRMO Hazardous Waste Concrete Storage Pad	Proposed ER
37	37	15.5	DRMO Hazardous Waste Gravel Storage Pad	Screening
38	38	15.5	DRMO Damaged/Empty Hazardous Materials Drum Storage Area	Screening
39	39	15.5	DRMO Damaged/Empty Lubricant Container Area	Screening
41	41	13.4	Satellite Drum Accumulation Area (1 of 4 total - Building 210)	Proposed NFA
42	42	33.9	Former pentachlorophenol Dip Vat Area	Screening
43	43	33.9	Former Underground pentachlorophenol Tank Area	Screening
44	44	33.6	Former Wastewater Treatment Unit Area	Proposed NFA

**TABLE 3-1
POTENTIAL CONTAMINATION SITES ASSOCIATED
WITH OPERABLE UNITS**

INSTALLATION RESTORATION SITE NUMBER	DSERTS SITE NUMBER	SUBPARCEL NUMBER	DESCRIPTION	CURRENT DISPOSITION OF SITE
45	45	33.9	Former Contaminated Soil Staging Area	Proposed NFA
46	46	33.9	Former pentachlorophenol Pallet Drying Area	Screening
53	53	30.2	X-25 Flammable Solvents Storage Area (near Building 925)	Screening
54	54	15.6	Main Installation - DRMO East Stormwater Runoff Canal	Screening
55	55	15.6	Main Installation - DRMO North Stormwater Runoff Canal	Screening
56	56	29.3	Main Installation - West Stormwater Drainage Canal	Screening
57	57	12.1	Building 629 Spill Area	RI
70	70	Multiple	POL, Various Chemical Leaks (railroad tracks 1, 2, 3, 4, 5, and 6)	Screening
71	71	Multiple	Herbicide (all railroad tracks) (used to clear tracks)	Screening
72	72	15.6	Waste Oil (DRMO yard) (surface application for dust control)	Screening
73	73	Multiple	2,4-Dichlorophenoxyacetic Acid (all grassed areas)	Screening
74	74	15.3	Flammables, Toxics (West End - Building 319)	Screening
79	79	15.4	Fuels, Miscellaneous Liquids, Wood, and Paper (Vicinity S702)	Screening
80	80	33.9	Fuel and Cleaners Dispensing (Building 720)	Screening
81	81	33.7	Fuel Oil AST (Building 765 - removed in 1994)	Screening
83	83	30.5	Dried Paint Residues - South of Building P949	Screening

Notes:

2,4-D 2,4-Dichlorophenoxyacetic acid
 CWM: Chemical Warfare materiel
 CWMP Chemical Warfare Management Plan
 DDT 4,4'-Dichlorodiphenyltrichloroethane
 DRMO Defense Reutilization and Marketing Organization
 ER Early removal
 MOGAS Motor gasoline
 Na. Sodium
 NFA No further action
 PCB Polychlorinated biphenyl
 PO₄ Phosphate
 POL. Petroleum, oil, and lubricants
 RFA RCRA facility assessment
 RI/FS Remedial investigation/feasibility study
 RI Remedial investigation

a) Defense Site Environmental Restoration Tracking System (DoD Database)

**TABLE 3-2
SPILL RESPONSE SUMMARY**

BUILDING	DATE	SPILLED MATERIAL	QUANTITY	INSIDE/ OUTSIDE	LOCATION/COMMENTS	ACTION TAKEN
209	4/14/94	Microbicide	1 quart	Inside	Boiler room	Absorbent applied. Product taken to DRMO for disposal.
251	1/30/95	Oil	0.5 gallon	Outside	West end	Absorbent applied. Product taken to DRMO for disposal.
254	3/20/95	Diesel	5 gallons	Outside	Southwest corner (tank)	Absorbent applied. Product taken to DRMO for disposal.
257	4/20/90	Gasoline	1-2 gallons	Outside	Gas station. Product overflowed from tank vent while being filled	Soil was excavated and taken to Dunn Field to aerate.
257	8/11/93	Gasoline	4 gallons	Outside	Gas station. UST overflowed through vent pipe while being filled	Absorbent applied. Soil excavated and taken to DRMO for disposal.
257	8/31/93	Gasoline	4 gallons	Outside	Main tank spewed gas out of pressure tube	Absorbent applied. Product taken to DRMO for disposal.
309	3/26/91	Dielectric fluid (non-PCB)	<1 gallon	Outside	Leaking transformer West of Building 309 in DRMO yard	Absorbed by soak-up pads. Products to DRMO for disposal.
309	12/2/91	Cleaning compound solvent	30 gallons	Outside	On B Street, Southwest of Building 309	Absorbent applied. Contaminated material excavated, containerized and taken to DRMO for disposal.
349	3/5/93	Hydraulic fluid	6 gallons	Outside	Section 3 - North dock	Absorbent applied. Product taken to DRMO for disposal.
359	8/27/93	Sulfuric acid	1 pint	Inside	Section 2 - Charging station, battery boiled over	Product neutralized, containerized and taken to DRMO for disposal.
449	7/27/93	Lube oil	<55 gallons	Outside	North dock	Absorbent applied. Product taken to DRMO for disposal.
449	4/7/95	Hydraulic fluid	1 gallons	Outside	Section 3 - West side dock	Absorbent applied. Product taken to DRMO for disposal.
469	12/16/93	Transformer oil containing PCBs	5 pint	Inside	South side door on wall down to floor. Some product was absorbed by concrete on wall and floor	Absorbent applied. Product taken to DRMO for disposal.
489	6/10/93	Sulfuric acid	2 gallons	Outside	Section 5 - outside between Buildings 489 and 490, stock selector turned over on gravel drive	Product neutralized, containerized and taken to DRMO for disposal.
489	11/3/95	80w90 oil	1 gallons	Outside	Section 4 - North dock	Absorbent applied. Product taken to DRMO for disposal.
490	6/1/94	Sulfuric acid	1 quart	Inside	Section 5	Product neutralized, containerized and taken to DRMO for disposal.
490	9/27/94	Cleaner/degreaser	1 gallon	Inside	South dock - Leaking containers inside truck	Absorbent applied. Product taken to DRMO for disposal.

**TABLE 3-2
SPILL RESPONSE SUMMARY**

BUILDING	DATE	SPILLED MATERIAL	QUANTITY	INSIDE/ OUTSIDE	LOCATION/COMMENTS	ACTION TAKEN
490	12/15/95	Sulfuric acid	1 gallon	Inside	Section 5 - Southwest side	Product neutralized, contained and taken to DRMO for disposal
529	8/10/93	Hydraulic fluid	1 gallon	Inside	South dock, Section 2, Door 2 - forklift hose burst	Absorbent applied. Product taken to DRMO for disposal.
529	8/11/93	Hydraulic fluid	2 quarts	Outside	North dock - Loose hose on forklift	Absorbent applied. Product taken to DRMO for disposal.
549	2/25/94	Hydraulic fluid	1 gallon	Outside	South side at Door 8 on road.	Absorbent applied. Product taken to DRMO for disposal.
549	4/7/94	Hydraulic fluid	5 gallons	Outside	Section 3 - Loading dock	Absorbent applied. Product taken to DRMO for disposal.
560	12/10/93	Sulfuric acid	<1 gallon	Inside	Section 3 - battery fell off charger	Product neutralized, contained and taken to DRMO for disposal.
560	10/17/95	Aqueous film forming foam	5 gallons	Inside	Section 3 - West side wall	Absorbent applied. Product taken to DRMO for disposal.
560	11/14/95	Aqueous film forming foam	15 gallons	Inside	Section 3 - Cargo Door 10	Absorbent applied. Product taken to DRMO for disposal.
629	4/23/90	Nitric acid	6 gallons	Inside	Section 1	Product neutralized, contained and taken to DRMO for disposal.
629	6/24/94	Formaldehyde	2 pints	Outside	North side on C Street	Absorbent applied. Product taken to DRMO for disposal.
649	5/16/90	Paint, lube oil, insecticide, other oil	3 quarts	Outside	Leaking containers near the east end dumpster	Absorbent applied. Product to recoup for disposal.
649	8/11/95	Hydraulic fluid	1 gallon	Inside	Section 5 - Southwest and Northwest corner	Absorbent applied. Product taken to DRMO for disposal.
650	3/18/93	Battery acid, hydraulic fluid	<1 gallon	Outside	South corner in street	Product neutralized, contained and taken to DRMO for disposal.
670	5/4/90	Battery electrolyte	10 gallons	Outside	6th Street and Building 670	Product neutralized, contained and taken to DRMO for disposal.
670	8/30/95	Hydraulic fluid	1 gallon	Inside	Section 1 - North side aisle	Absorbent applied. Product taken to DRMO for disposal.
685	4/16/92	Sulfuric acid and water	3 gallons	Inside	Battery charging station	Product neutralized, contained and taken to DRMO for disposal.
689	5/8/90	Nitric acid	1 pint	Inside	Section 5 - "Hot House"	Product neutralized, contained and taken to DRMO for disposal.
689	1/6/91	Corrosion removing compound	2 gallons	Outside	Section 5 - door 8	Absorbent applied. Product taken to DRMO for disposal.

**TABLE 3-2
SPILL RESPONSE SUMMARY**

BUILDING	DATE	SPILLED MATERIAL	QUANTITY	INSIDE/ OUTSIDE	LOCATION/COMMENTS	ACTION TAKEN
689	2/13/92	Hydraulic fluid	2 gallons	Inside	Section 4 - North dock	Absorbent applied. Product taken to DRMO for disposal.
689	1/2/93	Carbon removing compound	1 gallon	Inside	Section 5 - leaking drum inside trailer	Absorbent applied. Product taken to DRMO for disposal.
689	9/30/93	Corrosion removing compound	<55 gallons	Inside	Bay 6 - Leaking containers	Absorbent applied. Product taken to DRMO for disposal.
689	6/13/94	Deter	40 gallons	Outside	Section 4, Northwest end, Door 31, on street	Absorbent applied. Product taken to DRMO for disposal.
689	1/17/95	Oil	2.5 gallons	Outside	Section 3 - Back door	Absorbent applied. Product taken to DRMO for disposal.
689	8/15/95	Hydraulic fluid	2 gallons	Outside	Section 5 - Door 8	Absorbent applied. Product taken to DRMO for disposal.
689	10/12/95	Sulfuric acid	1 gallon	Inside	Section 5 - Southwest side at Door 34	Product neutralized, contained and taken to DRMO for disposal.
689	11/6/95	Hydraulic fluid	2 gallons	Outside	Section 5 - West dock, Door 8	Absorbent applied. Product taken to DRMO for disposal.
689	11/15/95	Hydraulic fluid	1 25 gallons	Inside	Section 3 - Southwest corner	Absorbent applied. Product taken to DRMO for disposal.
689	11/16/95	Hydraulic fluid	0 3 gallon	Inside	Northeast corner	Absorbent applied. Product taken to DRMO for disposal.
690	2/17/94	Turbine engine oil	10 gallons	Outside	West side loading dock	Absorbent applied. Product taken to DRMO for disposal.
690	3/31/94	Sulfuric acid	5 quart	Outside	West side loading dock	Product neutralized, contained and taken to DRMO for disposal.
737	11/9/95	Mineral oil <1ppm PCB	50 gallons	Outside	West side	Absorbent applied. Soil excavated, contained and all products taken to DRMO for disposal.
770	7/9/90	Mineral oil containing PCBs (>50 ppm, <500 ppm)	50 gallons	Outside	West side, 14.5 cubic yards of contaminated soil excavated. Confirmatory samples taken	Absorbent applied. Soil excavated, contained and all products taken to DRMO for disposal.
770	11/8/91	Petroleum	<55 gallons	Outside	55-gallons drum ruptured on the West side	Absorbent applied. Soil excavated, contained and all products taken to DRMO for disposal.
835	3/9/91	Battery acid	9 gallons	Inside	Section 3	Product neutralized, contained and taken to DRMO for disposal.

**TABLE 3-2
SPILL RESPONSE SUMMARY**

BUILDING	DATE	SPILED MATERIAL	QUANTITY	INSIDE/ OUTSIDE	LOCATION/COMMENTS	ACTION TAKEN
835	6/25/91	Hydrochloric acid	5 gallons	Inside	Section 4 - R84 dock area	Product neutralized, contained and taken to DRMO for disposal
835	7/1/91	Ammonium hydroxide	6 gallons	Inside	Section 2	Neutralized spill with glacial acetic acid. Absorbent applied. Product contained and taken to DRMO for disposal
835	10/2/91	Sulfuric acid	15 gallons	Inside	Section 3 - Corrosive section	Product neutralized, contained and taken to DRMO for disposal
835	11/19/91	Battery fluid acid	6 gallons	Inside	Section 3	Product neutralized, contained and taken to DRMO for disposal
835	11/19/91	Sulfuric acid	5 gallons	Inside	Section 4	Product neutralized, contained and taken to DRMO for disposal
835	3/17/92	Muriatic acid	1 5 gallon	Inside	Section 3	Product neutralized, contained and taken to DRMO for disposal
835	1/15/93	Hydraulic fluid	.5 gallon	Inside	R87 location - Line on stock selector broke	Absorbent applied. Product taken to DRMO for disposal
835	2/22/93	Orthodontic resin	1 pint	Inside	Section 3 - Packing area Glass bottle fell and broke	Absorbent applied Product taken to DRMO for disposal
835	6/28/93	Calcium Hypochlorite	5 pounds	Inside	Section 2 - Oxidizer section	Product swept, contained and taken to DRMO for disposal
835	7/22/93	Herbicide (Benefin), granular	Several pounds	Inside	Section 5. 25 each damaged 40-lbs bags	Product swept, contained and taken to DRMO for disposal
835	8/31/93	Cleaning compound solvent	2 5 gallons	Inside	Section 3	Product neutralized, contained and taken to DRMO for disposal
835	10/1/93	Hydrofluoric acid	1 gallon	Inside	Section 3 - Corrosive section	Product neutralized, contained and taken to DRMO for disposal
835	11/12/93	Xylene	1 gallon	Inside	Section 5	Absorbent applied Product taken to DRMO for disposal
835	3/1/94	Sulfuric acid	10 gallons	Inside	Section 3 - Corrosive section	Product neutralized, contained and taken to DRMO for disposal
835	4/5/94	Sterilizer solution	5 gallon	Inside	Section 1 - Caps ruptured on 4 1-liter bottles	Product neutralized, contained and taken to DRMO for disposal
835	4/5/94	Ethanol	5 gallon	Inside	Section 1	Absorbent applied. Product taken to DRMO for disposal
835	4/15/94	Ethanol	2 gallons	Inside	4 each 1-gallons jugs spilled about 1/2 gallons each.	Absorbent applied Product taken to DRMO for disposal

**TABLE 3-2
SPILL RESPONSE SUMMARY**

BUILDING	DATE	SPILLED MATERIAL	QUANTITY	INSIDE/ OUTSIDE	LOCATION/COMMENTS	ACTION TAKEN
835	6/9/94	Microbicide	1 quart	Inside	Section 3	Absorbent applied. Product taken to DRMO for disposal
835	8/18/94	Cleaning compound solvent	2.5 gallons	Outside	West loading dock	Product neutralized, contained and taken to DRMO for disposal
835	11/23/94	Phosphoric acid	2 quarts	Inside	Section 5	Product neutralized, contained and taken to DRMO for disposal
835	3/5/95	Sulfuric acid	2.5 gallons	Inside	Section 3	Product neutralized, contained and taken to DRMO for disposal
835	5/26/95	Transmission fluid	10 gallons	Outside	Section 4 - West side	Absorbent applied. Product taken to DRMO for disposal
860	3/17/92	Lube oil	Several quarts	Inside	North side	Absorbent applied. Product taken to DRMO for disposal
860	1/13/94	Lube oil	3 gallons	Inside	North side	Absorbent applied. Product taken to DRMO for disposal
873	3/10/90	Tetrachloroethylene	60 gallons	Inside/Outside	Section 2 and outside - West onto gravel	Absorbent applied. Soil excavated, contained and all products taken to DRMO for disposal
873	12/7/90	Cleaning compound solvent	55 gallons	Inside	Section 1 - East side	Absorbent applied. Product taken to DRMO for disposal
873	3/9/91	Lube oil	25 gallons	Inside	Section 2	Absorbent applied. Product taken to DRMO for disposal
873	8/16/91	Hydraulic fluid	2 gallons	Outside	Section 1	Absorbent applied. Product taken to DRMO for disposal
873	11/18/91	Cleaning compound solvent	10 gallons	Inside	Section 1	Absorbent applied. Product taken to DRMO for disposal
873	11/18/91	Cleaning compound solvent	20 gallons	Inside	Section 1	Absorbent applied. Product taken to DRMO for disposal
873	11/26/91	Fog oil	55 gallons	Outside	Section 7 - West side	Absorbent applied. Soil excavated, contained and all products taken to DRMO for disposal
873	11/26/91	Cleaning compound solvent	18 gallons	Outside	Section 3	Absorbent applied. Soil excavated, contained and all products taken to DRMO for disposal
873	2/13/92	Descaling compound	10 gallons	Inside	Section 6 - loading dock	Absorbent applied. Product taken to DRMO for disposal

TABLE 3-2
SPILL RESPONSE SUMMARY

BUILDING	DATE	SPILLED MATERIAL	QUANTITY	INSIDE/ OUTSIDE	LOCATION/COMMENTS	ACTION TAKEN
873	3/2/92	Lube oil	55 gallons	Outside	Southwest corner	Absorbent applied. Soil excavated, containerized and all products taken to DRMO for disposal.
873	7/12/93	Lube oil	25 gallons	Outside	G Street at 15th Street, Northwest of Building 873.	Absorbent applied. Product taken to DRMO for disposal.
873	7/21/93	Corrosion removing compound	1 5 gallon	Inside	Section 6 - drums corroded	Product neutralized, containerized and taken to DRMO for disposal.
873	8/6/93	Corrosion removing compound	75 gallon	Inside	Section 5 - Leaking drum	Product neutralized, containerized and taken to DRMO for disposal.
873	10/25/93	Sulfuric acid	2 gallons	Inside	Section 2 - West side	Product neutralized, containerized and taken to DRMO for disposal.
873	11/29/93	Hydrofluoric acid	3 gallons	Inside	Section 6 - leaking bottles	Product neutralized, containerized and taken to DRMO for disposal.
873	4/7/94	Hydrochloric acid	5 gallon	Inside	Section 5	Product neutralized, containerized and taken to DRMO for disposal.
873	6/8/94	Tincture benzoin	3 pints	Inside	Section 2	Absorbent applied. Product taken to DRMO for disposal.
873	7/11/94	Diethylene glycol	55 gallons	Outside	Northwest end	Absorbent applied. Soil excavated, containerized and all products taken to DRMO for disposal.
873	8/11/94	Methanol	3 pints	Inside	Section 2 - Most of spill evaporated	Absorbent applied. Product taken to DRMO for disposal.
873	8/29/94	Transmission fluid	5 gallons	Outside/Inside	Forklift line broke in Building 873 Section 3. Forklift driven through Section 2 across X03 to Building 770.	Absorbent applied. Product taken to DRMO for disposal.
875	3/6/93	Malathion	2 gallons	Outside/Inside	Inside Roadway trailer. 2 drums fell and leaked	Absorbent applied. Product taken to DRMO for disposal.
875	12/6/95	Oil/lubricant	2 quarts	Outside	East side on 15th Street	Absorbent applied. Product taken to DRMO for disposal.
972	10/5/93	Hydraulic fluid	34 gallons	Outside	On the road to Building 770	Absorbent applied. Product taken to DRMO for disposal.
972	3/14/95	Diesel	3 gallons	Outside	West side	Absorbent applied. Product taken to DRMO for disposal.
995	9/13/93	Gasoline	10 gallons	Outside	Northwest of Building 995 on road. Truck tank punctured	Absorbent applied. Product taken to DRMO for disposal.

**TABLE 3-2
SPILL RESPONSE SUMMARY**

BUILDING	DATE	SPILLED MATERIAL	QUANTITY	INSIDE/ OUTSIDE	LOCATION/COMMENTS	ACTION TAKEN
B Street	5/23/94	Sulfuric Acid	30 gallons	Outside	South of Gate 20 - West of 309/308	Product neutralized. Soil excavated, containerized and all products taken to DRMO for disposal.
Gate 1	10/28/93	Diesel fuel	2 gallons	Outside	Gate 1 in street	Absorbent applied. Product taken to DRMO for disposal.
Gate 1	1/14/94	Diesel fuel	5 gallons	Outside	Gate 1 in street	Absorbent applied. Product taken to DRMO for disposal.
Gate 1	3/22/95	Motor oil	4 gallons	Outside	Gate 1 parking lot	Absorbent applied. Product taken to DRMO for disposal.
Gate 15	9/12/95	Hydraulic fluid	1 25 gallon	Outside	A Street and 11th Street - North through Gate 15 to Dunn Field	Absorbent applied. Product taken to DRMO for disposal.
X02	6/3/94	Mineral oil < 1 ppm PCB	10 gallons	Outside	Between 771 and 873 - transformer fell off truck	Absorbent applied. Product taken to DRMO for disposal.
X10	7/26/93	Ethyl acetate/Naphtha aromatic	<1 gallon of each	Outside	Damaged, leaking 55-gallons drums	Absorbent applied. Soil excavated, containerized and all products taken to DRMO for disposal.
X20	5/7/90	Cleaning compound solvent	Unknown - Small amount of product leaked from each of 12 drums	Outside	Leaking 55-gallons drums.	Absorbent applied. Soil excavated, containerized and all products taken to DRMO for disposal.
X27	5/13/94	Hydraulic fluid	25 gallons	Outside	On 27th Street from 925 to 972	Absorbent applied. Soil excavated, containerized and all products taken to DRMO for disposal.
X30	4/19/94	Hydraulic fluid	5 gallons	Outside	G Street from 1089 to Gate 15	Absorbent applied. Product taken to DRMO for disposal.

TABLE 3-3
SOURCES OF POTENTIAL CONTAMINATION

FACILITY/PROPERTY	PARGEL NUMBER	INSTALLATION RESTORATION SITE	FACILITY USE	SOURCE OF POTENTIAL CONTAMINATION ^(a)
Building 319, Alcohol Storage	15	74	Storage	Storage of various hazardous substances
Buildings S465 and S469, Steam Shed and Electromotive Repair Shop	19	40/41	Light industrial	PCB spill area, waste oil and lubricating oil storage (55-gallon drums) (potential)
Building S702	15	79	Demolished 1997/ Former Officer's Hobby Shop	Fuel/miscellaneous liquid storage
Building 720, Train Engine Repair Shop	33	80	Light industrial	Diesel dispensing area (potential)
Building S737, Pest Control Shop	33	42/43/45/46	Pest control	Storage and mixing of pesticides and herbicides in the building, storage of aluminum phosphide waste outside of the building
Building 770, Facility Equipment Maintenance Shop	24	30/34/40/41	Light and heavy industrial	POL drum storage area, fork lift waste station, and residue from sandblasting and painting (potential)
Building S863	33		Storage	Forklift Storage/Battery Recharge area
Building 865	32	28	Hazardous Materials Repackaging	Drum storage area (Hazardous materials repouring operations)
Building 1086, Paint Booth	35	30	Light industrial	Former hazardous materials storage and potential for paint residue, sump
Building S1090	35		Storage	POL storage
Area X01	23		Storage	Possible PCB and herbicide/pesticide residue contamination
Area X02, Petroleum 55-gallon drum storage	32	28	Storage	Storage of petroleum products and other hazardous substances
Area X03, Steel Storage Yard	24		Storage	Storage of petroleum products and other hazardous substances
Storage Areas X17, X19, X20, X21, and X23	31		Storage	Storage of petroleum products and other hazardous substances

Notes:

PCB. Polychlorinated biphenyl
POL. Petroleum, oil and lubricants

- a) These Sources of Potential Contamination are in addition to those listed as Installation Restoration Sites in Table 3 1

TABLE 3-4
UNDERGROUND STORAGE TANK SUMMARY

PARCEL NO.	LOCATION	YEAR INSTALLED	SIZE (gals)	SUBSTANCE STORED	STATUS	FUTURE ACTIONS
4	Building 253, north side	1952	5,000	Heating oil	Removed July 1996	NA
4	Building 254, northwest side	NA	1,100	Gasoline	Removed December 1989	NA
4	Building 257	1942	12,000	Gasoline	Removed 1986, replaced with 18,000- and 20,000-gallon tanks	NA
4	Building 257	1942	12,000	Gasoline	Removed 1986, replaced with 18,000- and 20,000-gallon tanks	NA
4	Building 257	1951	20,000	Gasoline	Removed 1986, replaced with 18,000- and 20,000-gallon tanks	NA
4	Building 257, south side	1984	18,000	Diesel	Removed 1998	NA
4	Building 257, south side	1984	20,000	Gasoline	Removed 1998	NA
4	Building 257, west side	1951	2,580	Gasoline	Removed December 1989	NA
14	Building 209, north side	1942	12,000	Heating oil	Removed July 1994	NA
14	Building 209, north side	1942	500	Heating oil	Removed July 1995	NA
14	Building 209, north side	1942	500	Blower blow-down water	Removed July 1995	NA
15	Building 319, north side	1988	4,000	Heating oil	Removed July 1994	NA
17	Building 359, north side	1942	12,000	Heating oil	Closed in place July 1994	NA
17	Building 359, north side	1942	500	Heating oil	Closed in place September 1995	NA
17	Building 359, north side	1942	500	Blower blow-down water	Closed in place July 1994	NA
17	Building 359/4	1979	1,000	Heating oil	Removed 1993	NA
17	Building 359/4	1942	500	Diesel Fuel	Removed 1993	NA
24	Building 770, east side	1951	10,000	Heating oil	Removed July 1994	NA
24	Building 770, west side	NA	440	Gasoline	Removed December 1989	NA
24	Building 770, west side	1951	1,000	Used motor oil	Removed December 1989	NA
24	Building 770, west side	1951	1,000	Used motor oil	Removed December 1989	NA
25	Building 875, east side	1950	1,000	Heating oil	Closed in place July 1994	NA

**TABLE 3-4
UNDERGROUND STORAGE TANK SUMMARY**

PARCEL NO.	LOCATION	YEAR INSTALLED	SIZE (gals)	SUBSTANCE STORED	STATUS	FUTURE ACTIONS
33	Building 737, south side	1942	12,000	Pentachlorophenol and dioxin	Removed September 1985	NA
33	Building 737, west side	1986	1,000	Pesticide/herbicide/insecticide rinsate	Closed in place September 1995	NA
33	Building 754	1956	200	Gasoline	Removed January 1986	NA
33	Building 756, west side	1987	1,000	Diesel fuel	Removed July 1994	NA
35	Building 1085, east side	1942	1,000	Waste oil	Removed in December 1989	NA
35	Building S1085	1950	100	Hydraulic fluid	Closed in place July 1995	NA

Notes:

EBS Environmental Baseline Survey
 NA Not applicable
 TBD To be determined
 UST Underground storage tank

**TABLE 3-5
ABOVEGROUND STORAGE TANK SUMMARY**

SUBPARCEL NO.	LOCATION	YEAR INSTALLED	SIZE (gals)	SUBSTANCE STORED	STATUS	FUTURE ACTIONS
4.7	Building 257	1992	1,000	Gasoline	Active	TBD
4.7	Building 257	1992	1,000	Diesel fuel	Active	TBD
24.3	Building 770	1951	11,155	Diesel fuel	Removed July 1994	NA
24.3	Building 770	1951	11,155	Fuel oil	Removed July 1994	NA
33.9	Building 720,	1942	12,000	Diesel fuel	Removed June 1997	NA
17.2	Building 359	1992	1,000	Diesel fuel	Active	TBD
13.5	Building 210	1988	500	Diesel fuel	Active	TBD
33.7	Building 765	1942	11,155	Diesel fuel	Removed July 1994	NA
33.11	Building 756	1994	1,000	Diesel fuel	Active	TBD

Notes:

NA Not applicable
TBD To be determined

**TABLE 3-6
SUBPARCEL DESCRIPTIONS**

SUBPARCEL NUMBER AND LABEL	LOCATION (x, y coordinates)	APPROXIMATE SIZE (acres)	FACILITY	BASIS	REMEDIATION MITIGATION
Environmental Condition Category 1					
1 1(1)	32,10	0 01	Gate 1	This parcel is associated with Gate 1. There has been no documented release or disposal of hazardous substances or petroleum products, nor has there been migration from an adjacent property of hazardous substances or petroleum products. Per letter dated March 17, 1997, the EPA concurred with the Category 1 designation for this parcel.	No remediation is necessary
1 2(1)	32,13	0 01	Gate 2	This parcel is associated with Gate 2. There has been no documented release or disposal of hazardous substances or petroleum products, nor has there been migration from an adjacent property of hazardous substances or petroleum products. Per letter dated March 17, 1997, the EPA concurred with the Category 1 designation for this parcel.	No remediation is necessary
1 3(1)	Building not on Figure 5-1	<0 01	Building 129	This parcel is associated with Building 129. There has been no documented release or disposal of hazardous substances or petroleum products, nor has there been migration from an adjacent property of hazardous substances or petroleum products. Per letter dated March 17, 1997, the EPA concurred with the Category 1 designation for this parcel.	No remediation is necessary
1 4(1)	Building not on Figure 5-1	<0 01	Building 139	This parcel is associated with Building 139. There has been no documented release or disposal of hazardous substances or petroleum products, nor has there been migration from an adjacent property of hazardous substances or petroleum products. Per letter dated March 17, 1997, the EPA concurred with the Category 1 designation for this parcel.	No remediation is necessary
1 5(1)	34,12	0 31	Building 144	This parcel is associated with Building 144. There has been no documented release or disposal of hazardous substances or petroleum products, nor has there been migration from an adjacent property of hazardous substances or petroleum products. Per letter dated March 17, 1997, the EPA concurred with the Category 1 designation for this parcel.	No remediation is necessary
1 6(1)	Building not on Figure 5-1	0 02	Building S145	This parcel is associated with Building S145. There has been no documented release or disposal of hazardous substances or petroleum products, nor has there been migration from an adjacent property of hazardous substances or petroleum products. Per letter dated March 17, 1997, the EPA concurred with the Category 1 designation for this parcel.	No remediation is necessary
1 7(1)	Building not on Figure 5-1	<0 01	Building 155	This parcel is associated with Building 155. There has been no documented release or disposal of hazardous substances or petroleum products, nor has there been migration from an adjacent property of hazardous substances or petroleum products. Per letter dated March 17, 1997, the EPA concurred with the Category 1 designation for this parcel.	No remediation is necessary

**TABLE 3-6
SUBPARCEL DESCRIPTIONS**

SUBPARCEL NUMBER AND LABEL	LOCATION (x, y coordinates)	APPROXIMATE SIZE ^a (acres)	FACILITY	BASIS	REMEDIAL MITIGATION
2.1(1)	34,6	0.11	Building 176	This parcel is associated with Building 176. There has been no documented release or disposal of hazardous substances or petroleum products, nor has there been migration from an adjacent property of hazardous substances or petroleum products. Per letter dated March 17, 1997, the EPA concurred with the Category 1 designation for this parcel.	No remediation is necessary.
2.2(1)	Building not on Figure 5-1	0.03	Building S178	This parcel is associated with Building S178. There has been no documented release or disposal of hazardous substances or petroleum products, nor has there been migration from an adjacent property of hazardous substances or petroleum products. Per letter dated March 17, 1997, the EPA concurred with the Category 1 designation for this parcel.	No remediation is necessary.
2.3(1)	34,5	0.11	Building 179	This parcel is associated with Building 179. There has been no documented release or disposal of hazardous substances or petroleum products, nor has there been migration from an adjacent property of hazardous substances or petroleum products. Per letter dated March 17, 1997, the EPA concurred with the Category 1 designation for this parcel.	No remediation is necessary.
2.4(1)	34,5	0.11	Building 181	This parcel is associated with Building 181. There has been no documented release or disposal of hazardous substances or petroleum products, nor has there been migration from an adjacent property of hazardous substances or petroleum products. Per letter dated March 17, 1997, the EPA concurred with the Category 1 designation for this parcel.	No remediation is necessary.
2.5(1)	Building not on Figure 5-1	0.11	Building S183	This parcel is associated with Building S183. There has been no documented release or disposal of hazardous substances or petroleum products, nor has there been migration from an adjacent property of hazardous substances or petroleum products. Per letter dated March 17, 1997, the EPA concurred with the Category 1 designation for this parcel.	No remediation is necessary.
2.6(1)	34,4	0.11	Building 184	This parcel is associated with Building 184. There has been no documented release or disposal of hazardous substances or petroleum products, nor has there been migration from an adjacent property of hazardous substances or petroleum products. Per letter dated March 17, 1997, the EPA concurred with the Category 1 designation for this parcel.	No remediation is necessary.
3.1(1)	32,2	0.01	Building 193	This parcel is associated with Building 193. There has been no documented release or disposal of hazardous substances or petroleum products, nor has there been migration from an adjacent property of hazardous substances or petroleum products. Per letter dated March 17, 1997, the EPA concurred with the Category 1 designation for this parcel.	No remediation is necessary.

**TABLE 3-6
SUBPARCEL DESCRIPTIONS**

SUBPARCEL NUMBER AND LABEL ^a	LOCATION (x, y coordinates)	APPROXIMATE SIZE ^b (acres)	FACILITY	BASIS	REMEDIAL ACTION/ MITIGATION
3 2(1)	31,2	0 10	Building 195	This parcel is associated with Building 195. There has been no documented release or disposal of hazardous substances or petroleum products; nor has there been migration from an adjacent property of hazardous substances or petroleum products. Per letter dated March 17, 1997, the EPA concurred with the Category 1 designation for this parcel.	No remediation is necessary.
3 3(1)	31,2	0 02	Building 196	This parcel is associated with Building 196. There has been no documented release or disposal of hazardous substances or petroleum products; nor has there been migration from an adjacent property of hazardous substances or petroleum products. Per letter dated March 17, 1997, the EPA concurred with the Category 1 designation for this parcel.	No remediation is necessary.
3 4(1)	31,2	0 01	Building 198	This parcel is associated with Building 198. There has been no documented release or disposal of hazardous substances or petroleum products; nor has there been migration from an adjacent property of hazardous substances or petroleum products. Per letter dated March 17, 1997, the EPA concurred with the Category 1 designation for this parcel.	No remediation is necessary.
4 1(1)	30,10	0 19	Building 252	This parcel is associated with Building 252. There has been no documented release or disposal of hazardous substances or petroleum products; nor has there been migration from an adjacent property of hazardous substances or petroleum products. Per letter dated March 17, 1997, the EPA concurred with the Category 1 designation for this parcel.	No remediation is necessary.
4 2(1)	31,7	0 33	Building 270	This parcel is associated with Building 270. There has been no documented release or disposal of hazardous substances or petroleum products; nor has there been migration from an adjacent property of hazardous substances or petroleum products. Per letter dated March 17, 1997, the EPA concurred with the Category 1 designation for this parcel.	No remediation is necessary.
4 3(1)	31,7	0 03	Building 271	This parcel is associated with Building 271. There has been no documented release or disposal of hazardous substances or petroleum products; nor has there been migration from an adjacent property of hazardous substances or petroleum products. Per letter dated March 17, 1997, the EPA concurred with the Category 1 designation for this parcel.	No remediation is necessary.

**TABLE 3-6
SUBPARCEL DESCRIPTIONS**

SUBPARCEL NUMBER AND LABEL	LOCATION (x, y coordinates)	APPROXIMATE SIZE (acres)	FACILITY	BASIS	REMEDATION/ MITIGATION
4 11(1)	29,9	0.22	Building 253	This parcel is associated with Building 253, No Further Action Site 40 (Safety Klean unit) and Screening Site (SS) 66 (POL Building 253). Petroleum products (55-gallon drums of hydraulic oil) and antifreeze were stored and used at Building 253. Records and visual evidence do not indicate any release, disposal or migration in this building. The Safety Klean unit was removed by Safety Klean prior to closure in September 1997. One screening site surface soil and three soil boring samples were taken from around the outside of the building. Results indicated levels of poly aromatic hydrocarbons (PAHs) that exceeded the BCT screening criteria ^(a) . Also, this building was fumigated. Air sampling conducted during the BRAC sampling effort indicated no human health hazards from fumigation. At the September 1997 meeting, the BCT agreed to change the parcel to a Category 6 based on soil sample results outside the building. In February 1998, the BCT concurred the parcel (Building 253) would change to a Category 1 and that the issue of PAHs in the soil outside the building would be further evaluated on a site-wide basis.	No remediation is necessary
6 3(1)	27,12	2.8	Building 349	This parcel is associated with Building 349, which may have been fumigated. Air sampling conducted during the BRAC sampling effort indicated no human health hazards from fumigation. In December 1997, the BCT concurred that this parcel change to Category 1 (CH2M Hill, 1998).	No remediation is necessary
8 2(1)	29,15	2.8	Building 229	This parcel is associated with Building 229, which may have been fumigated. Air sampling conducted during the BRAC sampling effort indicated no human health hazards from fumigation. In December 1997, the BCT concurred that this parcel change to Category 1 (CH2M Hill, 1998).	No remediation is necessary.
8 3(1)	29,14	2.8	Building 230	This parcel is associated with Building 230, which may have been fumigated. Air sampling conducted during the BRAC sampling effort indicated no human health hazards from fumigation. In December 1997, the BCT concurred that this parcel change to Category 1 (CH2M Hill, 1998).	No remediation is necessary
8 4(1)	26,15	2.8	Building 329	This parcel is associated with Building 329, which may have been fumigated. Air sampling conducted during the BRAC sampling effort indicated no human health hazards from fumigation. In December 1997, the BCT concurred that this parcel change to Category 1 (CH2M Hill, 1998).	No remediation is necessary
8 5(1)	26,13	2.8	Building 330	This parcel is associated with Building 330, which may have been fumigated. Air sampling conducted during the BRAC sampling effort indicated no human health hazards from fumigation. In December 1997, the BCT concurred that this parcel change to Category 1 (CH2M Hill, 1998).	No remediation is necessary

**TABLE 3-6
SUBPARCEL DESCRIPTIONS**

SUBPARCEL NUMBER AND LABEL	LOCATION (x, y coordinates)	APPROXIMATE SIZE (acres)	FACILITY	BASIS	REMEDIATION MITIGATION
9.2(1)	23,15	2.8	Building 429	This parcel is associated with Building 429, which may have been fumigated. Air sampling conducted during the BRAC sampling effort indicated no human health hazards from fumigation. In December 1997, the BCT concurred that this parcel change to Category 1 (CH2M Hill, 1998).	No remediation is necessary.
9.4(1)	23,12	2.8	Building 449	This parcel is associated with Building 449, which may have been fumigated. Air sampling conducted during the BRAC sampling effort indicated no human health hazards from fumigation. In December 1997, the BCT concurred that this parcel change to Category 1 (CH2M Hill, 1998).	No remediation is necessary.
9.5(1)	23,11	2.8	Building 450	This parcel is associated with Building 450, which may have been fumigated. Air sampling conducted during the BRAC sampling effort indicated no human health hazards from fumigation. In December 1997, the BCT concurred that this parcel change to Category 1 (CH2M Hill, 1998).	No remediation is necessary.
10.4(1)	20,12	2.8	Building 549	This parcel is associated with Building 549, which may have been fumigated. Also, the west side of the building contains a fumigation chamber. Air sampling conducted during the BRAC sampling effort indicated no human health hazards from fumigation. In December 1997, the BCT concurred that this parcel change to Category 1 (CH2M Hill, 1998).	No remediation is necessary.
10.6(1)	17,11	2.8	Building 650	This parcel is associated with Building 650, which may have been fumigated. Air sampling conducted during the BRAC sampling effort indicated no human health hazards from fumigation. In December 1997, the BCT concurred that this parcel change to Category 1 (CH2M Hill, 1998).	No remediation is necessary.
11.3(1)	20,14	2.8	Building 530	This parcel is associated with Building 530, which may have been fumigated. Air sampling conducted during the BRAC sampling effort indicated no human health hazards from fumigation. In December 1997, the BCT concurred that this parcel change to Category 1 (CH2M Hill, 1998).	No remediation is necessary.
11.4(1)	16,13	2.8	Building 630	This parcel is associated with Building 630, which may have been fumigated. Air sampling conducted during the BRAC sampling effort indicated no human health hazards from fumigation. In December 1997, the BCT concurred that this parcel change to Category 1 (CH2M Hill, 1998).	No remediation is necessary.
13.1(1)	33,16	<0.01	Gate 23	This parcel is associated with Gate 23. There has been no documented release or disposal of hazardous substances or petroleum products; nor has there been migration from an adjacent property of hazardous substances or petroleum products. Per letter dated March 17, 1997, the EPA concurred with the Category 1 designation for this parcel.	No remediation is necessary.

TABLE 3-6
SUBPARCEL DESCRIPTIONS

SUBPARCEL NUMBER AND LABEL	LOCATION (X, Y coordinates)	APPROXIMATE SIZE ^a (acres)	FACILITY	BASIS	REMEDIAL MITIGATION
13.2(1)	Building not on Figure 5-1	<0.01	Gate 24	This parcel is associated with Gate 24. There has been no documented release or disposal of hazardous substances or petroleum products, nor has there been migration from an adjacent property of hazardous substances or petroleum products. Per letter dated March 17, 1997, the EPA concurred with the Category 1 designation for this parcel.	No remediation is necessary
13.3(1)	32,16	<0.01	Gate 25	This parcel is associated with Gate 25. There has been no documented release or disposal of hazardous substances or petroleum products; nor has there been migration from an adjacent property of hazardous substances or petroleum products. Per letter dated March 17, 1997, the EPA concurred with the Category 1 designation for this parcel.	No remediation is necessary
13.4(1) HS	31,17	5.5	Building 210	This parcel is associated with Building 210 and proposed No Further Action Site 41 (Satellite Drum Accumulation Area). The building also contained the base photographer's photo developing lab in Bay 7. There has been no documented release or disposal of hazardous substances or petroleum products, nor has there been migration from an adjacent property of hazardous substances or petroleum products. This parcel became a Category 1 due to the Category definition change that occurred after the November 1996 Environmental Baseline Survey categorized this parcel as a Category 2.	Proposed NFA Site 41. No remediation is necessary
14.1(1)	27,19	<0.01	Gate 22	This parcel is associated with Gate 22. There has been no documented release or disposal of hazardous substances or petroleum products, nor has there been migration from an adjacent property of hazardous substances or petroleum products. Per letter dated March 17, 1997, the EPA concurred with the Category 1 designation for this parcel.	No remediation is necessary
15.1(1)	10,18	<0.01	Gate 15	This parcel is associated with Gate 15. There has been no documented release or disposal of hazardous substances or petroleum products; nor has there been migration from an adjacent property of hazardous substances or petroleum products. Per letter dated March 17, 1997, the EPA concurred with the Category 1 designation for this parcel.	No remediation is necessary
16.2(1)	17,10	5.5	Building S559	This parcel is associated with Building S559, which may have been fumigated. Air sampling conducted during the BRAC sampling effort indicated no human health hazards from fumigation. In December 1997, the BCT concurred that this parcel change to Category 1 (CH2M Hill, 1998).	No remediation is necessary
17.1(1)	22,10	0.09	Building 459	This parcel is associated with Building 459. There has been no documented release or disposal of hazardous substances or petroleum products; nor has there been migration from an adjacent property of hazardous substances or petroleum products. Per letter dated March 17, 1997, the EPA concurred with the Category 1 designation for this parcel.	No remediation is necessary

**TABLE 3-6
SUBPARCEL DESCRIPTIONS**

SUBPARCEL NUMBER AND LABEL	LOCATION (x, y coordinates)	APPROXIMATE SIZE (acres)	FACILITY	BASIS	REMEDIAL MITIGATION
21 1(1)HS	17,3	5.0	Building 690	This parcel is associated with Building 690, which has been used to temporarily stage hazardous materials prior to shipment. Screening Site (SS) 77, which is typically associated with this building, is adjacent to and not inside of the building. There has been no documented release or disposal of hazardous substances or petroleum products, nor has there been migration from adjacent properties of hazardous substances or petroleum products. This parcel became a Category 1 due to the Category definition change that occurred after the November 1996 Environmental Baseline Survey categorized this parcel as a Category 2. At the October 1997 meeting, the BCT concurred that this parcel change to a Category 1 based on the new parcel definitions.	No remediation is necessary.
23 1(1)	19,2	<0.01	Gate 7	This parcel is associated with Gate 7. There has been no documented release or disposal of hazardous substances or petroleum products, nor has there been migration from an adjacent property of hazardous substances or petroleum products. Per letter dated March 17, 1997, the EPA concurred with the Category 1 designation for this parcel.	No remediation is necessary.
23 2(1)	13,2	0.02	Gate 8	This parcel is associated with Gate 8. There has been no documented release or disposal of hazardous substances or petroleum products, nor has there been migration from an adjacent property of hazardous substances or petroleum products. Per letter dated March 17, 1997, the EPA concurred with the Category 1 designation for this parcel.	No remediation is necessary.
23 3(1)	11,4	0.12	Building 787	This parcel is associated with Building 787. There has been no documented release or disposal of hazardous substances or petroleum products; nor has there been migration from an adjacent property of hazardous substances or petroleum products. Per letter dated March 17, 1997, the EPA concurred with the Category 1 designation for this parcel.	No remediation is necessary.
23 4(1)	Building not on Figure 5-1	0.01	Building 795	This parcel is associated with Building 795. There has been no documented release or disposal of hazardous substances or petroleum products, nor has there been migration from an adjacent property of hazardous substances or petroleum products. Per letter dated March 17, 1997, the EPA concurred with the Category 1 designation for this parcel.	No remediation is necessary.
23 5(1)	5,2	0.18	Building S995	This parcel is associated with Building S995. There has been no documented release or disposal of hazardous substances or petroleum products, nor has there been migration from an adjacent property of hazardous substances or petroleum products. Per letter dated March 17, 1997, the EPA did not concur with the Category 1 designation for this parcel due to groundwater contamination under the building.	No remediation is necessary.

**TABLE 3-6
SUBPARCEL DESCRIPTIONS**

SUBPARCEL NUMBER AND LABEL	LOCATION (x, y coordinates)	APPROXIMATE SIZE (acres)	FACILITY	BASIS	REMEDIAL MITIGATION
29.1(1)	3,10	0.01	Gate 9	This parcel is associated with Gate 9. There has been no documented release or disposal of hazardous substances or petroleum products, nor has there been migration from an adjacent property of hazardous substances or petroleum products. Per letter dated March 17, 1997, the EPA concurred with the Category 1 designation for this parcel.	No remediation is necessary.
30.4(1)	4,11	1.4	Building P949	Short-term hazardous substance storage and possible fumigation in Building P949. Air sampling conducted during the BRAC sampling effort indicated no human health hazards from fumigation. In December 1997, the BCT concurred that this parcel change to Category 1 (CH2M Hill, 1998).	No remediation is necessary.
33.1(1)	13,16	0.01	Building 727	This parcel is associated with Building 727. There has been no documented release or disposal of hazardous substances or petroleum products; nor has there been migration from an adjacent property of hazardous substances or petroleum products. Per letter dated March 17, 1997, the EPA concurred with the Category 1 designation for this parcel.	No remediation is necessary.
33.2(1)	14,10	0.05	Building 754	This parcel is associated with Building 754. There has been no documented release or disposal of hazardous substances or petroleum products, nor has there been migration from an adjacent property of hazardous substances or petroleum products. Per letter dated March 17, 1997, the EPA concurred with the Category 1 designation for this parcel.	No remediation is necessary.
33.3(1)	14,10	0.01	Building 755	This parcel is associated with Building 755. There has been no documented release or disposal of hazardous substances or petroleum products, nor has there been migration from an adjacent property of hazardous substances or petroleum products. Per letter dated March 17, 1997, the EPA concurred with the Category 1 designation for this parcel.	No remediation is necessary.
33.4(1)	14,9	0.06	Building 756	This parcel is associated with Building 756. There has been no documented release or disposal of hazardous substances or petroleum products, nor has there been migration from an adjacent property of hazardous substances or petroleum products. Per letter dated March 17, 1997, the EPA concurred with the Category 1 designation for this parcel.	No remediation is necessary.
33.5(1)	11,10	0.02	Building T860	This parcel is associated with Building T860. There has been no documented release or disposal of hazardous substances or petroleum products, nor has there been migration from an adjacent property of hazardous substances or petroleum products. Per letter dated March 17, 1997, the EPA concurred with the Category 1 designation for this parcel.	No remediation is necessary.

**TABLE 3-6
SUBPARCEL DESCRIPTIONS**

SUBPARCEL NUMBER AND LABEL	LOCATION (x, y coordinates)	APPROXIMATE SIZE (acres)	FACILITY	BASIS	REMEDIATION/ MITIGATION
33.10(1)	14,10	0.01	Building 753	This parcel is associated with Building 753. There has been no documented release or disposal of hazardous substances or petroleum products; nor has there been migration from an adjacent property of hazardous substances or petroleum products. This parcel became a Category 1 due to the Category definition change that occurred after the November 1996 Environmental Baseline Survey categorized this parcel as a Category 2. At the October 1997 meeting, the BCT concurred that this parcel change to a Category 1 based on the new parcel definitions.	No remediation is necessary.
34.1(1)	24,8	4.0	Building 360	This parcel is associated with Building 360. This building was recently constructed and has not been used for storage. There has been no documented release or disposal of hazardous substances or petroleum products; nor has there been migration from an adjacent property of hazardous substances or petroleum products. Per letter dated March 17, 1997, the EPA concurred with the Category 1 designation for this parcel.	No remediation is necessary.
Environmental Condition Category 2					
26.2(2)	6,4	6.3	Building S970	This parcel is associated with Building S970. An oil fired generator that had leaked oil onto the concrete pad was observed at Building S970, Section 6 during the EBS visual inspection. This release consisted of only petroleum products. Absorbent was applied and the residue disposed in accordance with federal, state and local regulations. In October 1997, the BCT concurred that this parcel change to a Category 2.	No remediation is necessary.
33.6(2)HR	13,13	0.25	Outside Building 737	This parcel is associated with the open land area outside Building 737 and proposed No Further Action Site 44 (Former Wastewater Treatment Unit). A 50-gallon mineral oil (<1 ppm PCB) spill was reported on November 9, 1995 outside of Building 737. The Spill Team responded, excavated contaminated material and disposed it in accordance with federal, state and local regulations. This parcel became a Category 2 due to the Category definition change that occurred after the November 1996 Environmental Baseline Survey categorized this parcel as a Category 4. At the October 1997 meeting, the BCT concurred that this parcel change to a Category 2 based on the new parcel definitions.	No remediation is necessary.
33.11(2)	14,9	0.25	Outside Building 756	This parcel is associated with the 1,000-gallon diesel above ground storage tank outside Building 756. The original tank supplying the emergency generator in Building 756 was removed in June 1994. Soil was sampled for Total Petroleum Hydrocarbons and found to be less than 20 ppm.	No remediation is necessary.

TABLE 3-6
SUBPARCEL DESCRIPTIONS

SUBPARCEL NUMBER AND LABEL ^a	LOCATION (X, Y coordinates)	APPROXIMATE SIZE ^a (acres)	FACILITY	BASIS	REMEDIAL MITIGATION
Environmental Condition Category 3					
4 4(3)PS/PR/HS/ HR	30,9	0 15	Building 260	This parcel is associated with Building 260, proposed No Further Action Site 41 (Satellite Drum Accumulation Area) and proposed No Further Action Site 30 (Safety Kleen Units). The RCRA Facility Assessment visual inspection noted staining on the floor in the sign shop of this building. The Safety Kleen unit was removed prior to closure. Absorbent was applied to released Safety Kleen solvent and disposed in accordance with federal, state and local regulations.	No further remediation is necessary
4 8(3)	30,9	0 02	Building 263	This parcel is associated with Building 263, which has been used as attendants' room for the dispensing of petroleum, oil and lubricant to vehicles and as a vehicle grease rack since the 1940s, and to Screening Site (SS) 68 (POL-Building 263). Records do not indicate any release, disposal or migration. In addition, this building was fumigated. Air sampling conducted during the BRAC sampling effort indicated no human health hazards from fumigation. Soil borings were sampled during the Screening Site Sampling Program. Sample results indicate no levels that exceeded BCT screening criteria ^(c) (CH2M Hill, 1998). After the December 1997 BCT decision to change fumigated buildings to Category 1, the BCT conferred and concurred via telephone calls that this parcel would become a Category 3 based on the concern that petroleum products and antifreeze may have been released (CH2M Hill, 1998). In June 1998, the BCT again concurred that this parcel change to a Category 3.	No remediation is necessary
5 1(3)	29,7	0 49	Building T272 and area surrounding buildings in Parcel 5	This parcel is associated with Building T272 and the open land area surrounding buildings in Parcel 5. Based on interviews with DDMT personnel, the surface soil has the potential for pesticide contamination. One Remedial Investigation (associated with Site 58 - Pad 267) soil sample and one BRAC soil sample were collected. Sample results indicated no levels that exceeded the BCT screening criteria ^(c) (CH2M Hill, 1998). At the September 1997 meeting, the BCT concurred that this parcel change to a Category 3.	No remediation is necessary
6 2(3)	29,11	2 8	Building 250	This parcel is associated with Building 250 and may have been fumigated. Air sampling conducted during the BRAC sampling effort indicated no human health hazards from fumigation (CH2M Hill, 1998). Staining due to acid leaks from batteries in the fork lift area were observed during the EBS visual inspection. After the December 1997 BCT decision to change fumigated buildings to Category 1, the BCT conferred and concurred via telephone calls that this parcel would become a Category 3 based on the release of battery acid. In June 1998, the BCT again concurred that this parcel change to a Category 3.	No remediation is necessary

**TABLE 3-6
SUBPARCEL DESCRIPTIONS**

SUBPARCEL NUMBER AND LABEL	LOCATION (x, y coordinates)	APPROXIMATE SIZE (acres)	FACILITY	BASIS	REMEDIAL ACTION/ MITIGATION
6 4(3)	26,11	2.8	Building 350	This parcel is associated with Building 350 and may have been fumigated. Air sampling conducted during the BRAC sampling effort indicated no human health hazards from fumigation (CH2M Hill, 1998). Staining due to acid leaks from batteries in the fork lift area were observed during the EBS visual inspection. After the December 1997 BCT decision to change fumigated buildings to Category 1, the BCT conferred and concurred via telephone calls that this parcel would become a Category 3 based on the release of battery acid. In June 1998, the BCT again concurred that this parcel change to a Category 3.	No remediation is necessary.
9.3(3)	23,13	2.8	Building 430	This parcel is associated with Building 430 and may have been fumigated. Air sampling conducted during the BRAC sampling effort indicated no human health hazards from fumigation (CH2M Hill, 1998). Staining due to acid leaks from batteries in the fork lift area were observed during the EBS visual inspection. After the December 1997 BCT decision to change fumigated buildings to Category 1, the BCT conferred and concurred via telephone calls that this parcel would become a Category 3 based on the release of battery acid. In June 1998, the BCT again concurred that this parcel change to a Category 3.	No remediation is necessary.
10 1(3)HR	16,12	2.8	Building 649	This parcel is associated with Building 649. A 1-gallon hydraulic fluid spill was reported on August 11, 1995, inside Building 649, Section 5. In addition, leaking containers of paint/tube oil/insecticide and other oil were reported on May 16, 1990, outside Building 649. The Spill Team responded, applied absorbent and disposed of all residue in accordance with federal, state and local regulations.	No remediation is necessary.
10 5(3)	19,11	2.8	Building 550	This parcel is associated with Building 550 and may have been fumigated. Air sampling conducted during the BRAC sampling effort indicated no human health hazards from fumigation (CH2M Hill, 1998). Staining due to acid leaks from batteries in the fork lift area were observed during the EBS visual inspection. After the December 1997 BCT decision to change fumigated buildings to Category 1, the BCT conferred and concurred via telephone calls that this parcel would become a Category 3 based on the release of battery acid. In June 1998, the BCT again concurred that this parcel change to a Category 3.	No remediation is necessary.

TABLE 3-6
SUBPARCEL DESCRIPTIONS

SUBPARCEL NUMBER AND LABEL	LOCATION (x, y coordinates)	APPROXIMATE SIZE (acres)	FACILITY	BASIS	REMEDIAL MITIGATION
11 2(3)	19,15	2.8	Building 529	This parcel is associated with Building 529 and may have been fumigated. Air sampling conducted during the BRAC sampling effort indicated no human health hazards from fumigation (CH2M Hill, 1998). Antifreeze, firefighting foam and photographic chemicals were stored in the west end of the building. Records indicate several spills of firefighting foam. The Spill Team responded, applied absorbent and disposed of all residue in accordance with federal, state and local regulations. Staining due to acid leaks from batteries in the fork lift area were observed during the EBS visual inspection. After the December 1997 BCT decision to change fumigated buildings to Category 1, the BCT conferred and concurred via telephone calls that this parcel would become a Category 3 based on the release of battery acid and firefighting foam. In June 1998, the BCT again concurred that this parcel change to a Category 3.	No remediation is necessary
15 2(3)	26,18	0.01	Building S308	This parcel is associated with S308 and Screening Site 35 (Building 308 - Hazardous Waste Storage). Law Environmental surface soil sample SS-4 (100 feet downslope and southeast of Bldg S308) detected PAHs, dieldrin and arsenic in surface soil and total chromium and lead in subsurface soil. Three Screening site soil borings taken from around the building were sampled. Sample results indicated arsenic in surface soil below the BCT screening criteria ⁽⁶⁾ as well as chromium and lead in subsurface soil near background levels. All levels appear to be naturally occurring. SS 35 does not exhibit waste accumulation-related contamination. The Preliminary Risk Evaluation indicates SS 35 does not pose a human health concern for industrial or residential scenarios and recommends the parcel change to a Category 3 CH2M Hill, 1998). Also, air sampling conducted in this building to assess the impact from storage of hazardous materials indicated no human health hazards. At the September 1997 meeting, the BCT reviewed the data and determined that no levels exceeded BCT screening criteria ⁽⁶⁾ , but no Category change mentioned. At the June 1998 meeting, the BCT concurred that this parcel change to Category 3.	No remediation is necessary
18 2(3)	19,8	2.6	Area surrounding buildings in Parcel 18	This parcel is associated with the open land area in Parcel 18 surrounding Building 560. This parcel contains railroad tracks that were historically sprayed with pesticides, herbicides and waste oil containing PCP. One BRAC soil sample was collected. Sample results indicated no levels that exceeded the BCT screening criteria ⁽⁶⁾ . At the September 1997 meeting, the BCT concurred that this parcel change to a Category 3.	No remediation is necessary
20 1(3)PR	21,5	0.46	Building 489	This parcel is associated with Building 489. A 1-gallon oil spill was reported on November 3, 1995 at the north dock of Building 489, Section 4. The Spill Team responded, applied absorbent and disposed of the residue in accordance with federal, state and local regulations.	No remediation is necessary

TABLE 3-6
SUBPARCEL DESCRIPTIONS

SUBPARCEL NUMBER AND LABEL *	LOCATION (x, y coordinates)	APPROXIMATE SIZE * (Acres)	FACILITY	BASIS	REMEDIAL MITIGATION
23.6(3)	12,2	20.6	Area surrounding buildings in the eastern portion of Parcel 23	This parcel is associated with open land areas south of Buildings 690 and 490 including parking lots and grassy areas, the open land area surrounding Buildings 787 and Gate 8 as well as Screening Site (SS) 82 (Flammables - Building 783 and 793). This parcel contains grassed areas with the potential for pesticide contamination. Four screening site surface soil, four screening site subsurface soil and one BRAC surface soil samples were collected. Sample results indicate arsenic levels in surface soil (20.2 and 24.3 mg/kg) near the range of background levels (20 mg/kg), but below BCT screening criteria ^(e) . In October 1997, the BCT concurred that this parcel change to a Category 3 (CH2M Hill, 1998).	No remediation is necessary. The groundwater under this parcel will be further evaluated.
23.9(3)	4,2	0.25	Outside Building S995	This parcel is associated with a gasoline spill reported on September 13, 1993, adjacent and to the northwest of Building S995. The Spill Team responded, applied absorbent, removed stained soil and disposed of it in accordance with federal, state and local regulations. One BRAC soil boring and surface soil sample was collected from the center of the suspected spill area. Petroleum hydrocarbons were detected at 3.2 mg/kg, well below the Tennessee clean-up level of 100 mg/kg. In October 1997, the BCT concurred that this parcel change to a Category 3 (CH2M Hill, 1998).	No remediation is necessary. The groundwater under this parcel will be further evaluated.
23.10(3)	8,2	2.6	Area X01	This parcel is associated with the open land area south of Buildings 873 and 875 in area X01, which was once a small lake. The sediments were possibly contaminated with PCB and pesticide/herbicide residues. One BRAC surface soil sample and one BRAC soil boring were collected. Sample results indicate that no levels exceeded the BCT screening criteria ^(e) . In October 1997, the BCT concurred that this parcel remain a Category 3 (CH2M Hill, 1998).	No remediation is necessary. The groundwater under this parcel will be further evaluated.
28.1(3)	2,7	6.0	Area X04	This parcel contains the open storage area X04 north of Building 1089. This parcel contains railroad tracks that were historically sprayed with pesticides, herbicides, and waste oil containing PCP. According to DDMT personnel, this area was used for the storage of feed stock material and not hazardous materials. Four BRAC soil samples, two surface and two subsurface, were collected. Sample results indicate aluminum and iron in surface soil near the range of the BCT screening criteria ^(e) and lead within the background value range. The Preliminary Risk Evaluation indicated that carcinogenic risks were below acceptable levels for both industrial worker and residential scenarios of one in a million, noncarcinogenic risks were above one in a million due to the inorganic chemicals aluminum and iron in both subsurface and surface, but the concentrations of these constituents in surface soils only did not pose significant health risks. In October 1997, the BCT concurred that this parcel change to a Category 3.	No remediation is necessary.

**TABLE 3-6
SUBPARCEL DESCRIPTIONS**

SUBPARCEL NUMBER AND LABEL *	LOCATION (x, y coordinates)	APPROXIMATE SIZE (acres)	FACILITY	BASIS	REMEDIAL ACTION MITIGATION
32.1(3)	9,14	4.6	Areas X02, X13, and X15	This parcel is associated with Parcel 32 and contains open storage areas X02, X13, and X15 that are to the west and north of Building 835. This parcel contains railroad tracks that were historically sprayed with pesticides, herbicides and waste oil containing PCP. Four BRAC soil samples (two surface and two subsurface) were collected. Sample results indicate that no levels exceeded the BCT screening criteria ^(c) . In October 1997, the BCT recommended this parcel change to a Category 3 (CH2M Hill, 1998).	No remediation is necessary
34.2(3)	24,7	2.7	Area surrounding buildings in Parcel 34	This parcel is associated with Parcel 34 and contains railroad tracks that were historically sprayed with pesticides, herbicides, and waste oil containing PCP. One BRAC soil sample was collected. Sample results indicate chlordane at levels that exceeded the BCT screening criteria ^(c) . The Preliminary Risk Evaluation indicated that the carcinogenic and noncarcinogenic risks were well below the acceptable levels for both industrial worker and residential scenarios of one in a million. In October 1997, the BCT concurred that this parcel change to a Category 3 (CH2M Hill, 1998).	No remediation is necessary
Environmental Condition Category 4					
4.12(4)	31,10	0.18	Building 251	This parcel is associated with Building 251 that has a floor drain connected to the sanitary sewer. One surface soil sample was taken from the sump beneath the floor drain. Results indicate elevated concentrations of many metals and poly aromatic hydrocarbons. The Preliminary Risk Evaluation indicated these concentrations had a risk ratio above acceptable levels for residential and industrial worker scenarios. In December 1997, the BCT recommended that the sump be cleaned and, if appropriate, grouted closed and that upon completion of this action, the parcel should change to a Category 4. The action was completed in January 1998.	No further remediation is necessary
4.13(4)	31,8	0.18	Building 265	This parcel is associated with Building 265 that has a floor drain that is connected to the sanitary sewer. One surface soil sample was taken from the sump beneath the floor drain. Results indicate elevated concentrations of many metals and poly aromatic hydrocarbons. The Preliminary Risk Evaluation indicated these concentrations had a risk ratio above acceptable levels for residential and industrial worker scenarios. In May 1998, the BCT recommended that the sump be cleaned and, if appropriate, grouted closed and that upon completion of this action, the parcel should change to a Category 4. The action was completed in June 1998.	No further remediation is necessary

TABLE 3-6
SUBPARCEL DESCRIPTIONS

SUBPARCEL NUMBER AND LABEL	LOCATION (x, y coordinates)	APPROXIMATE SIZE (acres)	FACILITY	BASIS	REMEDIAL ACTION MITIGATION
7 2(4)	29,12	2.8	Building 249	This parcel is associated with Building 249 that was formerly used as a storage facility for clothing treated with impregnate (XXCC-3), a chemical used as a preventive to the effects of chemical warfare agents on skin. A battery acid spill was reported on April 15, 1993, at Building 249, North dock. The Spill Team responded, applied sodium bicarbonate and disposed of all residue in accordance with federal, state and local regulations. This building may have been fumigated. Air sampling conducted during the BRAC sampling effort indicated no human health hazards from fumigation (CH2M Hill, 1998). After the December 1997 BCT decision to change fumigated buildings to Category 1, the BCT conferred and concurred via telephone calls that this parcel would become a Category 4 based on the cleanup of the battery acid. In June 1998, the BCT again concurred that this parcel change to a Category 4.	No further remediation is necessary.
12 2(4)	16,15	2.8	Building 629	This parcel is associated with Building 629 - the former hazardous materials storage building (DDT, herbicides, solvents, oxidizers, and toxic/corrosive materials). A 6-gallon nitric acid spill was reported on April 23, 1990 inside Building 629, Section 1. The Spill Team responded, applied sodium bicarbonate and disposed of all residue in accordance with federal, state and local regulations. The soil surrounding Building 629 is associated with Remedial Investigation Site 57 and will be further evaluated during the Remedial Investigation process. This building may have been fumigated. Air sampling conducted during the BRAC sampling effort indicated no human health hazards from fumigation. After the December 1997 BCT decision to change fumigated buildings to Category 1, the BCT conferred and concurred via telephone calls that this parcel would become a Category 4 based on the cleanup of the nitric acid. In January 1998, the BCT again concurred that this parcel change to a Category 4.	No further remediation is necessary.

**TABLE 3-6
SUBPARCEL DESCRIPTIONS**

SUBPARCEL NUMBER AND LABEL	LOCATION (x, y coordinates)	APPROXIMATE SIZE ^a (acres)	FACILITY	BASIS	REMEDIATION/ MITIGATION
17.3(4)	25,9	5.5	Building 359	This parcel is associated with Building 359 and proposed No Further Action Site 49 (Medical Waste Storage Area). This building was used for storage of medical supplies, medical supply waste (expired shelf life medical supplies), sodium chloride, petroleum products and low level radiological items (watch dials, lantern mantels and compasses). The 1997 Radiological Survey concluded this building was available for unrestricted use as no evidence of radiological contamination was found. A sulfonic acid spill was reported on August 27, 1993 inside Building 359, Section 2. The Spill Team responded, applied sodium bicarbonate and disposed of all residue in accordance with federal, state and local regulations. An out of service incinerator is also located in this building. This building was fumigated. Air sampling conducted during the BRAC sampling effort indicated no human health hazards from fumigation. After the December 1997 BCT decision to change fumigated buildings to Category 1, the BCT conferred and concurred via telephone calls that this parcel would become a Category 4 based on the cleanup of the sulfonic acid. In June 1998, the BCT again concurred that this parcel change to a Category 4.	No further remediation is necessary.
18.1(4)HS/HR	17,8	4.0	Building 560	This parcel is associated with Building 560. Two spills (5 gallons and 15 gallons) of aqueous film forming foam were reported on October 17, 1995 and November 14, 1995 inside Building 560, Section 3. The Spill Team responded, applied absorbent and disposed of all residue in accordance with federal, state and local regulations.	No further remediation is necessary.
20.2(4)HS/HR	17,6	5.0	Building 670	This parcel is associated with Building 670. Significant corrosion was observed during the EBS visual inspection due to acid leaks at the battery charging station. Sodium bicarbonate was applied and disposed in accordance with federal, state and local regulations. A 1-gallon spill of hydraulic fluid was reported on August 30, 1995 inside Building 670, Section 1. The Spill Team responded, applied absorbent and disposed of all residue in accordance with federal, state and local regulations.	No further remediation is necessary.
20.3(4)HS/HR	20,7	5.0	Building 470	This parcel is associated with Building 470. Corrosion was observed during the EBS visual inspection due to acid spills at the battery charging station. Sodium bicarbonate was applied and disposed in accordance with federal, state and local regulations.	No further remediation is necessary.
20.4(4)HS/HR	21,5	5.0	Building 489	This parcel is associated with Building 489. Corrosion was observed during the EBS visual inspection due to acid spills at the battery charging station. Sodium bicarbonate was applied and disposed in accordance with federal, state and local regulations.	No further remediation is necessary.

**TABLE 3-6
SUBPARCEL DESCRIPTIONS**

SUBPARCEL NUMBER AND LABEL	LOCATION (x, y coordinates)	APPROXIMATE SIZE ^a (acres)	FACILITY	BASIS	REMEDIATION/ MITIGATION
15 6(7)	18,17	43.8	Buildings 301, 304, 305, 306, 307, S309, T416, T417, 701, and surrounding areas	<p>This BRAC parcel is associated with Parcel 15. This parcel contains open storage areas X09, Y10 and Y50. This parcel contains railroad tracks that were historically sprayed with pesticides, herbicides, and waste oil containing PCP. Historically, waste oil containing PCP was used for dust control in these areas. This parcel also contains the following concerns:</p> <ul style="list-style-type: none"> • DRMO East Stormwater Runoff Canal (Site 54) is a canal that collects the stormwater runoff from the DRMO yard and other DDMT facilities. No previous sampling for the site. • DRMO North Stormwater Runoff Canal (Site 55) is a canal that collects the stormwater runoff from the DRMO yard and other DDMT facilities. No previous sampling for the site. • Waste oil used for dust control at PDO Yard (Site 72). • Surface and subsurface soil and groundwater samples detected metals, pesticides and methylene chloride. • Spills of dark liquid were observed on the concrete pad (real property 88015) south of Building 702 and west of Building 629. • A 4,000-gallon heating oil tank was removed in July 1994 outside of Building 319. • A 30-gallon spill of solvent was reported on December 2, 1991, south of Building 309. The precise location of the spill is unknown. 	Screening Sites 54, 55 and 72 - Surface soil, subsurface soil, surface water, and sediment sampling proposed to evaluate the presence of a contaminant release.
16 1(7)	21,9	2.8	Area surrounding buildings in Parcel 16	This parcel is associated with Parcel 16. This parcel contains railroad tracks that were historically sprayed with pesticides, herbicides, and waste oil containing PCP. Based on an interview with DDMT personnel, the surface soil surrounding the buildings at the installation has the potential for pesticide contamination.	This parcel requires additional evaluation.
17 2(7)	22,9	3.7	Area surrounding buildings in Parcel 17	<p>This BRAC parcel is associated with Parcel 17. This parcel contains railroad tracks that were historically sprayed with pesticides, herbicides, and waste oil containing PCP. Based on an interview with DDMT personnel, the surface soil surrounding the buildings at the installation has the potential for pesticide contamination.</p> <p>A 12,000-gallon and 500-gallon fuel oil tank were closed in place in July 1994 and September 1995, respectively, at Building 359. A 1,000-gallon fuel oil and 500-gallon diesel tank were removed in 1993 at Building 359. A 12,000-gallon and 500-gallon fuel oil tank were removed in 1993 at Building 359.</p>	This parcel requires additional evaluation.

**TABLE 3-6
SUBPARCEL DESCRIPTIONS**

SUBPARCEL NUMBER AND LABEL	LOCATION (x, y coordinates)	APPROXIMATE SIZE (acres)	FACILITY	BASIS	REMEDIAL MITIGATION
19.1(7)	21,8	2.8	Buildings T-467, S-468, and area surrounding buildings in Parcel 19	This parcel is associated with Parcel 19. This parcel contains railroad tracks that were historically sprayed with pesticides, herbicides, and waste oil containing PCP. Based on an interview with DDMT personnel, the surface soil surrounding the buildings at the installation has the potential for pesticide contamination. A 1,000-gallon oil/water separator is located at Building S-465.	This parcel requires additional evaluation.
19.2(7)	22,7	0.01	Building S-465	Petroleum products are stored at Building S-465. In addition, this building contains a vehicle wash.	This parcel requires additional evaluation.
19.3(7)	22,8	0.22	Building S-469	Storage of sulfuric acid, hydraulic fluid, waste oil, and lubrication oil at Building S-469. In addition, according to an interview, a PCB spill that has not been investigated took place in this building.	Proposed NFA Sites 40 (Safety Kleen units) and 41 (satellite drums).
20.5(7)	19,6	26.5	Area surrounding buildings in Parcel 20	This parcel is associated with Parcel 20. This parcel contains railroad tracks that were historically sprayed with pesticides, herbicides, and waste oil containing PCP. Based on an interview with DDMT personnel, the surface soil surrounding the buildings at the installation has the potential for pesticide contamination.	This parcel requires additional evaluation.
20.6(7)	20,4	0.40	Between Buildings 489 and 490	A sulfuric acid spill was reported on June 10, 1993 between Buildings 489 and 490. The precise location of the spill is unknown.	Action taken and quantity of spill unknown.
21.5(7)	19,3	32.9	Area surrounding buildings in Parcel 21	This parcel is associated with Parcel 21. Based on an interview with DDMT personnel, the surface soil surrounding the buildings at the installation has the potential for pesticide contamination.	This parcel requires additional evaluation.
22.1(7)	18,4	0.66	Area surrounding buildings in Parcel 22	This parcel is associated with Parcel 22. Based on an interview with DDMT personnel, the surface soil surrounding the buildings at the installation has the potential for pesticide contamination.	This parcel requires additional evaluation.
22.2(7)	17,4	0.58	Between Buildings 689 and 690	A battery recoupment area exists between Buildings 689 and 690. No previous sampling for the site.	Screening Site 77 - Surface and subsurface soil sampling proposed to evaluate the presence of a contaminant release.
23.7(7)	11,5	0.05	Building 783	Building 783 was previously designated for the storage of flammable items and ordnance material and is the location of the former DDMT recoupment facility. No previous sampling has been conducted for this site.	Screening Site 82 - Surface and subsurface soil sampling proposed to evaluate the presence of a contaminant release.
23.8(7)	11,3	0.04	Building 793	Building 793 was previously designated for the storage of flammable items and ordnance material and is the location of the former DDMT recoupment facility. No previous sampling has been conducted for this site.	Screening Site 82 - Surface and subsurface soil sampling proposed to evaluate the presence of a contaminant release.

TABLE 3-6
SUBPARCEL DESCRIPTIONS

SUBPARCEL NUMBER AND LABEL ^a	LOCATION (x, y coordinates)	APPROXIMATE SIZE ^b (acres)	FACILITY	BASIS	REMEDIATION/ MITIGATION
23 11(7)	6,2	3.3	Area surrounding buildings in the western portion of Parcel 23	This parcel is associated with the western portion of Parcel 23. Based on an interview with DDMT personnel, the surface soil surrounding the buildings at the installation has the potential for pesticide contamination	This parcel requires additional evaluation
24 2(7)	11,6	12.6	Area X03	This parcel is associated with Parcel 24. This parcel is comprised of area X03, which was used for storage of flammable materials in 55-gallon drums until 1988. The area then became steel storage. This parcel contains railroad tracks that were historically sprayed with pesticides, herbicides, and waste oil containing PCP. Based on an interview with DDMT personnel, the surface soil surrounding the buildings at the installation has the potential for pesticide contamination	This parcel requires additional evaluation
24 3(7)	11,7	3.9	Buildings 770, T771, and area surrounding these buildings	<p>Hazardous materials (antifreeze, paint, solvents, Safety Kleen) and petroleum products were stored in Building 770. Surface soil samples (SS-38 and SS-39) detected PAHs, VOCs, pesticides, and metals.</p> <p>Several spills were reported for Building 770 including, an oil spill was reported on August 23, 1993 outside of Building 770 (northeast corner); a 50-gallon spill of PCB-containing liquid was reported on July 9, 1990; and a 55-gallon spill of petroleum was reported on November 7, 1991 outside of Building 770 (west side)</p> <p>Several tanks have been removed at this building, including an 11,155-gallon diesel tank removed in July 1994; an 11,155-gallon fuel oil tank removed in July 1994; a 10,000-gallon fuel oil tank removed in July 1994; a 440-gallon gasoline tank removed in December 1989; and two 1,000-gallon used motor oil tanks removed in December 1989.</p> <p>Building 770 has an oil/water separator that is pumped out quarterly, and a floor drain</p> <p>Oil staining observed on the floor of Building T771.</p>	<p>RI Site 34 (west of Building 770) - Additional surface soil and subsurface soil sampling proposed to assess the vertical and horizontal extent of soil contamination. NFA Sites 30 (paint spray booth), 40 (Safety Kleen Unit only), 41 (satellite drum area)</p> <p>Action taken and quantity of spill unknown</p> <p>Contaminated materials from tank removal were excavated and disposed.</p>
26 1(7)	6,9	4.7	Building 889 and area surrounding buildings in Parcel 26	This parcel is associated with Parcel 26. This parcel contains railroad tracks that were historically sprayed with pesticides, herbicides, and waste oil containing PCP. Based on an interview with DDMT personnel, the surface soil surrounding the buildings at the installation has the potential for pesticide contamination	This parcel requires additional evaluation
27 1(7)	4,9	4.4	Area surrounding buildings in Parcel 27	This parcel is associated with Parcel 27. This parcel contains railroad tracks that were historically sprayed with pesticides, herbicides, and waste oil containing PCP. Based on an interview with DDMT personnel, the surface soil surrounding the buildings at the installation has the potential for pesticide contamination	This parcel requires additional evaluation.

TABLE 3-6
SUBPARCEL DESCRIPTIONS

SUBPARCEL NUMBER AND LABEL ^a	LOCATION (x, y coordinates)	APPROXIMATE SIZE ^b (acres)	FACILITY	BASIS	REMEDIAL ACTION/ MITIGATION
29 2(7)	4,18	30.4	Areas X27 and X30, Buildings 801, 802, and 804	This parcel is associated with Parcel 29. This parcel contains open storage areas X27 and X30. This parcel contains railroad tracks that were historically sprayed with pesticides, herbicides, and waste oil containing PCP. Based on an interview with DDMT personnel, the surface soil surrounding the buildings at the installation has the potential for pesticide contamination. A 1 25-gallon hydraulic fluid spill was reported on September 12, 1995 in the street. The spill was spread north out Gate 15 and across Dunn Avenue. The precise location of the spill is unknown.	This parcel requires additional evaluation.
29 3(7)	2,11	0.13	West Storm Drainage Canal	Main Installation, West Storm Water Drainage Canal collects the stormwater runoff from the PCP tank area and the western portion of the main installation. Surface water samples SW-2 and SW-14 detected 2-butanone and metals.	Screening Site 56 - Surface soil, subsurface soil, and sediment sampling proposed to evaluate the presence of a contaminant release.
30 2(7)	4,13	0.42	Between Buildings 925 and P949	This parcel is associated with X25 open storage area. Historical flammable solvents storage drums were stored with an earthen berm then a concrete berm. Fabric tension structure erected over concrete berm area. In 1988 the structure collapsed during heavy winds releasing approximately 327 gallons of flammable material (xylene, toluene, methyl ethyl ketone) that mixed with approximately 30,000 gallons of water. Building 925 was constructed over a portion of the area.	Proposed NFA Site 53- Material associated with the nearby spill in Building 925 was removed in 1988. This parcel requires additional information to ensure the spill did not migrate outside of the former concrete berm south of current location of Bldg. 925.
30 3(7)	4,15	6.0	Area surrounding buildings in Parcel 30	This parcel is associated with Parcel 30. This parcel contains open storage area X23. This parcel contains railroad tracks that were historically sprayed with pesticides, herbicides, and waste oil containing PCP. Based on an interview with DDMT personnel, the surface soil surrounding the buildings at the installation has the potential for pesticide contamination.	This parcel requires additional evaluation.
30 5(7)	4,10	0.55	Adjacent to the south side of Building P949	Site 83 is adjacent to the south side of Building P949. This location was apparently used to dispose of dried paint residues. Surface soil sample SS-20 detected metals, pesticides, VOCs, and SVOCs.	Screening Site 83 - Additional surface and subsurface soil sampling proposed to evaluate the presence of a contaminant release.
31 1(7)	6,13	23.7	Building 910 and area surrounding buildings in Parcel 31	This parcel is associated with Parcel 31. This parcel contains railroad tracks that were historically sprayed with pesticides, herbicides, and waste oil containing PCP. Based on an interview with DDMT personnel, the surface soil surrounding the buildings at the installation has the potential for pesticide contamination.	This parcel requires additional evaluation.
32 3(7)	9,10	2.3	Building 865	Building 865, the Recoup Area Building, is a hazardous materials and waste handling area used to transfer materials from damaged or leaking containers into undamaged containers. The site includes the entire building. No previous sampling for the site. A small fenced in area was observed on the southwest side of Building 865. This area contained various drums (5-, 10-, 15-, and 55-gallon) of old chemicals (oil, methyl ethyl ketone, isopropanol), some with protruding rusting tops.	Screening Site 28 - Surface and subsurface soil sampling proposed to evaluate the presence of a contaminant release.

TABLE 3-6
SUBPARCEL DESCRIPTIONS

SUBPARCEL NUMBER AND LABEL*	LOCATION (x, y coordinates)	APPROXIMATE SIZE* (acres)	FACILITY	BASIS	REMEDIAL ACTION MITIGATION
33.7(7)	13,8	0.15	Building 765	Building 765 was a fuel oil AST that was removed in 1994. No previous sampling for the site.	Screening Site 81 - Surface and subsurface soil sampling proposed to evaluate the presence of a contaminant release.
33.8(7)	10,10	0.03	Building S863	Considerable oil stains were observed on the concrete floor of Building S863.	This parcel requires additional evaluation.
33.9(7)	12,14	39.4	Areas X05, X06, X07, X08, X10, X11, and X12 Buildings S737, 720, and 717	This parcel is associated with Parcel 33. This parcel contains open storage areas X05, X06, X07, X08, X10, X11, and X12. Storage area X11 has drums with flammables. The PCP dip vat (Site 42) and UST (Site 43) near Building S737 were remediated. Building S737 is currently used for storing/mixing pesticides. The former PCP pallet drying area is Site 46. Building 720 (Site 80) was used for dispensing fuels and cleaners. Surface soil sample SS-24 detected VOCs, PAHs, DDT, and metals. Soil boring STB-4 detected 2-butanone. This parcel contains railroad tracks (east rail yard) that were historically sprayed with pesticides, herbicides, and waste oil containing PCP. A 12,000-gallon diesel AST and a 1,000-gallon used motor oil tank are located at Building 720. A 1,000-gallon diesel fuel tank was removed in July 1994 outside Building 756.	Screening Sites 42, 43, 46, and 80 - Additional surface and subsurface soil sampling proposed to evaluate the presence of a contaminant release. At Sites 42 and 43, liquid PCP source was removed, and 602 cubic yards of contaminated soil were excavated and disposed of.
35.1(7)	3,3	0.02	Building S1090	Storage at Building S1090 of paint thinner, lubricating oil, P-19 preservation oil, and corrosion preservation compound.	This parcel requires additional evaluation.
35.2(7)	3,5	0.43	Building 1084 and area surrounding this building	Site 88 is an old concrete grease rack and storage area for POL at Building 1085 (removed). Site 29 was a UST associated with the grease rack (removed 1988). Site 87 (Building 1084) was once used for storage of DDT/other pesticides.	Proposed Early Removal Sites 29, 87, 88 - Require additional evaluation.
35.3(7)	3,5	0.22	Building 1086	Building 1086 was used to store hazardous materials from 1959 through 1983/1984, and this building has a sump.	Proposed NFA Site 30 (paint spray booths).
35.4(7)	3,3	4.9	Buildings 1087 and 1088	RI Site 32 is next to Building 1088. Former location of spray paint booth in Building 1087 (Site 31) used to conduct major stock primer and enamel spray painting operations. Open-sided, metal roof shed (Site 33) with a gravel floor adjacent to Building 1088, which was historically used to store 55-gallon drums containing spent sandblasting material. Surface soil samples detected toluene, PAHs, pesticides, PCBs, metals, and VOCs. Groundwater sample from MW-22 detected VOCs, and metals.	RI Site 32 (Sandblasting Waste Accumulation Area) - Additional groundwater, surface soil, and subsurface soil sampling proposed to assess the horizontal and vertical extent of soil contamination. Screening Sites 31 and 33 - Additional surface and subsurface soil sampling proposed to evaluate the presence and extent of contamination.
36.1(7)	30,9	<0.01	Dunn Field	A seven-pound jug of ammonia hydroxide and a one-gallon bottle of acetic acid were buried here. Existing data is not adequate to assess if a release has occurred.	Proposed Early Removal Site 2 - Require additional evaluation.

**TABLE 3-6
SUBPARCEL DESCRIPTIONS**

SUBPARCEL NUMBER AND LABEL	LOCATION (x, y coordinates)	APPROXIMATE SIZE (acres)	FACILITY	BASIS	REMEDIAL ACTION/ MITIGATION
36.2(7)	30,9	0.01	Dunn Field	Three thousand quarts of unknown chemicals and five cubic feet of orthotoluidine dihydrochloride are buried here. Existing data is not adequate to assess if a release has occurred	Proposed Early Removal Site 3 - Require additional evaluation
36.3(7)	30,9	0.02	Dunn Field	Forty-five 55-gallon drums of discarded oil, grease, paints, and thinner are buried in these two adjacent trenches. Existing data is not adequate to assess if a release has occurred	Proposed Early Removal Sites 4 and 4.1 - Require additional evaluation
36.4(7)	30,9	<0.01	Dunn Field	Three cubic feet of methyl bromide are buried here in an unidentified container or containers. Existing data is not adequate to assess if a release has occurred	Proposed Early Removal Site 5 - Require additional evaluation
36.5(7)	30,8	<0.01	Dunn Field	1,700 quart bottles of nitric acid are buried here. Existing data is not adequate to assess if a release has occurred	Proposed Early Removal Site 7 - Require additional evaluation
36.6(7)	30,8	<0.01	Dunn Field	3,768 one-gallon cans of methyl bromide are buried to a depth of seven feet. Existing data is not adequate to assess if a release has occurred	Proposed Early Removal Site 8 - Require additional evaluation
36.7(7)	31,9	<0.01	Dunn Field	1,433 one-ounce bottles of trichloroacetic acid are buried at a depth of six feet. Existing data is not adequate to assess if a release has occurred	Proposed Early Removal Site 11 - Require additional evaluation
36.8(7)	27,8	0.06	Dunn Field	Thirty pallets of discarded acid containers are buried at these three locations at a depth of eight feet. Existing data is not adequate to assess if a release has occurred	Proposed Early Removal Sites 12 and 12.1 - Require additional evaluation
36.9(7)	28,8	0.01	Dunn Field	32 cubic yards of mixed chemicals and acids and 8,100 pounds of unnamed solids were buried at a depth of eight feet. Existing data is not adequate to assess if a release has occurred	Proposed Early Removal Site 13 - Require additional evaluation
36.10(7)	28,8	<0.01	Dunn Field	These sites contain unknown amounts of unnamed acid. Existing data is not adequate to assess if a release has occurred	Proposed Early Removal Sites 16 and 16.1 - Require additional evaluation
36.11(7)	28,8	<0.01	Dunn Field	An unknown amount of chemicals and medical supplies were buried. Existing data is not adequate to assess if a release has occurred	Proposed Early Removal Site 17 - Require additional evaluation
36.12(7)	23,11	0.92	Dunn Field	This site contains one above-grade covered bauxite pile. Existing data is not adequate to assess if a release has occurred	Proposed Early Removal Site 62 - Require additional evaluation
36.13(7)	27,11	3.3	Dunn Field	This site contains two above-grade covered bauxite piles. Existing data is not adequate to assess if a release has occurred	Proposed Early Removal Site 62 - Require additional evaluation
36.14(7)	31,11	0.33	Dunn Field	This site is a former pistol range and impact area and includes Building 1184 (Site 85). The building is now used for temporary pesticide storage. Existing data is not adequate to assess if a release has occurred	Proposed Early Removal Sites 60 and 85 - Require additional evaluation

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**TABLE 3-6
SUBPARCEL DESCRIPTIONS**

SUBPARCEL NUMBER AND LABEL	LOCATION (x, y coordinates)	APPROXIMATE SIZE (acres)	FACILITY	BASIS	REMEDIAL ACTION MITIGATION
36 15(7)	29,10	11.7	Dunn Field	Groundwater contamination is documented. In addition, this parcel contains railroad tracks that were historically sprayed with pesticides, herbicides, and waste oil containing PCP. Sampling is recommended for the railroad tracks in this parcel.	Remedial action has been suggested in the Record of Decision, but not yet implemented. Additional evaluation is required.
36 16(7)	29,9	0.08	Dunn Field	Nine sets of CAIS (containing mustard gas and lewisite) were buried. Existing data is not adequate to assess if a release has occurred.	Chemical Warfare Management Plan Site 1 - Conduct an investigation of potential chemical warfare materials, prepare a site safety submission, then conduct remediation.
36 17(7)	30,9	0.07	Dunn Field	Ashes and metals from the former burn site (Screening Site 6-4) were buried here. Existing data is not adequate to assess if a release has occurred.	Chemical Warfare Management Plan Site 9 - Conduct an investigation of potential chemical warfare materials, prepare a site safety submission, then conduct remediation.
36 18(7)	28,9	0.61	Dunn Field	Food items with expired shelf life were buried here. Reportedly, CAIS sets were also buried here. Existing data is not adequate to assess if a release has occurred.	Chemical Warfare Management Plan Site 86 - Conduct an investigation of potential chemical warfare materials, prepare a site safety submission, then conduct remediation.
36 19(7)	28,9	0.02	Dunn Field	Food items with expired shelf life were buried here. Reportedly, CAIS sets were also buried here. Existing data is not adequate to assess if a release has occurred.	Chemical Warfare Management Plan Site 86 - Conduct an investigation of potential chemical warfare materials, prepare a site safety submission, then conduct remediation.
36 20(7)	31,9	0.01	Dunn Field	40,037 units of eye ointment were buried here in 1955. No data exist to assess if a release has occurred.	Remedial Action Site 6 - Surface and subsurface sampling proposed to assess the presence of a contaminant release.
36 21(7)	30,8	0.07	Dunn Field	This site was discovered during the installation of monitoring well 10. Charred debris was encountered. No data exist to assess the materials buried at the site or if a release has occurred.	Remedial Action Site 10 - Surface and subsurface soil and groundwater sampling proposed to assess the presence of a contaminant release.
36 22(7)	28,8	0.01	Dunn Field	This municipal waste burial site reportedly contains paper, food, and other unnamed materials. No data exist to assess if a release has occurred.	Remedial Action Site 14 - Surface and subsurface soil and groundwater sampling proposed to assess the presence of a contaminant release.
36 23(7)	28,8	0.08	Dunn Field	Records indicate that one pallet each of sodium and sodium phosphate containers, and an unknown quantity of sodium, sodium phosphate, acid, chlorinated lime, and medical supplies were buried here in 1970. No data exist to assess if a release has occurred.	Remedial Action Sites 15, 15.1, and 15.2 - Surface and subsurface soil and groundwater sampling proposed to assess the presence of a contaminant release.
36 24(7)	28,11	0.08	Dunn Field	This site was used for the disposal of sanitary wastes, construction debris, smoke pots, and tear gas canisters from 1955 to 1960. No sampling data have been collected for this site.	Screening Site 19 - Surface and subsurface soil sampling proposed to assess the presence of a contaminant release.

**TABLE 3-6
SUBPARCEL DESCRIPTIONS**

SUBPARCEL NUMBER AND LABEL	LOCATION (x, y coordinates)	APPROXIMATE SIZE (acres)	FACILITY	BASIS	REMEDIAL MITIGATION
36 25(7)	30,10	0.34	Dunn Field	Reportedly, asphalt and roofing gravel were dumped in a surface fill at this location until 1981 when the debris was removed. Existing data is not adequate to assess if a release has occurred	Screening Site 20 - Surface and subsurface soil sampling proposed to assess the presence of a contaminant release
36 26(7)	31,13	0.51	Dunn Field	This site consists of two trenches with unknown depths. It is reported that XXCC-3 impregnate is buried here. No data exist to assess if a release has occurred	Screening Site 21 - Surface and subsurface soil sampling proposed to assess the presence of a contaminant release
36 27(7)	31,12	0.21	Dunn Field	This concrete-lined drainage ditch collects stormwater runoff from surrounding areas. Surface water samples have been collected (during stormwater runoff), however, not enough data exist to assess the impact from this site	Screening Site 50 - Surface and subsurface soil and stormwater sampling proposed to assess the presence of a contaminant release
36 28(7)	30,9	0.11	Dunn Field	This drain was installed in the mid-1950s and is used for stormwater conveyance. No data exist to assess if a release has occurred	Screening Site 61 - Surface and subsurface soil sampling proposed to assess the presence of a contaminant release
36 29(7)	23,9	7.5	Dunn Field	This area is a current flourspar storage area that historically was a bauxite storage area, and mustard gas, smoke pot, cyanide grenades and ordinance burn area (1946). No data exist to assess if a release has occurred	CWMP Site 24 and Screening Site 64 - Surface water and sediment sampling proposed to assess the presence of a contaminant release.
36 30(7)	28,12	41.9	Dunn Field, Buildings 1104, 1145, 1146, and 1185	This parcel is associated with Dunn Field excluding the areas that were previously parcelized. This parcel contains railroad tracks that were historically sprayed with pesticides, herbicides, and waste oil containing PCP. Previous sampling has not been performed in this area to confirm the absence of contamination	This parcel requires additional evaluation

Notes:

AST Aboveground storage tank
 BCT BRAC Cleanup Team
 BRAC Base Realignment and Closure
 CAIS Chemical Agent Identification Sets
 DDE 4,4'-Dichlorodiphenyltrichloroethene
 DRC Depot Redevelopment Corporation
 DDT 4,4'-Dichlorodiphenyltrichloroethane
 DRMO Defense Reutilization and Marketing Office
 EBS Environmental Baseline Survey
 NFA No further action
 PAH Poly aromatic hydrocarbon

a) Parcel label definitions are as follows
 PS Petroleum storage
 PR Petroleum release or disposal
 HR Hazardous substance release or disposal
 HS Hazardous substance storage

TABLE 3-6 SUBPARCEL DESCRIPTIONS

Qualified parcel label definitions are as follows

- A Asbestos containing material
- P: Polychlorinated biphenyls
- R Radon
- X: UXO and/or ordnance fragments
- RD: Radionuclides
- (P): Possible (unverified)

b) Acreage figures are approximate; they have been calculated using AutoCad Release 13

c) BCT screening criteria were established by the BCT during the August 1997 BCT meeting and basically consist of the EPA Region III Risk Based Concentration table and, for some metals, regional background levels.

TABLE 3-7
UNCONTAMINATED CATEGORY 1 SUBPARCELS

SUBPARCEL NUMBER AND CERFA CATEGORY	MAP LOCATION	BUILDING NUMBER
1.1(1)	32,10	1
1.2(1)	32,13	2
1.3(1)	NA	129
1.4(1)	NA	139
1.5(1)	34,12	144
1.6(1)	NA	145
1.7(1)	NA	155
2.1(1)	34,6	176
2.2(1)	NA	178
2.3(1)	34,5	179
2.4(1)	34,5	181
2.5(1)	NA	183
2.6(1)	34,4	184
3.1(1)	32,2	193
3.2(1)	31,2	195
3.3(1)	31,2	196
3.4(1)	31,2	198
4.1(1)	30,10	252
4.2(1)	31,7	270
4.3(1)	31,7	271
4.11(1)	29,9	253
6.3(1)	27,12	349
8.2(1)	29,15	229
8.3(1)	29,14	230
8.4(1)	26,15	329
8.5(1)	26,13	330
9.2(1)	23,15	429
9.4(1)	23,12	449
9.5(1)	23,11	450
10.4(1)	20,12	549
10.6(1)	17,11	650

TABLE 3-7
UNCONTAMINATED CATEGORY 1 SUBPARCELS

SUBPARCEL NUMBER AND CERFA CATEGORY	MAP LOCATION	BUILDING NUMBER
11.3(1)	20,14	530
11.4(1)	16,13	630
13.1(1)	33,16	23
13.2(1)	NA	24
13.3(1)	32,16	25
13.4(1)HS	31,17	210
14.1(1)	27,19	22
15.1(1)	10,18	15
16.2(1)	17,10	S559
17.1(1)	22,10	459
21.1(1)HS	17,3	690
23.1(1)	19,2	7
23.2(1)	13,2	8
23.3(1)	11,4	787
23.4(1)	NA	795
23.5(1)	5,2	S995
29.1(1)	3,10	9
30.4(1)	4,11	P949
33.1(1)	13,16	727
33.2(1)	14,10	754
33.3(1)	14,10	755
33.4(1)	14,9	756
33.5(1)	11,10	860
33.10(1)	14,10	753
34.1(1)	24,8	360

Notes

HS Hazardous Substance Storage

TABLE 3-8
QUALIFIED PARCEL DESCRIPTIONS

QUALIFIED PARCEL NUMBER AND LABEL *	LOCATION (X,Y COORDINATES)	APPROXIMATE SIZE (ACRES)*	BUILDING NUMBER	BASIS	EBS SOURCE OF EVIDENCE*	REMEDIAL MITIGATION
1 1-1Q-A/L(P)	32,10	0 01	1	ACM present; confirmed by previous sampling and testing LBP possible based on the year of construction	35, 2	No current mitigation
1 2-2Q-A/L(P)	32,13	0 01	2	ACM present; confirmed by previous sampling and testing LBP possible based on the year of construction	35, 2	No current mitigation
1 3-129Q-A(P)	NA	<0 01	129	ACM possible based on the year of construction	15	No current mitigation
1 4-139Q-A/L(P)	NA	<0 01	139	ACM present; confirmed by previous sampling and testing LBP possible based on the year of construction	26, 2	No current mitigation
1 5-144Q-A/L(P)	34,12	0 31	144	ACM present; confirmed by previous sampling and testing LBP possible based on the year of construction	22, 2	No current mitigation
1 6-S145Q-A/L(P)	NA	0 02	S145	ACM present; confirmed by previous sampling and testing LBP possible based on the year of construction	22, 2	No current mitigation
1 7-155Q-A/L(P)	NA	<0 01	155	ACM present; confirmed by previous sampling and testing LBP possible based on the year of construction.	26, 2	No current mitigation
2 1-176Q-A/L	34,6	0 11	176	ACM and LBP present; confirmed by previous sampling and testing.	26, 2	No current mitigation
2 2-S178Q-A/L(P)	NA	0 03	S178	ACM present; confirmed by previous sampling and testing LBP possible based on the year of construction.	26, 2	No current mitigation
2 3-179Q-A/L	33,5	0 11	S179	ACM and LBP present; confirmed by previous sampling and testing.	26, 2	No current mitigation
2 4-181Q-A/L	34,5	0 11	181	ACM and LBP present; confirmed by previous sampling and testing.	26, 2	No current mitigation
2 5-S183Q-A/L(P)	NA	0 11	S183	ACM present; confirmed by previous sampling and testing LBP possible based on the year of construction.	26, 2	No current mitigation.
2 6-184Q-A/L	34,4	0 11	184	ACM and LBP present; confirmed by previous sampling and testing. Lead from exterior paint present in soil at levels greater than 400 ppm	26, 2	Soil was removed No further mitigation

TABLE 3-8
QUALIFIED PARCEL DESCRIPTIONS

QUALIFIED PARCEL NUMBER AND LABEL*	LOCATION (X,Y COORDINATES)	APPROXIMATE SIZE (ACRES)*	BUILDING NUMBER	BASIS	EBS SOURCE OF EVIDENCE*	REMEDIAL MITIGATION
3 2-S195Q-A/L	31,2	0 10	S195	ACM and LBP present, confirmed by previous sampling and testing	22, 2	No current mitigation.
3 3-196Q-A/L(P)	31,2	0 02	196	ACM present, confirmed by previous sampling and testing LBP possible based on the year of construction	26, 2	No current mitigation.
3 4-S198Q-A/L(P)	31,2	0 01	S198	ACM present, confirmed by previous sampling and testing LBP possible based on the year of construction	26, 2	No current mitigation.
3 5-398Q-A/L(P)	29,4	0 01	398	ACM present, confirmed by previous sampling and testing LBP possible based on the year of construction.	30, 2	No current mitigation.
3 5-RANGEQ-X(P)	30,6	0 25	Range	Site formerly used as a pistol range, UXO possible	3	Ongoing Remedial Investigation
4 1-252Q-A/L(P)	30,10	0 19	252	ACM present, confirmed by previous sampling and testing LBP possible based on the year of construction.	23, 2	No current mitigation.
4 2-270Q-A/L(P)	31,7	0 33	270	ACM present, confirmed by previous sampling and testing. LBP possible based on the year of construction	24, 2	No current mitigation.
4 3-S271Q-A/L(P)	31,7	0 03	S271	ACM present, confirmed by previous sampling and testing. LBP possible based on the year of construction	24, 2	No current mitigation.
4 4-260Q-A/L(P)	30,9	0 15	260	ACM present, confirmed by previous sampling and testing. LBP possible based on the year of construction	24, 2	No current mitigation.
4 5-T256Q-A(P)/L(P)	30,8	<0 01	T256	ACM and LBP possible based on the year of construction	15	No current mitigation.
4 6-T254Q-A/L(P)	29,9	0 02	T254	ACM present, confirmed by previous sampling and testing LBP possible based on the year of construction.	23, 2	No current mitigation.
4 7-257Q-A/L(P)	28,10	0 01	257	ACM present, confirmed by previous sampling and testing LBP possible based on the year of construction.	23, 2	No current mitigation.
4 8-263Q-L(P)	30,9	0 02	263	LBP possible based on the year of construction	24, 2	No current mitigation.

TABLE 3-8
QUALIFIED PARCEL DESCRIPTIONS

QUALIFIED PARCEL NUMBER AND LABEL*	LOCATION (X,Y COORDINATES)	APPROXIMATE SIZE (ACRES)*	BUILDING NUMBER	TESTING BASIS	EBS SOURCE OF EVIDENCE	REMEDIAL MITIGATION
4 11-253Q-A/L(P)	29,9	0.22	253	ACM present, confirmed by previous sampling and testing. LBP possible based on the year of construction.	23, 2	No current mitigation.
4 12-251Q-A/L(P)	31,10	0.18	251	ACM present, confirmed by previous sampling and testing. LBP possible based on the year of construction.	23, 2	No current mitigation.
4 13-265Q-A/L(P)	31,8	0.18	265	ACM present; confirmed by previous sampling and testing. LBP possible based on the year of construction.	24, 2	No current mitigation.
5 1-T272Q-L(P)	29,7	0.03	T272	LBP possible based on the year of construction.	27, 2	No current mitigation.
5 2-274Q-A/L(P)	29,7	0.31	274	ACM present; confirmed by previous sampling and testing. LBP possible based on the year of construction.	27, 2	No current mitigation.
6 2-250Q-A/L(P)	29,11	2.8	250	ACM present, confirmed by previous sampling and testing. LBP possible based on the year of construction.	29, 2	No current mitigation.
6 3-349Q-A/L(P)	27,12	2.8	349	ACM present; confirmed by previous sampling and testing. LBP possible based on the year of construction.	29, 2	No current mitigation.
6 4-350Q-A/L(P)	26,11	2.8	350	ACM present, confirmed by previous sampling and testing. LBP possible based on the year of construction.	29, 2	No current mitigation.
7 2-249Q-A/L(P)	29,12	2.8	249	ACM present, confirmed by previous sampling and testing. LBP possible based on the year of construction.	28, 2	No current mitigation.
8 2-229Q-A/L(P)	29,15	2.8	229	ACM present, confirmed by previous sampling and testing. LBP possible based on the year of construction.	28, 2	No current mitigation.
8 3-230Q-A/L(P)	30,14	2.8	230	ACM present, confirmed by previous sampling and testing. LBP possible based on the year of construction.	28, 2	No current mitigation.
8 4-329Q-A/L(P)	26,15	2.8	329	ACM present, confirmed by previous sampling and testing. LBP possible based on the year of construction.	29, 2	No current mitigation.

TABLE 3-8
QUALIFIED PARCEL DESCRIPTIONS

QUALIFIED PARCEL NUMBER AND LABEL *	LOCATION (X,Y COORDINATES)	APPROXIMATE SIZE (ACRES)*	BUILDING NUMBER	BASIS	EBS SOURCE OF EVIDENCE*	REMEDIATION/ MITIGATION
8 5-330Q-AVL(P)	26,13	2.8	330	ACM present; confirmed by previous sampling and testing. LBP possible based on the year of construction	29, 2	No current mitigation
9 2-429Q-AVL(P)	23,15	2.8	429	ACM present; confirmed by previous sampling and testing. LBP possible based on the year of construction	31, 2	No current mitigation
9 3-430Q-AVL(P)	23,13	2.8	430	ACM present; confirmed by previous sampling and testing. LBP possible based on the year of construction	31, 2	No current mitigation.
9 4-449Q-AVL(P)	23,12	2.8	449	ACM present; confirmed by previous sampling and testing. LBP possible based on the year of construction.	31, 2	No current mitigation
9 5-450Q-AVL(P)	23,11	2.8	450	ACM present; confirmed by previous sampling and testing. LBP possible based on the year of construction.	31, 2	No current mitigation.
10 1-649Q-AVL(P)	16,12	2.8	649	ACM present; confirmed by previous sampling and testing. LBP possible based on the year of construction.	32, 2	No current mitigation.
10 4-549Q-AVL(P)	20,12	2.8	549	ACM present; confirmed by previous sampling and testing. LBP possible based on the year of construction	32, 2	No current mitigation.
10 5-550Q-AVL(P)	19,11	2.8	550	ACM present; confirmed by previous sampling and testing. LBP possible based on the year of construction	32, 2	No current mitigation.
10 6-650Q-AVL(P)	17,11	2.8	650	ACM present; confirmed by previous sampling and testing. LBP possible based on the year of construction	32, 2	No current mitigation
11 2-529Q-AVL(P)	19,15	2.8	529	ACM present; confirmed by previous sampling and testing. LBP possible based on the year of construction	31, 2	No current mitigation
11 3-530Q-AVL(P)	20,14	2.8	530	ACM present; confirmed by previous sampling and testing. LBP possible based on the year of construction	31, 2	No current mitigation
11 4-630Q-AVL(P)	16,13	2.8	630	ACM present; confirmed by previous sampling and testing. LBP possible based on the year of construction	32, 2	No current mitigation

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TABLE 3-8
QUALIFIED PARCEL DESCRIPTIONS

QUALIFIED PARCEL NUMBER AND LABEL *	LOCATION (X,Y COORDINATES)	APPROXIMATE SIZE (ACRES)*	BUILDING NUMBER	BASIS	EBS SOURCE OF EVIDENCE*	REMEDIAL MITIGATION
12.2-629Q-A/L(P)	16,15	2.8	629	ACM present; confirmed by previous sampling and testing. LBP possible based on the year of construction	32, 2	No current mitigation
13.1-23Q-A/L(P)	33,16	<0.01	23	ACM present; confirmed by previous sampling and testing. LBP possible based on the year of construction	35, 2	No current mitigation
13.2-24Q-L(P)	NA	<0.01	24	LBP possible based on the year of construction	35, 2	No current mitigation.
13.3-25Q-L(P)	32,16	<0.01	25	LBP possible based on the year of construction	35, 2	No current mitigation
13.4-210Q-A/L(P)	31,17	5.5	210	ACM present; confirmed by previous sampling and testing. LBP possible based on the year of construction	23, 2	No current mitigation
14.1-22Q-A/L(P)	27,19	<0.01	22	ACM present; confirmed by previous sampling and testing. LBP possible based on the year of construction	35, 2	No current mitigation
14.2-S209Q-A/L(P)	33,17	5.50	S209	ACM present; confirmed by previous sampling and testing. LBP possible based on the year of construction	22, 2	No current mitigation
15.1-15Q-A/L(P)	10,18	<0.01	15	ACM present; confirmed by previous sampling and testing. LBP possible based on the year of construction.	35, 2	No current mitigation
15.2-S308Q-A/L(P)	26,18	0.01	S308	ACM present; confirmed by previous sampling and testing. LBP possible based on the year of construction	28, 2	No current mitigation
15.3-319Q-A/L(P)	26,16	0.41	319	ACM present; confirmed by previous sampling and testing. LBP possible based on the year of construction	30, 2	No current mitigation
15.6-301Q-A(P)/L(P)	18,17	<0.01	301	ACM and LBP possible based on the year of construction	15	No current mitigation
15.6-S309Q-A/L(P)	25,18	0.01	S309	ACM present; confirmed by previous sampling and testing. LBP possible based on the year of construction	28, 2	No current mitigation

TABLE 3-8
QUALIFIED PARCEL DESCRIPTIONS

QUALIFIED PARCEL NUMBER AND LABEL*	LOCATION (X,Y COORDINATES)	APPROXIMATE SIZE (ACRES)*	BUILDING NUMBER	BASIS	EBS SOURCE OF EVIDENCE*	REMEDIAL ACTION/ MITIGATION
15 6-T416Q-A/L(P)	24,16	0 06	T416	ACM present, confirmed by previous sampling and testing. LBP possible based on the year of construction	27, 2	No current mitigation
15 6-T417Q-A/L(P)	23,16	0 07	T417	ACM present, confirmed by previous sampling and testing. LBP possible based on the year of construction	27, 2	No current mitigation
16 2-S559Q-A/L(P)	17,10	5 5	S559	ACM present; confirmed by previous sampling and testing. LBP possible based on the year of construction.	27, 2	No current mitigation
17 3-359Q-A/L(P)	25,9	5 5	359	ACM present, confirmed by previous sampling and testing. LBP possible based on the year of construction	29, 2	No current mitigation
19 1-S468Q-L(P)	21,8	0 22	S468	LBP possible based on the year of construction	30, 2	No current mitigation.
19 2-S465Q-A	22,7	0 01	S465	ACM present, confirmed by previous sampling and testing.	30	No current mitigation
19 3-S469Q-L(P)	22,8	0 22	S469	LBP possible based on the year of construction	30, 2	No current mitigation
20 2-670Q-A/L(P)	17,6	5 0	670	ACM present, confirmed by previous sampling and testing. LBP possible based on the year of construction	33, 2	No current mitigation
20 3-470Q-A/L(P)	20,7	5 0	470	ACM present, confirmed by previous sampling and testing. LBP possible based on the year of construction	30, 2	No current mitigation
20 4-489Q-A/L(P)	21,5	5 0	489	ACM present, confirmed by previous sampling and testing. LBP possible based on the year of construction	30, 2	No current mitigation
21 1-690Q-A/L(P)	17,3	5 0	690	ACM present, confirmed by previous sampling and testing. LBP possible based on the year of construction	33, 2	No current mitigation
21 2-490Q-A/L(P)	23,3	5 0	490	ACM present; confirmed by previous sampling and testing. LBP possible based on the year of construction	30, 2	No current mitigation
21 3-689Q-A/L(P)	15,5	5 2	689	ACM present, confirmed by previous sampling and testing. LBP possible based on the year of construction	33, 2	No current mitigation

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TABLE 3-8
QUALIFIED PARCEL DESCRIPTIONS

QUALIFIED PARCEL NUMBER AND LABEL*	LOCATION (X,Y COORDINATES)	APPROXIMATE SIZE (ACRES)*	BUILDING NUMBER	BASIS	EBS SOURCE OF EVIDENCE*	REMEDIATION/ MITIGATION
21 4-685Q-A/L(P)	15,4	0.73	685	ACM present, confirmed by previous sampling and testing. LBP possible based on the year of construction	33, 2	No current mitigation.
23 2-8Q-A/L(P)	13,2	0.02	8	ACM present; confirmed by previous sampling and testing. LBP possible based on the year of construction	35, 2	No current mitigation
23 4-795Q-L(P)	NA	0.01	795	LBP possible based on the year of construction	27, 2	No current mitigation
23 7-783Q-A/L(P)/X(P)	11,5	0.05	783	ACM present, confirmed by previous sampling and testing. LBP possible based on the year of construction. UXO possible historically ordnance has been stored in this building	34, 2	No current mitigation
23 8-793Q-L(P)/X(P)	11,3	0.04	793	LBP possible based on the year of construction. UXO possible historically ordnance has been stored in this building.	34, 2	No current mitigation
24 3-770Q-A/L(P)	12,8	0.57	770	ACM present, confirmed by previous sampling and testing. LBP possible based on the year of construction.	34, 2	No current mitigation
24 3-771Q-A/L(P)	11,7	0.02	771	ACM present, confirmed by previous sampling and testing. LBP possible based on the year of construction.	34, 2	No current mitigation
25 1-S873Q-A/L(P)	9,4	6.3	S873	ACM present; confirmed by previous sampling and testing. LBP possible based on the year of construction	15	No current mitigation
25 2-T875Q-A/L(P)	8,7	6.3	T875	ACM present; confirmed by previous sampling and testing. LBP possible based on the year of construction.	36, 2	No current mitigation
26 2-S970Q-A/L(P)	6,4	6.3	S970	ACM present, confirmed by previous sampling and testing. LBP possible based on the year of construction	36, 2	No current mitigation
27 2-S972Q-A/L(P)	4,4	6.3	S972	ACM present, confirmed by previous sampling and testing. LBP possible based on the year of construction	36, 2	No current mitigation.
28 2-S1089Q-A(P)/L(P)	3,5	0.91	S1089	ACM and LBP possible based on the year of construction	15	No current mitigation

TABLE 3-8
QUALIFIED PARCEL DESCRIPTIONS

QUALIFIED PARCEL NUMBER AND LABEL *	LOCATION (X,Y COORDINATES)	APPROXIMATE SIZE (ACRES)*	BUILDING NUMBER	BASIS	EBS SOURCE OF EVIDENCE*	REMEDIATION/ MITIGATION
29.1-9Q-A/L(P)	3,10	0.01	9	ACM present; confirmed by previous sampling and testing. LBP possible based on the year of construction.	35, 2	No current mitigation
29.2-801Q-A/L(P)	4,18	0.01	801	ACM present; confirmed by previous sampling and testing. LBP possible based on the year of construction.	36, 2	No current mitigation.
33.3-755Q-A/L(P)	14,10	0.01	755	ACM present; confirmed by previous sampling and testing. LBP possible based on the year of construction.	27, 2	No current mitigation.
33.4-756Q-A	14,9	0.06	756	ACM present; confirmed by previous sampling and testing.	27	No current mitigation
33.5-T860Q-A/L(P)	11,10	0.02	T860	ACM present; confirmed by previous sampling and testing. LBP possible based on the year of construction.	36, 2	No current mitigation
33.8-S863Q-A/L(P)	10,10	0.03	S863	ACM present; confirmed by previous sampling and testing. LBP possible based on the year of construction.	36, 2	No current mitigation
33.9-717Q-A/L(P)	12,14	0.01	717	ACM present; confirmed by previous sampling and testing. LBP possible based on the year of construction.	33, 2	No current mitigation
33.9-720Q-A/L(P)	14,15	0.11	720	ACM present; confirmed by previous sampling and testing. LBP possible based on the year of construction.	33, 2	No current mitigation
33.9-S737Q-A/L(P)	13,13	0.13	737	ACM present; confirmed by previous sampling and testing. LBP possible based on the year of construction.	34, 2	No current mitigation
33.10-753Q-A/L(P)	14,10	0.01	753	ACM present; confirmed by previous sampling and testing. LBP possible based on the year of construction.	34, 2	No current mitigation
35.1-S1090Q-A/L(P)	3,3	0.02	S1090	ACM present; confirmed by previous sampling and testing. LBP possible based on the year of construction.	35, 2	No current mitigation
35.2-T1084Q-A/L(P)	4,5	0.03	T1084	ACM present; confirmed by previous sampling and testing. LBP possible based on the year of construction.	35, 2	No current mitigation

TABLE 3-8
QUALIFIED PARCEL DESCRIPTIONS

QUALIFIED PARCEL NUMBER AND LABEL ^a	LOCATION (X,Y COORDINATES)	APPROXIMATE SIZE (ACRES) ^b	BUILDING NUMBER	BASIS	EBS SOURCE OF EVIDENCE ^c	REMEDIAL/ MITIGATION
35 3-1086Q-L(P)	3,5	0 22	1086	LBP possible based on the year of construction	35, 2	No current mitigation.
35 4-1087Q-A/L(P)	3,3	0 11	1087	ACM present; confirmed by previous sampling and testing LBP possible based on the year of construction	35, 2	No current mitigation
35 4-1088Q-L(P)	3,3	0 05	1088	LBP possible based on the year of construction.	35, 2	No current mitigation
35 5-S1091Q-A/L(P)	2,2	0 02	S1091	ACM present, confirmed by previous sampling and testing LBP possible based on the year of construction.	35, 2	No current mitigation.
36 14-1184Q-L(P)	31,12	0 01	1184	LBP possible based on the year of construction	35, 2	No current mitigation
36 14-RANGEQ-X(P)	31,11	0 33	Range	Qualification for UXO includes potential for lead in soil from the former pistol range	37	Ongoing Remedial Investigation
36 29-OBQ-X(P)	23,9	7 50	Former Ordnance Burn Area	UXO possible based on former use as an ordnance burn area	1, 6	Ongoing Remedial Investigation

Notes

a) Parcel label definitions are as follows

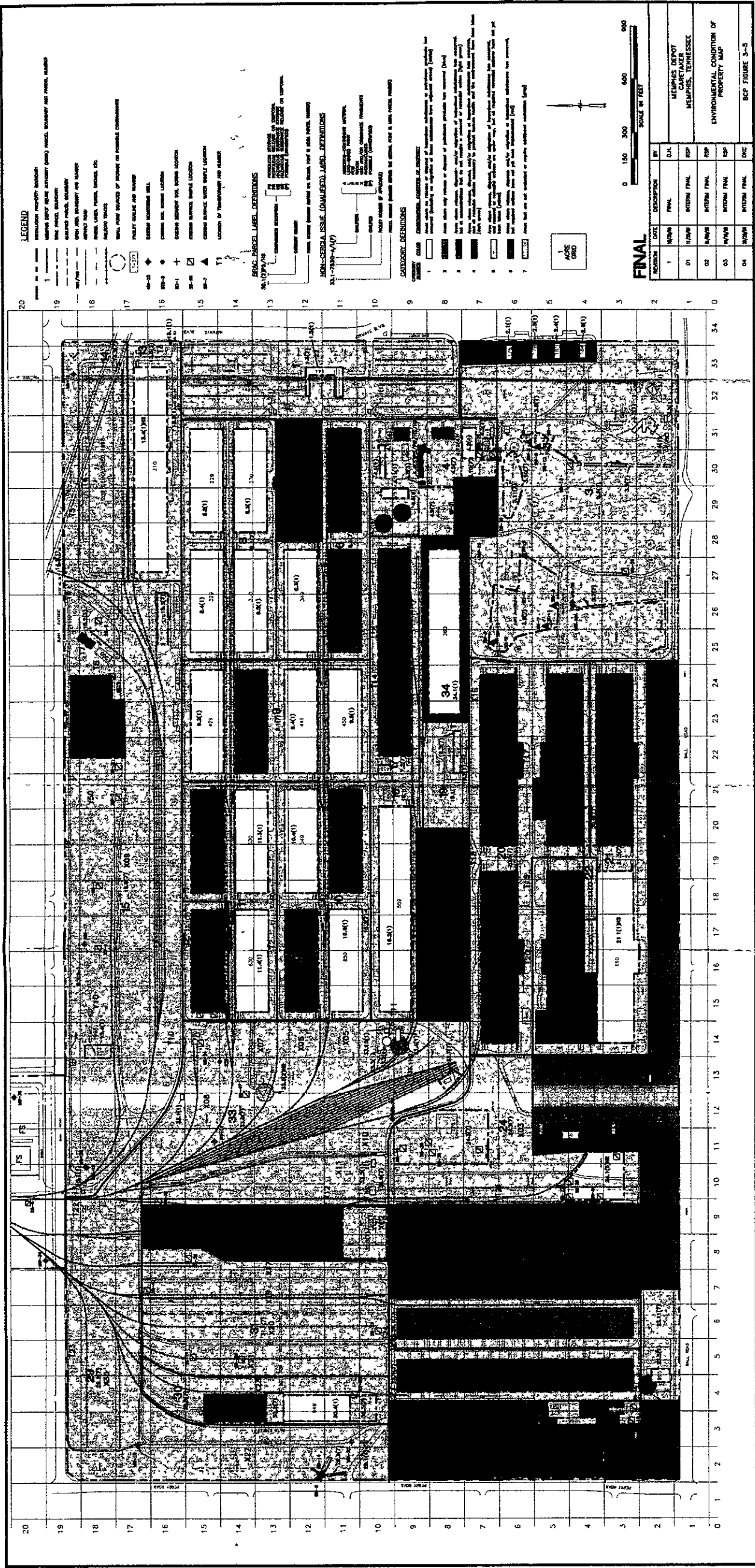
PS = petroleum storage
 PR = petroleum release or disposal
 HS = hazardous substance storage
 HR = hazardous substance release or disposal

Qualified parcel label definitions are as follows

A = asbestos containing material
 L = lead-based paint
 P = polychlorinated biphenyls
 R = radon
 X = UXO and/or ordnance fragments
 (P) = possible (unverified)

b) Acreage figures are approximate; they have been calculated using AutoCad Release 12

c) EBS Source of Evidence numbers refer to documents listed in Table 2-1 of this report.



SECTION FOUR

INSTALLATION-WIDE STRATEGY FOR ENVIRONMENTAL RESTORATION

4.0 INSTALLATION-WIDE STRATEGY FOR ENVIRONMENTAL RESTORATION

This section describes and summarizes the installation-wide environmental restoration and compliance strategy for the Depot.

Prior to closure of the Depot on September 30, 1997, restoration projects were under way to identify, characterize and remediate environmental contamination at the Depot. The restoration strategy focused on the protection of human health and the environment at the Depot, taking into consideration the ongoing and continued use of the Depot. With the closure announcement, the restoration strategy for the Depot changed from supporting an active military installation to responding to property disposal (transfer) and reuse considerations. The Depot environmental restoration strategy was therefore modified to address closure and reuse while still focusing on protection of human health and the environment.

The overall environmental and compliance strategy is the responsibility of the Depot's Environmental Division. The Depot's BRAC strategy is designed to ensure that all regulatory requirements are met, and that adequate and cost-effective restoration activities are implemented as quickly as possible to provide expedited transfer and reuse in compliance with U. S. Army and community goals. The current strategy provides for the completion of all site restoration activities on the BRAC parcel by 2004 with the exception of groundwater remediation, which is anticipated to continue until 2007.

The following sections describe various elements of the Depot BRAC environmental restoration strategy, including area designation strategy, compliance strategy, and natural and cultural resources strategy.

4.1 AREA DESIGNATION STRATEGY

The history of the environmental restoration program at the Depot has three distinct periods. These periods are the Installation Restoration period, the National Priorities List (or "Superfund") period and the BRAC period. Each of these periods has introduced some method of grouping or segregating portions of the facility due to real estate or environmental issues. The group designations include Installation Restoration Sites, Operable Units (OUs) and BRAC parcels. The following subsections reflect the relationship among IR sites, OUs and BRAC parcels. The priorities and sequence for cleanup were determined by the BCT and the DRC to reflect a balance between risk to human health and the environment and the reuse priority of a parcel awaiting remedial action.

SECTION FOUR**INSTALLATION-WIDE STRATEGY FOR
ENVIRONMENTAL RESTORATION****4.1.1 Zonie Designations**

Development of Installation Restoration (IR) sites began with the 1981 Installation Assessment of Defense Depot Memphis, Tennessee (USATHAMA 1981) and continued through the Environmental Audit No. 43-21-1387-86 (USAEHA July 1985), the RCRA Facilities Assessment (RFA) (A.T. Kearney 1990), and a Remedial Investigation (Law 1990). All areas of potential contamination identified in these studies have been assigned IR site numbers and are now being evaluated through the CERCLA site assessment/preliminary investigation process. Some of these sites will continue through the CERCLA remedial investigation/feasibility study process.

When the Depot was placed on the National Priorities List in 1992 and during subsequent federal facilities agreement negotiations, the Depot was broken into four CERCLA operable units based on the geographic layout of the facility. These units are Operable Unit 1 (OU-1), OU-2, OU-3 and OU-4. The IR sites were included in one of the four operable units.

When the facility was designated as a BRAC closure facility in 1995 and the Memphis Depot Redevelopment Agency was formed, the MDRA along with the Depot broke the facility property into parcels that were known as the BRAC parcels and subparcels. These parcels and subparcels were developed from a reuse and environmental restoration perspective. Thirty six parcels were formed. Areas of environmental concern within each parcel were broken in subparcels, 187 in all, and represent buildings, spill locations, burial locations, former pistol ranges, open land areas and IR sites. In some cases, the BRAC parcel contains both open spaces and buildings.

This BRAC parcel system has allowed for the IR sites to be compared directly to BRAC parcels for reuse purposes and to facilitate sampling/analysis, CERFA category decision making, leasing and, ultimately, transfer. The relationship among the OUs and BRAC parcels is shown in Table 4-1.

4.1.2 Sequence

The sequence for investigating each BRAC parcel or subparcel is presented in Table 4-1. The sequence is based primarily on the DRC's order of preference. This shall be updated as the DRC attracts business and organizations to locate at the Depot. Table 4-2 lists primary deliverables and projected deliverable dates for the environmental restoration investigation.

SECTION FOUR**INSTALLATION-WIDE STRATEGY FOR
ENVIRONMENTAL RESTORATION****4.1.3 Early Actions Strategy**

The Depot is implementing the “Record of Decision for Interim Remedial Action of the Groundwater at Dunn Field (OU-1)” to control the migration of chlorinated solvents identified in the groundwater. The Depot has also implemented an early removal of dieldrin impacted soil from the Military Family Housing area. Other early actions will be initiated when appropriate to accelerate the cleanup process. Candidates for early removal actions are listed in Environmental Condition of Property Category 6 within Table 3-6.

4.1.4 Remedy Selection Approach

Remedies for the restoration of each IR site or BRAC subparcel, if required, at the Depot will be selected in accordance with the NCP. The BCT has and will continue to evaluate each IR site or subparcel to determine the appropriate remedy. Areas where contamination is suspected to be limited in extent will likely be addressed by ER actions (presumptive remedy) where such activities have been identified as providing significant environmental and economic benefits. If contamination extends beyond the limits within which remediation can feasibly be completed using available ER technologies, ER will not be implemented and another course of action will be taken.

Using the approach outlined in the NCP, the following items will be required for these sites.

- A work plan will be prepared and implemented to evaluate the extent of the contamination
- A risk assessment will be completed to evaluate the potential risk to human health and the environment. Future land use will be considered during the assessment (it is anticipated that industrial use would apply to most BRAC parcels), the results have and will be compared to EPA Region III Risk Based Concentrations, background concentrations and achievable analytical reporting limits.
- Options to cleanup the area of contamination will be evaluated. Selected technologies for application of expedited solutions will be reviewed, presumptive remedies will be reviewed, and a focused feasibility study will be prepared.
- The design for the selected remedial option will be prepared and implemented in a ROD, and applicable or relevant and appropriate requirements will be identified.

SECTION FOUR**INSTALLATION-WIDE STRATEGY FOR
ENVIRONMENTAL RESTORATION****4.2 COMPLIANCE PROGRAM STRATEGY**

This section describes the strategies for addressing compliance-related environmental issues at the Depot. These environmental compliance strategies have been developed to ensure that the Depot complies with federal, state and local regulatory requirements, DOD and DLA directives, and other relevant regulations throughout the BRAC closure and property transfer process.

4.2.1 Storage Tanks

The following strategies have been developed to manage the storage tanks at the Depot until realignment is complete and the Depot property is transferred. Historically, there have been 37 storage tanks in use at the Depot.

Underground Storage Tanks

Since the 1980s, the Depot has implemented a program to remove or close in place tanks that were identified as leaking or not in use. Soil samples and groundwater samples (if groundwater was encountered) were generally not collected to confirm the absence of contamination for the USTs removed or closed in place during the 1980s because the regulatory agencies did not require sampling. The areas where confirmation sampling did not occur have either become IR sites or BRAC subparcels and will be sampled accordingly. If contamination is present at these areas, the remedy selection approach described in Section 4.1.4 will be implemented.

Neither the 1993 Pickering UST survey nor the 1996 EBS could confirm the location of a suspected UST at Building 229. For this unknown tank, the Depot confirmed through a records/document review that a tank did not exist at Building 229.

As of October 1998, the Depot had initiated the TDEC UST program closure process for the two regulated USTs removed in July 1998.

Aboveground Storage Tanks

Historically, there have been nine ASTs in use at the Depot. Since the 1980s, the Depot has implemented a program to remove or close in place tanks that were leaking or not in use. As of October 1998, there are five ASTs at the Depot. The five remaining ASTs will not be removed unless specifically directed by the DRC.

SECTION FOUR**INSTALLATION-WIDE STRATEGY FOR
ENVIRONMENTAL RESTORATION****4.2.2 Hazardous Materials/Waste Management**

Hazardous materials/waste management compliance programs at the Depot will continue to be conducted throughout the closure and property transfer process in accordance with applicable state and federal regulations.

4.2.3 Solid Waste Management

Municipal solid wastes generated at the Depot will continue to be collected and disposed of off-site at the North Shelby Sanitary Landfill or South Shelby Sanitary Landfill (both operated by Browning-Ferris Industries) by a licensed solid waste vendor.

4.2.4 Polychlorinated Biphenyls

In 1993, the Depot implemented a program to identify PCB-containing equipment and to replace the PCB-containing equipment with non-PCB-containing equipment. The results of the program are presented in Appendix E. As of October 1996, the Depot had replaced all equipment confirmed to contain PCBs with non-PCB equipment, with the exception of fluorescent light ballasts that may or may not contain PCBs

According to an interview conducted during the EBS, a PCB spill occurred in Building 469. The Depot plans to investigate the presence or absence of residual PCBs in Building 469. If required, the Depot plans to clean the PCB spill area in Building 469.

4.2.5 Asbestos

Asbestos-containing material will continue to be managed in compliance with the DA guidance, "Lead-Based Paint and Asbestos in U.S. Army Properties Affected by Base Realignment and Closure," and the DOD memorandum entitled "Asbestos, Lead Paint, and Radon Policies at BRAC Properties."

Friable and non-friable asbestos-containing material in good condition will be managed in place. All friable asbestos that poses a risk to human health will be removed or encapsulated. Asbestos inspections will be conducted as needed.

SECTION FOUR**INSTALLATION-WIDE STRATEGY FOR
ENVIRONMENTAL RESTORATION****4.2.6 Radon**

Based on the results of the radon testing conducted in 1995, radon levels in structures at the Depot are below the EPA action level; therefore, no further testing or abatement is planned. The results of the survey are provided in Appendix E.

4.2.7 RCRA Facilities

Solid waste management units were identified under the RCRA process at the Depot. The corrective action for each solid waste management unit will be addressed under CERCLA.

4.2.8 NPDES Permits

The Depot has an NPDES permit for the discharge of stormwater runoff. The Depot will continue to conduct the activities required in its NPDES permit.

4.2.9 Oil/Water Separators

There are three oil/water separators at the Depot that will be left in place.

4.2.10 Unexploded Ordnance

Three areas at the Depot were identified as being of concern because of potential UXO. Two areas were used as pistol ranges. One pistol range is located near the ninth hole of the golf course. The second pistol range is located in the Dunn Field area. The third area, an ordnance burn area, is located in the Dunn Field area. The Depot plans to sample and, if required, remediate these areas.

4.2.11 Pesticides

The Depot plans to implement a site-wide program to collect samples to evaluate the lateral extent of pesticide contamination and the types and concentrations of pesticides. Areas requiring remediation will be determined and remediation will be implemented if necessary.

4.2.12 Lead-Based Paint

Lead-based paint at the Depot is managed in accordance with DA policy guidance, "Lead-Based Paint and Asbestos in U.S. Army Properties Affected by Base Realignment and Closure," and the DOD memorandum entitled "Asbestos, Lead Paint, and Radon Policies at BRAC Properties."

SECTION FOUR**INSTALLATION-WIDE STRATEGY FOR
ENVIRONMENTAL RESTORATION**

The Depot plans to abate LBP in areas requiring such activities.

4.3 NATURAL AND CULTURAL RESOURCES STRATEGY

The Depot is prepared to implement a program as applicable for the preservation of natural and cultural resources. The EA for a Master Interim Lease at the Depot was completed in September 1996. The EA for Disposal and Reuse was completed in February 1998 and is currently in the public comment period. The EA identified if the following were found at the Depot: archaeological resources, historical structures and resources, Native American resources, threatened and endangered species, sensitive habitats, wetlands, surface waters, floodplains and paleontological resources.

4.3.1 Archaeological Resources

No archaeological resources were identified at the Depot. In April 1997 U. S. Army Corps of Engineers, Ft. Worth District conducted an archaeological survey of Dunn Field and the golf course. According to the "Archeological Survey of Two Parcels at Defense Distribution Depot Memphis, Tennessee" (Prewitt 1997), no evidence of archaeological resources was found at the Depot.

4.3.2 Historical Structures and Resources

The Depot has properties eligible for listing on the National Register of Historic Places (NRHP). In 1996, U. S. Army Corps of Engineers, Ft. Worth District, conducted a cultural resources survey and identified 20 World War II vintage warehouses (known as the 20 Typicals) as potentially eligible for the NRHP. The Tennessee State Historic Preservation Officer (TNSHPO) determined that the 20 Typicals as well as three World War II vintage guard stations (Buildings 9, 22 and 23) were eligible for listing on the NRHP. No nomination has been made to date. The Army Material Command, TNSHPO and Advisory Council on Historic Places entered into a Memorandum of Agreement regarding these eligible buildings. The DRC concurred with this Memorandum of Agreement.

4.3.3 Native American Resources

No Native American resources have been found at the Depot.

4.3.4 Threatened and Endangered Species

No threatened and endangered species have been identified at the Depot.

SECTION FOUR**INSTALLATION-WIDE STRATEGY FOR
ENVIRONMENTAL RESTORATION****4.3.5 Sensitive Habitats**

No sensitive habitats have been identified at the Depot.

4.3.6 Wetlands

There are no wetlands at the Depot

4.3.7 Surface Waters

There are two bodies of water located at the Depot. Both bodies of water (Lake Danielson and a golf course pond) are used to store water for firefighting purposes. Lake Danielson, approximately 4 acres in area, is located in the northwest corner of the golf course, and the golf course pond is located on the northeast corner of the golf course.

4.3.8 Floodplains

The Depot is located outside the 500-year floodplain

4.3.9 Paleontological Resources

No paleontological resources have been identified at the Depot.

4.4 COMMUNITY INVOLVEMENT/STRATEGY

A draft community relations plan dated September 1998 has been prepared to facilitate communication among the Depot, other federal, state or local agencies; and interested groups and other community residents concerning BRAC closure and environmental restoration activities at the Depot. This plan should ensure that all involved or interested parties are provided accurate, consistent information in a timely manner concerning related cleanup activities, contaminants and possible effects of any contamination, and offers mechanisms that allow all parties to provide input into the environmental restoration decision.

The Depot BCT has adopted the following strategy to support a proactive community relations program in accordance with the CERCLA requirements:

- Inform interested citizens and local officials about the progress of remedial activities

SECTION FOUR**INSTALLATION-WIDE STRATEGY FOR
ENVIRONMENTAL RESTORATION**

- Provide opportunities for the public to be involved in planning remedial actions at the site.
- Keep local residents; Depot employees; and federal, state and local officials informed in a timely manner of major findings of the remedial actions to be conducted at the Depot.
- Provide local residents; on-post employees, and federal, state and local officials with an opportunity to review and comment on the studies to be conducted at the Depot and on suggested remedial action alternatives and decisions.
- Be sensitive to and informed about changes in community concerns, attitudes, information needs and activities regarding the Depot. Use those concerns as factors when evaluating modifications to the community relations plan as necessary to address these changes.
- Effectively serve the community's information needs and address citizen inquiries through prompt release of information via the media and other information dissemination techniques.
- Provide timely responses to inquiries and requests for media interviews and briefings, to facilitate fair and accurate reporting of restoration activities at the Depot.
- Enhance and/or maintain, through an active public affairs program, a climate of understanding and trust with the aim of providing information and opportunities for comment and discussion.
- Provide a single point of contact for dissemination of information regarding the progress of the contamination assessments, restoration actions and other decisions at the Depot.
- Identify issues and potential areas of concern and develop and implement objective means to avoid or resolve conflicts.

This strategy is supported by the Restoration Advisory Board (RAB), information repositories, environmental hotline, public meetings, public comment periods and the newsletter

**TABLE 4-1
CLEANUP SEQUENCE**

OPERABLE UNIT	BRAC SUBPARCEL	ENVIRONMENTAL RISK	CLEANUP SEQUENCE^a
3	34.1	none anticipated	2
3	34.2	potential pesticide contamination	2
3	18.1	potential contamination from spill of unknown foam	2
3	18.2	potential pesticide contamination	2
4	32.1	potential pesticide contamination	1
4	32.2	potential petroleum and pesticide contamination	1
4	32.3	unknown	1
4	30.1	potential petroleum contamination	1
4	30.2	none anticipated	1
4	30.3	potential pesticide contamination	1
4	30.4	potential pesticide contamination	1
4	30.5	metals, pesticides, VOCs, and SVOCs	1
4	13.1	none anticipated	4
4	13.2	none anticipated	4
4	13.3	none anticipated	4
4	13.4	none anticipated	4
4	13.5	potential pesticide contamination	4
3	1.1	none anticipated	1
3	1.2	none anticipated	1
3	1.3	none anticipated	1
3	1.4	none anticipated	1
3	1.5	none anticipated	1
3	1.6	none anticipated	1
3	1.7	none anticipated	1
3	1.8	potential petroleum and pesticide contamination	1
3	6.1	potential pesticide contamination	3
3	6.2	potential pesticide contamination	3
3	6.3	potential pesticide contamination	3
3	6.4	potential pesticide contamination	3
3	17.1	none anticipated	1
3	17.2	potential petroleum and pesticide contamination	1
3	17.3	none anticipated	1
3	3.1	none anticipated	3
3	3.2	none anticipated	3
3	3.3	none anticipated	3
3	3.4	none anticipated	3

**TABLE 4-1
CLEANUP SEQUENCE**

OPERABLE UNIT	BRAC SUBPARCEL	ENVIRONMENTAL RISK	CLEANUP SEQUENCE^a
3	3.5	potential pesticide contamination	3
3	3.6	surface water and sediment contaminated with DDT, chlordane, and metals	3
3	3.7	potential pesticide, metals and VOC contamination	3
3	3.8	sediment contaminated with metals, DDT, and pesticides	3
3	3.9	pesticides and metals detected in surface water, PAHs detected in surface soils	3
3	3.10	potential UXO issues	3
3	3.11	potential petroleum contamination	3
3	2.1	none anticipated	1
3	2.2	none anticipated	1
3	2.3	none anticipated	1
3	2.4	none anticipated	1
3	2.5	none anticipated	1
3	2.6	none anticipated	1
3	2.7	potential lead and pesticide contamination	1
3	8.1	potential pesticide contamination	3
3	8.2	potential pesticide contamination	3
3	8.3	potential pesticide contamination	3
3	8.4	potential pesticide contamination	3
3	8.5	potential pesticide contamination	3
3	19.1	potential petroleum and pesticide contamination	5
3	19.2	potential petroleum contamination	5
3	19.3	PCB contamination	5
3	20.1	none anticipated	3
3	20.2	none anticipated	3
3	20.3	none anticipated	3
3	20.4	none anticipated	3
3	20.5	potential pesticide contamination	3
3	20.6	sulfuric acid spill	3
3	21.1	unknown	3
3	21.2	none anticipated	3
3	21.3	unknown	3
3	21.4	potential acid contamination	3
3	21.5	potential pesticide contamination	3
3	9.1	potential pesticide contamination	3
3	9.2	potential pesticide contamination	3
3	9.3	potential acid and pesticide contamination	3

**TABLE 4-1
CLEANUP SEQUENCE**

OPERABLE UNIT	BRAC SUBPARCEL	ENVIRONMENTAL RISK	CLEANUP SEQUENCE^a
3	9.4	potential pesticide contamination	3
3	9.5	potential pesticide contamination	3
4	10.1	none anticipated	3
3,4	10.2	potential pesticide contamination	3
3,4	10.3	potential acid and petroleum contamination	3
3	10.4	potential pesticide contamination	3
3	10.5	potential acid and pesticide contamination	3
4	10.6	potential pesticide contamination	3
3	16.1	potential pesticide contamination	1
3	16.2	potential pesticide contamination	1
3,4	11.1	potential pesticide contamination	3
3	11.2	potential acid and pesticide contamination	3
3	11.3	potential pesticide contamination	3
4	11.4	potential pesticide contamination	3
3	7.1	potential pesticide contamination	3
3	7.2	potential acid and pesticide contamination	3
4	12.1	potential pesticide contamination	3
4	12.2	potential acid and pesticide contamination, soil with PAHs, pesticides, VOCs, and metals	3
3	4.1	none anticipated	1
3	4.2	none anticipated	1
3	4.3	none anticipated	1
3	4.4	none anticipated	1
3	4.5	potential petroleum and pesticide contamination	1
3	4.6	potential petroleum contamination	1
3	4.7	potential pesticide, petroleum, PAHs, and metals contamination	1
3	4.8	potential petroleum and pesticide contamination	1
3	4.9	potential pesticide contamination	1
3	4.10	VOCs, PAHs, and pesticides detected in soil samples	1
3	4.11	potential petroleum and pesticide contamination	1
3	4.12	Building 251 has a sump/waste oil tank located in the building; no previous sampling for this site	1
3	4.13	Building 265 has a floor drain that is connected to the sanitary sewer, no previous sampling for this site	1
3	5.1	Potential pesticide contamination	1

**TABLE 4-1
CLEANUP SEQUENCE**

OPERABLE UNIT	BRAC SUBPARCEL	ENVIRONMENTAL RISK	CLEANUP SEQUENCE*
3	5 2	PAHs and DDT detected in soil, VOCs detected in groundwater, potential PCB contamination	1
4	14.1	none anticipated	5
4	14.2	potential petroleum and pesticide contamination	5
4	15.1	none anticipated	5
4	15.2	PAHs, dieldrin, and metals detected in soil	5
4	15.3	potential SVOC contamination	5
4	15.4	unknown	5
4	15.5	PAHs, dieldrin, and metals detected in soil	5
4	15.6	Potential petroleum, pesticide, and solvent contamination; metals, pesticides, and methylene chloride have been detected in soil and groundwater	5
3	22.1	potential pesticide contamination	3
3	22.2	unknown	3
2,3	23.1	none anticipated	5
2,3	23.2	none anticipated	5
2,3	23.3	none anticipated	5
2,3	23.4	none anticipated	5
2,3	23 5	none anticipated	5
2,3	23 6	potential pesticide contamination	5
2	23.7	potential flammables and UXO present	5
2	23.8	potential flammables and UXO present	5
2,3	23.9	potential gasoline contamination	5
2,3	23.10	potential PCB and pesticide contamination	5
2	23.11	potential pesticide contamination	5
2	24.1	VOCs, PAHs, pesticides, and metals detected in surface soils	5
2	24.2	potential pesticide contamination	5
2	24.3	PAHs, VOCs, pesticides, and metals detected in surface soils; potential petroleum contamination	5
2	25.1	potential petroleum, solvent and acid contamination	5
2	25.2	potential petroleum and pesticide contamination	5
2	26.1	potential pesticide contamination	5
2	26 2	potential petroleum contamination	5
2	27.1	potential pesticide contamination	5

**TABLE 4-1
CLEANUP SEQUENCE**

OPERABLE UNIT	BRAC SUBPARCEL	ENVIRONMENTAL RISK	CLEANUP SEQUENCE^a
2	27.2	potential petroleum and pesticide contamination	5
2	28.1	potential pesticide contamination	5
2	28.2	VOCs and metals detected in groundwater	5
4	29.1	none anticipated	5
4	29.2	potential petroleum and pesticide contamination	5
4	29.3	2-butanone and metals detected in surface water	5
4	31.1	potential pesticide contamination	5
4	33.1	none anticipated	5
4	33.2	none anticipated	5
4	33.3	none anticipated	5
4	33.4	none anticipated	5
4	33.5	none anticipated	5
4	33.6	potential petroleum contamination	5
4	33.7	potential petroleum contamination	5
4	33.8	potential petroleum contamination	5
4	33.9	potential pesticide and petroleum contamination; VOCs, PAHs, DDT, and metals detected in soils	5
4	33.10	none anticipated	5
4	33.11	none anticipated	5
2	35.1	none anticipated	5
2	35.2	potential pesticide and petroleum contamination	5
2	35.3	unknown	5
2	35.4	toluene, PAHs, pesticides, PCBs, metals and VOCs detected in soils; VOCs, SVOCs, and metals detected in groundwater	5
2	35.5	potential pesticide contamination	5
1	36.1	potential acid and base contamination	8
1	36.2	unknown	8
1	36.3	potential petroleum and solvents contamination	8
1	36.4	potential methyl bromide contamination	8
1	36.5	potential acid contamination	8
1	36.6	potential methyl bromide contamination	8
1	36.7	potential acid contamination	8
1	36.8	potential acid contamination	8
1	36.9	unknown	8
1	36.10	potential acid contamination	8

**TABLE 4-1
CLEANUP SEQUENCE**

OPERABLE UNIT	BRAC SUBPARCEL	ENVIRONMENTAL RISK	CLEANUP SEQUENCE ^a
1	36.11	unknown	8
1	36.12	potential contamination from bauxite pile	8
1	36.13	potential contamination from bauxite pile	8
1	36.14	potential pesticide contamination	5
1	36.15	potential pesticide contamination	8
1	36.16	potential presence of chemical warfare materials	8
1	36.17	potential presence of chemical warfare materials	8
1	36.18	potential presence of chemical warfare materials	8
1	36.19	potential presence of chemical warfare materials	8
1	36.20	potential contamination from buried eye ointment	8
1	36.21	unknown	8
1	36.22	potential contamination resulting from municipal waste burial	8
1	36.23	potential contamination resulting from burial of medical supplies, chlorinated lime, acid, sodium and sodium phosphate	8
1	36.24	potential contamination resulting from disposal of sanitary wastes, construction debris, smoke pots, and tear gas canisters	8
1	36.25	potential contamination resulting from disposal of asphalt and roofing gravel	5
1	36.26	potential contamination resulting from burial of XXCC-3 impregnate	5
1	36.27	unknown	5
1	36.28	unknown	8
1	36.29	potential contamination resulting from former bauxite pile and burning of mustard gas, cyanide grenades, and ordnance	8
1	36.30	potential pesticide contamination	5

Notes:

BRAC	Base Realignment and Closure	SVOC	Semivolatile organic compound
DDT	4,4'-Dichlorodiphenyltrichloroethane	UXO	Unexploded ordnance
DRC	Depot Redevelopment Corporation	VOC	Volatile organic compound
NA	Not applicable		
PAH	Polycyclic aromatic hydrocarbon		
PCB	Polychlorinated biphenyl		

^a Cleanup sequence is categorized from 1 to 8 with 1 as top priority to the DRC and 8 as the lowest priority to the DRC. An "NA" designation means that the DRC does not have an order of preference for this parcel.

**TABLE 4-2
ENVIRONMENTAL DOCUMENT STATUS**

ACTIVITY	AGENCY	DRAFT REPORT	FINAL REPORT
Environmental Baseline Survey	CESAM/Woodward-Clyde	May 16, 1996	November 1996
BRAC Cleanup Plan	CESAM/Woodward-Clyde	October 10, 1996	November 1996
Environmental Assessment-Leasing	CESAM/Tetra Tech	Aug 20, 1996	September 27, 1996
Environmental Assessment-Disposal	CESAM/Tetra Tech	November 1996	February 1998
Radiological Survey	DDRE	August 16, 1996	September 13, 1996
Cultural/Natural Resources Surveys	CESWF	October 31, 1996	November 1997
Wetland Determination	CESWF/CELMM		July 23, 1996
Section 106 Review	CESWF/HUD/Tennessee Historical Commission/TRC Moriah	October 31, 1996	June 7, 1997
Lead-Based Paint Survey	CELMM/Barge, Waggoner, Sumner & Cannon	December 1, 1995	April 12, 1996
Asbestos Survey	CELMM/Pickering Inc.		March 1, 1994
PCB Survey	DDMT-W		1993
Radon Survey	ASCE-WP		March 8, 1996
UST Survey	CELMM/Pickering Inc		November 1, 1993
Community Relations Plan	DDSP-FE/Frontline	September 1998	October 1998
RI/FS Work Plans	CEHNC/CH2M Hill	1995	1995
RI Reports	CEHNC/CH2M Hill	2001	2001
FS Reports	CEHNC/CH2M Hill	2001	2001
Proposed Remedial Action Plans	CEHNC/CH2M Hill	2001	2001
Record of Decision (Groundwater IRA)	CEHNC/CH2M Hill		April 1996
Records of Decision	CEHNC/CH2M Hill	2001	2004
RD Work Plans	CEHNC/CH2M Hill	2001	2004
RA Work Plans	CESAM	2002	2004
Written Notification of RA Implementation Start Date	DLA	2002	2004
Final Remediation Reports	DLA	2004	2005
Five Year Review Reports	DLA	TBD	TBD

TABLE 4-2
ENVIRONMENTAL DOCUMENT STATUS

ACTIVITY	AGENCY	DRAFT REPORT	FINAL REPORT
Site Closeout Report, including Notice of Intent to Delete	DLA	TBD	TBD
Site Management Plan	DLA	TBD	TBD

Notes:

ASCE-WP. Admin Support Center East - Environmental Branch
 BRAC Base Realignment and Closure
 CELMM U S Army Corps of Engineers, Memphis, Tennessee
 CEHNC U S Army Corps of Engineers, Huntsville, Alabama
 CESAM U S Army Corps of Engineers, Mobile, Alabama
 CESWF U S Army Corps of Engineers, Ft Worth, Texas
 DDC Defense Distribution Center
 DDMT Defense Distribution Depot Memphis, Tennessee
 DDSP-FE: The Memphis Depot Caretaker
 DDRE. Defense Distribution Region East
 DLA Defense Logistics Agency
 FS Feasibility study
 HUD Housing and Urban Development
 OU Operable unit
 PCB Polychlorinated biphenyl
 RA Remedial action
 RD Remedial design
 RI Remedial investigation
 TBD To be determined
 UST Underground storage tank

SECTION FIVE ENVIRONMENTAL PROGRAM SCHEDULES

5.0 ENVIRONMENTAL PROGRAM SCHEDULES

This section presents the Depot's schedule of anticipated activities for the installation's environmental programs. These schedules consolidate and summarize information from detailed network and operational schedules developed to support study area-specific work plans and compliance agreements. Environmental restoration activities are summarized in Table 5-1. This table will be updated as the BCT makes decisions regarding IR sites and BRAC subparcels that require restoration.

5.1 ENVIRONMENTAL RESTORATION PROGRAM

This section provides the response schedules and fiscal year requirements for the environmental restoration program for the Depot.

5.1.1 Response Schedules

The schedules shown on Table 5-1 were based on schedules established in August 1998 for the Depot's environmental restoration program by CEHNC, CESAM, EPA, TDEC, the Depot and the appropriate contractors. In October 1998, these schedules were further refined to reflect updates to site schedules in the Defense Site Environmental Restoration Tracking System (DSERTS). In order to accelerate the environmental restoration process, scheduling strategies and timelines are prepared by the BCT and project team so all involved parties can provide input to the process. These schedules will be reviewed regularly by the BCT and project team to ensure that they are current, that activities are expedited whenever possible and that reuse goals continue to be met

The response schedules on Table 5-1 include time frames for BCP updates; remedial investigation, design and action at the Main Installation, groundwater design and action at the Main Installation; chemical warfare materiel restoration action at Dunn Field; remedial investigation, design and action at Dunn Field; and groundwater design and action at Dunn Field.

5.1.2 Requirements by Fiscal Year

The financial requirements by fiscal year for the environmental program at the Depot are summarized on Table A-1 in Appendix A.

SECTION FIVE ENVIRONMENTAL PROGRAM SCHEDULES

5.2 COMPLIANCE PROGRAMS

The fiscal year requirements for compliance programs at the Depot are shown in Appendix A. The response schedules for the compliance programs at the Depot will be presented in subsequent versions of the BCP.

5.3 NATURAL AND CULTURAL RESOURCES

Natural and cultural resources at the Depot will be assessed under the NEPA environmental assessment as discussed in Section 4.3. The fiscal year requirements for natural and cultural resources at the Depot are shown in Appendix A. The final EA for Master Interim Lease for the Depot was completed in September 1996. The final EA for Disposal and Reuse was completed in February 1998 and is currently going through the public review and comment process. The Finding of No Significant Impact was signed by AMC on March 13, 1998.

5.4 BCT/PROJECT TEAM/RAB MEETING SCHEDULE

The meetings and the schedule for the meetings concerning issues related to BRAC closure and the environmental restoration program at the Depot are as follows: the Depot BEC and the project team meet the third Wednesday of every month, the BCT, including the project team, meets the third Thursday and Friday of every month; and the RAB meets the third Thursday of every month, except when the RAB decides otherwise. Additional BCT and project team meetings are scheduled as necessary to facilitate the decision-making process.

**TABLE 5-1
PROJECTED RESTORATION SCHEDULE**

Project	Start	Finish
BRAC Cleanup Plan Updates	Update as needed	Official Update due annually in October
Main Installation Soil Sites^a <ul style="list-style-type: none"> • Remedial Investigation • Remedial Designs • Remedial Action 	Underway January 2001 March 2001	April 2001 March 2001 September 2001
Dunn Field Soil Sites^b <ul style="list-style-type: none"> • Remedial Investigation • Remedial Design • Remedial Action 	Underway January 2001 May 2002	December 2000 May 2002 February 2004
Main Installation Groundwater Sites^c <ul style="list-style-type: none"> • Remedial Investigation • Remedial Design • Remedial Action • Long Term Operations/Maintenance 	Underway February 2001 October 2001 October 2002	February 2001 October 2001 October 2002 October 2007
Dunn Field Groundwater Sites^c <ul style="list-style-type: none"> • Remedial Investigation • Remedial Design • Remedial Action • Long Term Operations/Maintenance 	Underway February 2001 October 2001 October 2002	February 2001 October 2001 October 2002 October 2007
Dunn Field Chemical Warfare Materiel Sites^d <ul style="list-style-type: none"> • Early Removal Design/Safety Submissions • Early Removal Action 	Underway June 1999	June 1999 December 1999
Proposed No Further Action Sites^e	Documentation Underway	August 1999

Notes:

- a) Main Installation soil sites include sites 25, 26, 28, 31, 32, 33, 35, 36, 37, 38, 39, 42, 43, 46, 48, 51, 52, 54, 55, 56, 57, 58, 59, 65, 66, 68, 70, 71, 72, 73, 75, 77, 78, 79, 80, 82, 83, 84, 87, 88 and 89.
- b) Dunn Field soil sites include sites 2, 3, 5, 6, 7, 8, 10, 12, 13, 15, 16, 18, 19, 20, 21, 22, 23, 60, 61, 62, 63, 64, 85, 86, 90, 91, 92 and 93.
- c) Main Installation and Dunn Field groundwater sites include site 4, 11, 14, 17, 27, 29 and 34
- d) Dunn field Chemical Warfare Materiel sites include sites 1, 9 and 24.
- e) Proposed No Further Action sites include sites 30, 40, 41, 44, 45, 47, 49, 53, 69, 74, 76, and 81 Please note that sites 35, 43, 63 and 68 may also join the No Further Action site listing after obtaining evidence or documentation from sampling during the current Remedial Investigation

SECTION SIX TECHNICAL AND OTHER ISSUES TO BE RESOLVED

6.0 TECHNICAL AND OTHER ISSUES TO BE RESOLVED

This section summarizes technical and other issues that are yet to be resolved. These issues include information management; the usability of historical data; data gaps, natural (background) levels of elements and compounds in soil, groundwater, surface water and sediments; risk assessments; state cleanup standards; and program initiatives to complete cleanup requirements as required to meet property transfer schedules.

6.1 DATA USABILITY

This section summarizes unresolved issues pertaining to the validity of using historical data sets in the Depot's environmental restoration program. Historical data sets have been deemed valid for use in making environmental restoration decisions. Therefore, at this time there are no unresolved issues.

6.2 INFORMATION MANAGEMENT

This section addresses unresolved issues that need to be resolved with regard to managing information gathered and used in the Depot's environmental restoration and compliance programs. Issues include the following.

- Improve coordination of, access to and management of environmental restoration and real estate-type data generated at the Depot;
- Ensure that all data from the Depot has been loaded into a specified electronic data management system such as the Installation Restoration Program Information Management System (IRPIMS), Installation Restoration Data Management Information System (IRDMIS), or other equivalent data management system;
- Require that all contractors submit data and reports in an electronic format that can be readily used by the Depot;
- Establish method/procedure to distribute data and reports to all involved parties associated with the Depot's environmental restoration program (Depot, EPA, USGS, TDEC, DDRE, DDC, DLA, AMC, ATSDR, CEHNC and CESAM) and
- Develop provisions for real-time data input of field decisions to expedite the progress of environmental restoration field work

SECTION SIX **TECHNICAL AND OTHER ISSUES TO BE RESOLVED**

6.2.1 BCT Action Items

The following BCT action items should be addressed at the Depot to more effectively manage information during the environmental restoration process.

- Establish a database management system and procedures to distribute data to all involved parties (Depot, EPA, TDEC, USGS, ATSDR, DDRE, DDC, DLA, CEHNC and CESAM with a need for installation-wide and BRAC-specific perspectives on activities at the Depot,
- Evaluate all future contracts for provisions requiring the submittal of data and reports in both hard copy and electronic formats;
- Develop method/procedure for distribution of data and reports to the RAB; and
- Develop method/procedure to load future data and reports into a system that can be readily used by the U.S. Army, such as the Defense Environmental Network Information Exchange (DENIX)

6.2.2 Rationale

As the number of agencies and contractors associated with the Depot environmental restoration program grows, it is important that all parties involved be able to share data for decision making. The establishment and maintenance of electronic databases of sampling and analysis data and spatial data (e.g., real estate maps) are the most efficient methods of sharing data among parties.

6.2.3 Status/Strategy

The BCT is addressing the issue of maximizing the access of all interested parties to data in the following manner:

- All historical data generated at the Depot are available in the installation administrative record managed by the Depot's Environmental Division as well as in the Depot's information repositories;

SECTION SIX TECHNICAL AND OTHER ISSUES TO BE RESOLVED

- All new sampling and analysis data generated during the Depot's environmental restoration program will be entered in a specific data management system, such as the IRPIMS or IRDMIS,
- A process for distributing reports to the RAB has been established. A copy of the report is provided at RAB meetings for review by RAB members. Upon request, RAB members may check out documents for review. Community members can make appointments to review documents at the Depot's Community Reading Room.
- Necessary contract modifications will be made by the Depot and U.S. Army Corps of Engineers to ensure that data and reports from ongoing efforts are submitted electronically to the Depot and AMC and are loaded into a system such as DENIX that can be readily accessed by the Depot, DLA, AMC, and other authorized interested parties;
- Information repositories have been established, including several at public libraries, to provide community access to information; and
- Various public outreach programs have been established to disseminate information to the community. These include the formation of the RAB, community information sessions, public meetings, bi-monthly newsletters, fact sheets and mailings as necessary.

6.3 DATA GAPS

This section summarizes unresolved issues pertaining to the determination and collection of data needed to complete the Depot environmental restoration program

6.3.1 BCT Action Items

The following BCT action items should be addressed at the Depot to identify and fill data gaps and continue the environmental restoration process:

- A majority of the areas of concern at the Depot are undergoing either an evaluation to confirm the nature and extent of contamination or a risk assessment. These areas of concern include, but are not limited to, the following. fish sampling in the surface water impoundments, base-wide dieldrin and PAH issues; chemical warfare materials

SECTION SIX TECHNICAL AND OTHER ISSUES TO BE RESOLVED

field investigation at Dunn Field; and groundwater issues (Dunn Field, the southwest corner of the Main Installation and the anomaly in the northwest corner of the Main Installation).

- The data from the above-listed investigations has been used to evaluate whether a risk assessment is warranted. A risk assessment for Lake Danielson and the golf course pond as well as for the golf course and community club area are underway.

6.3.2 Rationale

Identifying and filling data gaps will permit the development of comprehensive conceptual zone or site models for site characterization and risk assessment. Effective analysis of data gaps will also facilitate the completion of RI efforts so that appropriate remedial (restoration) actions can be identified and evaluated. This information will also facilitate the identification of clean areas at the Depot.

6.3.3 Status/Strategy

Data gathered from the existing system of groundwater monitoring wells indicate the presence of an anomaly in the aquifer system under the northwest corner of the Main Installation that extends off the Depot onto neighboring property southwest of Dunn Field. This anomaly appears to greatly affect the local hydrogeology. Since it first became apparent, the BCT and United States Geologic Survey have voiced many concerns about the nature and extent of this anomaly. Obtaining permission to install a monitoring well or geologic boring on the neighboring property to further define the anomaly has been a challenge for the Depot. Prior negotiations with the neighboring property owner were not successful. The Depot environmental staff and CEHNC began discussions with the neighboring property owner in October 1998 in order to obtain access to the property. This issue will be updated in early 1999.

6.4 BACKGROUND LEVELS

The Depot completed a background sampling program. The data was used to establish screening criteria. At this time, there are no unresolved issues pertaining to background levels.

6.5 RISK ASSESSMENTS

This section addresses unresolved issues pertaining to the completion of risk assessments required to support the Depot's environmental restoration programs.

SECTION SIX **TECHNICAL AND OTHER ISSUES TO BE RESOLVED**

Risk assessment issues to be resolved involve the base-wide dieldrin and PAH study and sediment study for surface waters located at the Depot. The Depot plans to complete a remedial investigation program to address the base-wide dieldrin and PAH issues. Based on the results of the studies, the need for a risk assessment will be evaluated. If contaminant concentrations are greater than background levels or EPA Region III RBCs, a risk assessment will be prepared for the contaminants of concern identified in the studies. A risk assessment specifically for dieldrin impacted soils at the recreational portion of the Main Installation has been developed and will be finalized before the end of 1998.

It is possible that other unresolved issues will arise in the future as a result of other remedial investigation programs at the Depot. At this time, the base-wide dieldrin and PAH issues and sediment in the surface water impoundments are the only unresolved issues pertaining to risk assessment.

6.5.1 BCT Action Items

Subsequent to the 1996-1997 Remedial Investigation, Screening and BRAC sampling efforts, the BCT determined that Main Installation surface soils were impacted by polycyclic aromatic hydrocarbons (PAHs) at paved areas and rail tracks and dieldrin, a pesticide, at grassy areas. The BCT assumed that PAH impacts were due to the presence of these compounds in asphalt and in railroad cross ties. The BCT assumed that the dieldrin impacts were due to routine spraying of this pesticide in housing, recreation and perishable storage areas prior to the end of dieldrin use on the facility in the late 1970s. PAH and dieldrin impacts are not considered to be discreet disposal sites but are ubiquitous for areas where the compounds were detected - dieldrin on the eastern two-thirds of the Main Installation and PAHs at rails or road surfaces.

- A risk assessment specifically for dieldrin impacted soils at the recreational portion of the Main Installation has been developed and will be finalized before the end of 1998. The BCT plans on making a risk based-risk management decision during the winter-early spring of 1999 for the recreational area. This risk management decision may result in an Interim Record of Decision. The BCT has implemented an evaluation of a bioremediation technique that may potentially reduce the levels of dieldrin in the shallow surface soils. Results of this evaluation will coincide with the management decision the BCT plans to make in early 1999.

SECTION SIX **TECHNICAL AND OTHER ISSUES TO BE RESOLVED**

6.5.2 Rationale

Completion of risk assessments will enable the BCT to make restoration decisions based on the risk associated with the potential reuse. By using risk assessments in their decision making, the BCT will accelerate property restoration and reuse.

6.5.3 Status/Strategy

A risk assessment specifically for dieldrin impacted soils at the recreational portion of the Main Installation has been developed and will be finalized before the end of 1998. The BCT plans on making a risk based-risk management decision during the winter-early spring of 1999 for the recreational area.

6.6 BASE-WIDE REMEDIAL ACTION STRATEGY

This section discusses issues pertaining to the base-wide remedial action strategy for the Depot. A base-wide remedial action strategy has been developed to guide the ongoing environmental restoration efforts at the Depot. For most areas identified as having a potential for contamination from historical practices (CERFA Category 7), the Depot has collected samples to confirm the absence or presence of contamination. The BCT has reviewed this data. The BCT will continue to review data as additional samples are taken as required by BCT and the analyses become available. If contamination is found at a site, a strategy to address the extent of the contamination will be developed and implemented. In addition, the Depot plans to complete a base-wide dieldrin and PAH study. At this time, there are no unresolved issues pertaining to the base-wide remedial action strategy.

6.7 INTERIM MONITORING OF GROUNDWATER AND SURFACE WATER

At this time, the Depot has completed construction of an interim groundwater pump-and-discharge system at Dunn Field. Groundwater samples will be collected on a regular basis until the groundwater contamination has been cleaned to acceptable levels. In addition, the Depot implemented a remedial investigation in 1998 to evaluate the extent of VOCs within the groundwater at the Main Installation.

Surface water samples will be collected according to the requirements specified in the NPDES permit. At this time, there are no unresolved issues pertaining to interim monitoring of groundwater and surface water.

SECTION SIX **TECHNICAL AND OTHER ISSUES TO BE RESOLVED**

6.8 EXCAVATION OF CONTAMINATED MATERIALS

Environmental restoration activities are presently in the investigative and early removal phase. As of October 1998, there are plans to excavate impacted surface soil at the following specific area of concern: PCB impacted soil around Building 274 (the cafeteria) Excavation of dieldrin impacted soil around the family housing area was completed in October 1998

Early removal actions through excavation of contaminated material for appropriate areas of concern (technically feasible and cost-effective) is the Depot's preferred restoration action. As information is gathered at each area of concern, a strategy to remediate these areas will be developed, taking into consideration the use of presumptive remedies and other remedial techniques based on the type and extent of contamination. At this time, there are no unresolved issues pertaining to the excavation of contaminated materials.

6.9 PROTOCOLS FOR REMEDIAL DESIGN REVIEWS

Environmental restoration activities are presently in the investigative phase. Protocols for the review of design documents will follow the requirements specified in the Federal Facility Agreement. In addition, CEHNC will review design documents according to their established internal review procedures for design reports prepared either internally or by contractors. The BCT and the community will be included in the review process. As of October 1998, there are no unresolved issues pertaining to the protocols for remedial design review.

6.10 CONCEPTUAL MODELS

To assist in focusing decision making, conceptual site models are theorized, calculated, written and drawn up. Since little information is currently known about the areas of concern listed for investigations, a conceptual model in the form of a logic diagram was developed for OU-1 that can be applied generically to other areas (Appendix E). As investigations progress and more information is gathered, a generic conceptual model will be developed for each area of concern to better display site-specific assumptions regarding sources, pathways and receptors. As of October 1998, there are no unresolved issues pertaining to conceptual models.

SECTION SIX **TECHNICAL AND OTHER ISSUES TO BE RESOLVED**

6.11 CLEANUP STANDARDS

The BCT based their review criteria on the EPA Region III RBCs or background concentrations for the Depot. Either risk-based or other established cleanup goals will be developed and implemented, with agency approval, at a later date as more information is gathered at the Depot. As of October 1998, there are no unresolved issues pertaining to cleanup standards.

6.12 INITIATIVES FOR ACCELERATING CLEANUP

The following initiatives have been implemented by the project team for expediting response actions at the installation:

- **Regulatory Involvement.** The BCT has been formed and meets regularly. The BCT, in conjunction with the project team, provides a forum for the cooperative development of short-term and long-term strategies for the investigation and the restoration of the Depot. The BCT consists of representatives from the Depot, EPA and TDEC.
- **Defined Document Review Periods.** Document review periods have been established on an accelerated basis that will assist in the overall investigation and scheduling process.
- **Strategic Zone Groupings.** The zones were grouped to expedite investigation and restoration.
- **Concurrent Environmental Restoration/CERCLA Phases.** To expedite restoration, concurrent investigations, feasibility studies and designs will be conducted.
- **Concurrent Reviews.** To minimize review delays, concurrent review of documents will be conducted.
- **Community Involvement.** The Depot formed the RAB to involve the community during the restoration process. The RAB meets on a monthly basis to discuss the status of the environmental restoration program at the Depot. By informing the community of the environmental restoration process, the likelihood of opposing comments during the public comment review period will be minimized.

SECTION SIX **TECHNICAL AND OTHER ISSUES TO BE RESOLVED**

As the Depot environmental restoration program moves from the investigation to the design phase, other initiatives will be implemented to potentially expedite the cleanup process. These initiatives could include the following.

- **Innovative Technologies.** Collaborative projects using innovative technologies being researched by the DOD, EPA or state or suggested by any of the contractors will be pursued.
- **Innovative Contracting.** Flexible contracting procedures have been maximized, and the use of level-of-effort, direct/cost reimbursement, award incentives and other flexible contracting methods has been investigated and will be implemented where applicable.
- **Identify Applicable or Relevant and Appropriate Requirements.** A list of applicable or relevant and appropriate requirements has been established for the Depot.
- **Risk-based Cleanup.** At this time, the regulators have agreed to use the EPA Region III RBCs or background concentrations for screening goals. However, risk-based cleanup goals may be developed at a later date as additional information is gathered at each site. The regulators agreed that negotiations for revised cleanup goals according to future land use will be pursued at that time.
- **Early Removals.** With the presence of discretely impacted areas on the Main Installation being found mainly in surface soils, being immobile in nature and having reuse as a prime consideration, early removals have become a focus of the BCT. The BCT/project team approved, designed and conducted two early removals in 1998.

6.12.1 BCT Action Items

The BCT must continue evaluating what potential areas or sites are candidates for early removals throughout 1999. Such evaluation will continue to be based upon CERCLA considerations such as the protection of human health and the environment; ability to implement the removal; compliance with other federal, state and local requirements; cost; consistency with final remedial action; as well as other modifying factors. Particular modifying factors on the Main Installation are potential reuse and urgency of reuse.

SECTION SIX **TECHNICAL AND OTHER ISSUES TO BE RESOLVED**

6.12.2 Rationale

By utilizing initiatives for accelerating cleanup, the BCT will accomplish restoration and property transfer in an effective and timely manner.

6.12.3 Status/Strategy

Continue utilizing initiatives for accelerating cleanup in the Depot's environmental restoration program.

6.13 REMEDIAL ACTIONS

Environmental restoration activities are presently in the investigative phase. As of October 1998, no final remedial actions have been initiated. The Interim Remedial Action for Groundwater at Dunn Field was constructed and became operational in 1998. Therefore, there are no unresolved issues pertaining to remedial actions. If unresolved issues are identified at a later date, a strategy will be developed and implemented.

6.14 REVIEW OF SELECTED TECHNOLOGIES FOR APPLICATION OF EXPEDITED SOLUTIONS

Environmental restoration activities are presently in the investigative phase. As of October 1998, no remedial technologies have been selected at the Depot. The BCT has agreed to a bioremediation study for dieldrin impacted soil at the golf course, softball field and park area on the Main Installation. The BCT also approved two early removal projects at the family housing and cafeteria areas. Therefore, there are no unresolved issues pertaining to review of selected technologies for application of expedited solutions.

6.15 HOT-SPOT REMOVALS

Hot spots have been identified at the Depot. Therefore, there are no unresolved issues related to hot-spot removals at this time. However, early removal candidates (as detailed in Section 3.4.6) have been identified. The BCT and project team have developed a strategy for these areas. Removal of dieldrin impacted soil at the military family housing area was completed in 1998. Removal of PCB impacted soil around Building 274 is scheduled to begin in 1998.

SECTION SIX **TECHNICAL AND OTHER ISSUES TO BE RESOLVED**

6.15.1 BCT Action Items

The BCT must continue evaluating what potential areas or sites are candidates for early removals throughout 1999. Such evaluation will continue to be based upon CERCLA considerations such as the protection of human health and the environment, ability to implement the removal, compliance with other federal, state and local requirements, cost, consistency with final remedial action, as well as other modifying factors. A particular modifying factor on the main installation is the reuse potential and urgency

6.15.2 Rationale

Hot-spot removals, or early removals, expedite the environmental restoration and property transfer processes at the Depot.

6.15.3 Status/Strategy

With the presence of discretely impacted areas on the Main Installation being found mainly in surface soils, being immobile in nature and having reuse as a prime consideration, early removals have become a focus of the BCT.

6.16 IDENTIFICATION OF CLEAN PROPERTIES

Clean properties were identified in the final EBS. The Depot updated the environmental condition of property map in 1998 as areas of the Depot were determined to be clean after the BCT reviewed sampling data or reviewed documents and determined that no further action was required. The Depot will continue to update the environmental condition of property map as decisions are made by the BCT so that an accurate visual portrayal of property available for transfer is maintained.

One subparcel, 23.5 (Building 995), identified in the final EBS as a Category 1 clean property did not receive EPA's concurrence due to impacted groundwater under the subparcel. As of October 1998, this is the only unresolved issue pertaining to the identification of clean properties. If further unresolved issues are encountered, a strategy to address them will be developed and implemented.

SECTION SIX **TECHNICAL AND OTHER ISSUES TO BE RESOLVED**

6.17 OVERLAPPING PHASES OF THE CLEANUP PROCESS

As of October 1998, no remedial actions have been implemented. Therefore, there are no issues to be resolved pertaining to overlapping phases of the cleanup process. If unresolved issues arise in the future, a strategy to address each unresolved issue will be developed and implemented.

6.18 IMPROVED CONTRACTING PROCEDURES

The Depot has several contracting tools to assist in the accomplishment of the environmental restoration work at the Depot. As of October 1998, there are no unresolved issues pertaining to improved contracting procedures.

6.19 INTERFACING WITH THE COMMUNITY REDEVELOPMENT PLAN

The LRA was established as the MDRA, but was replaced by the formation of the Depot Redevelopment Corporation in April 1997. The Memphis Depot Redevelopment Plan was completed in May 1997 and approved by AMC in September 1997.

6.20 BIAS FOR CLEANUP INSTEAD OF STUDIES

Whenever possible, the BCT will select early cleanup rather than additional studies of potentially contaminated sites. Nine BRAC subparcels have been recognized by the BCT as early removal candidates (Section 3.4.6). This approach will expedite early achievement of restoration goals and transfer of property. As of October 1998, there are plans to excavate impacted surface soil at the following specific area of concern. PCB impacted soil around Building 274 (the cafeteria). Excavation of dieldrin impacted soil around the Military Family Housing area was completed in October 1998. At this time, the BCT has not identified any unresolved issues related to bias for cleanup instead of studies.

6.21 EXPERT INPUT ON CONTAMINATION AND POTENTIAL REMEDIAL ACTIONS

The Depot BCT is committed to using expert input during the scoping, execution and review of the individual environmental investigation projects and restoration actions. Such expertise will be drawn from CEHNC, CESAM, USGS, EPA, TDEC and contractors employed to perform scopes of work on the various projects at the Depot during the environmental investigation and restoration work. At this time, there are no unresolved issues pertaining to expert input on contamination and potential remedial actions.

SECTION SIX TECHNICAL AND OTHER ISSUES TO BE RESOLVED

6.22 PRESUMPTIVE REMEDIES

The EPA has issued guidance on generic or presumptive remedies for a few specific contamination scenarios (e g , one of the generic remedies for VOC contamination is soil vapor extraction)

Presumptive remedies are preferred remedial technologies for common categories of sites and are based on past patterns of remedy selection and performance data. Presumptive remedies are expected to reduce the cost and time required to clean up similar sites by streamlining site investigation and remedy selection. Presumptive remedies are expected to be used at appropriate sites. At this time, there are no unresolved issues with regard to presumptive remedies. The process to identify whether a presumptive remedy is applicable to any of the sites will be completed as more information is gathered for the sites.

6.23 PARTNERING (USING INNOVATIVE MANAGEMENT, COORDINATION AND COMMUNICATION TECHNIQUES)

The Depot is fostering the partnership with regulatory agencies, the U.S. Army Corps of Engineers and the community through scheduled meetings and the document review process. These partnerships can accelerate implementation of environmental restoration efforts by keeping key individuals informed, soliciting their comments and addressing their concerns prior to implementing environmental restoration activities. The BCT plans to continue its activities and to encourage information transfer. At this time, since partnering is established, there are no unresolved issues with regard to partnering.

6.24 UPDATING THE EBS AND NATURAL/CULTURAL RESOURCES DOCUMENTATION

The final EBS for the Depot was completed in November 1996. Now that the EBS is final, the Depot will update the installation status portions of the BCP on an annual basis, if needed.

The final EA for Master Interim Lease, which includes natural and cultural resources documentation for the Depot, was completed in September 1996. A final EA for Disposal and Reuse was completed in February 1998 and is currently going through the public review and comment process. A Finding of No Significant Impact regarding disposal and reuse of the Depot was signed by AMC on March 13, 1998. At this time, there are no unresolved issues pertaining to the updating of the EBS and natural and cultural resources documentation.

SECTION SIX TECHNICAL AND OTHER ISSUES TO BE RESOLVED**6.25 IMPLEMENTING THE POLICY FOR ON-SITE DECISION MAKING**

At this time, there are no major issues pertaining to implementing the policy for on-site decision making. The Depot is actively fostering partnerships with the regulatory agencies, the U S. Army Corps of Engineers and the community through scheduled meetings and the document review process. These partnerships can accelerate implementation of environmental restoration efforts by keeping key individuals informed, soliciting their comments and addressing their concerns prior to implementing environmental restoration activities.

SECTION SEVEN**REFERENCES****7.0 REFERENCES**

A.T. Kearney, Inc. 1990. RCRA Facilities Assessment Report Prepared for the U.S. Environmental Protection Agency.

Chemical Systems Laboratory. 1981. Installation Assessment of Defense Depot Memphis, Memphis, Tennessee.

CH2M Hill. 1994. Draft No Further Action Report, Defense Distribution Depot Memphis.

———. 1995a. Environmental Restoration Program, Monitoring Well Installation Locations, Soil, Surface Water and Sediment Sampling Locations.

———. 1995b. Generic Remedial Investigation/Feasibility Study Work Plan, Defense Distribution Depot Memphis.

———. 1995c. Operable Unit 1 - Field Sampling Plan, Defense Distribution Depot Memphis.

———. 1995d. Operable Unit 2 - Field Sampling Plan, Defense Distribution Depot Memphis.

———. 1995e. Operable Unit 3 - Field Sampling Plan, Defense Distribution Depot Memphis.

———. 1995f. Operable Unit 4 - Field Sampling Plan, Defense Distribution Depot Memphis.

———. 1995g. Record of Decision for Interim Remedial Action of the Groundwater at Dunn Field (OU-1) at the Defense Distribution Depot Memphis.

———. 1995h. Screening Sites Field Sampling Plan for Defense Distribution Depot Memphis.

———. 1995i. Technical Memorandum. Summary of Information Inventory, Defense Distribution Depot Memphis, Tennessee, Early Removal Task.

———. 1995j. Transmittal of Selection of Early Removal Sites Technical Memorandum for DDMT.

SECTION SEVEN**REFERENCES**

———. 1997a. Quarterly Groundwater Monitoring Results for DDMT.

———. 1998a. Screening Sites Letter Reports.

———. 1998b. Remedial Investigation Sites Letter Reports.

———. 1998c. BRAC Parcel Summary Reports.

Defense Distribution Depot, Memphis Tennessee (DDMT). 1992. Spill Response for DDMT 1990, 1991, 1992.

———. 1993. 1993 Spill Response Summary

———. 1995. 1995 Spill Response Checklist.

———. 1996. 1996 Spill Response Checklist

Department of Defense. 1995. BRAC Cleanup Plan (BCP) Guidebook with 1996 addendum.

Facilities Engineering Division DDMT. 1993. Location of Tanks on Depot to be Cleaned.

Harland Bartholomew & Associates, Inc. 1988. Master Plan Report, Defense Depot Memphis, Tennessee.

Law Environmental. 1990a. Feasibility Study Final Report. Prepared for U.S. Army Corps of Engineers, Huntsville Division.

———. 1990b. Remedial Investigation Final Report of DDMT. Prepared for U.S. Army Corps of Engineers, Huntsville Division.

Memphis and Shelby County Division of Planning and Development. 1993. Population, Housing, and Economic Analysis 1970-1990

Office of Post Engineer DDMT. 1947. Depot Layout Plan.

SECTION SEVEN**REFERENCES**

The Pickering Firm, Incorporated. 1993a. Asbestos Identification Survey for Buildings 144-209.

———. 1993b. Asbestos Identification Survey for Buildings 210-257.

———. 1993c. Asbestos Identification Survey for Buildings 260-271.

———. 1993d. Storage Tank Survey.

———. 1994a. Asbestos Identification Survey of Buildings 139-198.

———. 1994b. Asbestos Identification Survey for Buildings 211-795.

———. 1994c. Asbestos Identification Survey for Buildings 229-309.

———. 1994d. Asbestos Identification Survey of Buildings 319-359.

———. 1994e. Asbestos Identification Survey of Buildings 319-490.

———. 1994f. Asbestos Identification Survey for Buildings 429-530.

———. 1994g. Asbestos Identification Survey of Buildings 549-650.

———. 1994h. Asbestos Identification Survey of Buildings 670-720.

———. 1994i. Asbestos Identification Survey of Buildings 737-793.

———. 1994j. Asbestos Identification Survey of Buildings 1084-25.

———. 1994k. Asbestos Identification Survey of Buildings 801-995.

Prewitt & Associates, Inc. 1997. Archeological Survey of Two Parcels at Defense Distribution Depot Memphis, Tennessee.

SECTION SEVEN**REFERENCES**

TRC Mariah Associates, Inc. 1997. A Cultural Resources Inventory and Assessment at the Defense Distribution Depot Memphis, Tennessee.

TABLE A-1
FISCAL YEAR FUNDING REQUIREMENTS

376 204

INSTALLATION BUDGET (\$000)									
ACTIVITY	FY97	FY98	FY99	FY00	FY01	FY02	FY03	FY04	FY05 - COMPLETION
Restoration	14,500	9,652	1,625	16,488	2,335	50	50	50	210
Compliance	1,557	730	46	41	44	36	31	39	32
Planning	0	100	5	5	5	5	5	5	0
Management	620	1,044	870	881	884	762	566	520	1,286
TOTAL	16,676	11,526	2,546	17,415	3,268	853	652	614	1,528

TABLE D-1

TECHNICAL DOCUMENTS SUMMARY

Document	Year	Author
Installation Assessment of Defense Depot Memphis, Tennessee Report No. 191	1981	U.S. Army Toxic and Hazardous Materials Agency
Geohydrologic Study No. 38-26-0195-83	1982	U.S. Army Environmental Hygiene Agency
Environmental Audit No. 43-21-1387-86	1985	U.S. Army Environmental Hygiene Agency
Water Quality Biological Study No. 32-0733-86, Investigation of Fire Reservoir	1986	U.S. Army Environmental Hygiene Agency
Ground Water Consultation No. 38-26-0815-87, Collection and Analysis of Ground Water Samples	1986	U.S. Army Environmental Hygiene Agency
Summary Report, On-Site Remedial Activities at the Defense Depot Memphis	1986	O.H. Materials Company
Inter-Office Memorandum regarding January 19, 1988 Spandome Collapse	1988	City of Memphis
Remedial Investigation Final Report	1990	Law Environmental, Inc.
Remedial Investigation Final Report Appendices	1990	Law Environmental, Inc.
Feasibility Study Final Report	1990	Law Environmental, Inc.
RCRA Facility Assessment	1990	Environmental Protection Agency and A.T. Kearney
Hazard Ranking System Score	1991	Environmental Protection Agency
Federal Register February 1992/Sites Proposed for the National Priorities List	1992	Environmental Protection Agency/Jon D. Johnston
Federal Register October 14, 1992/Sites Promulgated to the National Priorities List	1992	Environmental Protection Agency
Final Pump Test Work Plan	1992	Engineering-Science, Inc.
Pumping Test Technical Memorandum	1992	Engineering-Science, Inc.
Non-Stockpile Chemical Materiel Program, Survey and Analysis Report	1993	U S. Army Chemical Materiel Destruction Agency
Final Focused Feasibility Study: Dunn Field	1994	Engineering-Science, Inc.

TABLE B-1

TECHNICAL DOCUMENTS SUMMARY

Document	Year	Author
Environmental Assessment, Removal Action for Groundwater	1994	Engineering-Science, Inc.
Final Proposed Groundwater Action Plan	1994	U.S. Army Corps of Engineers and CH2M Hill
No Further Action Report Draft	1994	U.S. Army Corps of Engineers and CH2M Hill
Electromagnetic and Magnetic Surveys at Dunn Field, Defense Depot Memphis, Tennessee	1994	U.S. Army Corps of Engineers Waterways Experiment Station
Groundwater Monitoring Results Report for Defense Depot Memphis, Tennessee, Volumes 1 through 9	1994	Environmental Science & Engineering Inc.
High Resolution Seismic Reflection Survey to Image the Top and Bottom of a Shallow Clay Layer at the Memphis Defense Depot, Memphis, Tennessee	1994	Kansas Geological Survey
Genenc Quality Assurance Project Plan Final	1995	U.S. Army Corps of Engineers and CH2M Hill
Generic Remedial Investigation/Feasibility Study Workplan Final	1995	U.S. Army Corps of Engineers and CH2M Hill
Screening Sites Field Sampling Plan Final	1995	U.S. Army Corps of Engineers and CH2M Hill
Operable Unit 1 Field Sampling Plan Final	1995	U.S. Army Corps of Engineers and CH2M Hill
Operable Unit 2 Field Sampling Plan Final	1995	U.S. Army Corps of Engineers and CH2M Hill
Operable Unit 3 Field Sampling Plan Final	1995	U.S. Army Corps of Engineers and CH2M Hill
Operable Unit 4 Field Sampling Plan Final	1995	U.S. Army Corps of Engineers and CH2M Hill
Public Health Assessment for USA Defense Depot Memphis	1995	U.S. Department of Health and Human Services, Public Health Service, Agency for Toxic Substances and Disease Registry
Ordinance and Explosive Waste Chemical Warfare Materiel, Archives Search Report for Memphis Defense Depot	1995	U. S. Army Corps of Engineers - St. Louis
Federal Facilities Agreement	1995	Environmental Protection Agency, Tennessee Department of Environment and Conservation, and Defense Depot Memphis, Tennessee
Sediment Sampling Analysis Report	1996	U.S. Army Space and Strategic Defense Command

TECHNICAL DOCUMENTS SUMMARY

Document	Year	Author
Record of Decision for Interim Remedial Action of the Groundwater at Dunn Field (OU-1) at the Defense Distribution Depot Memphis, Tennessee	1996	U.S. Army Corps of Engineers and CH2M Hill
Concurrence Letters for the Record of Decision on the Interim Remedial Action for Groundwater at Dunn Field	1996	Environmental Protection Agency and the Tennessee Department of Environment and Conservation
Interim Remedial Action for Groundwater at Dunn Field	1996	U.S. Army Corps of Engineers and CH2M Hill
Final Environmental Assessment for Master Interim Lease at Defense Distribution Depot Memphis	1996	U.S. Army Corps of Engineers and Tetra Tech, Inc.
Environmental Baseline Survey	1996	Woodward-Clyde, Inc.
Baseline Risk Assessment for Gold Course Impoundments	1997	Radian International, Inc.
Restoration Advisory Board Public Involvement Information, Defense Depot Memphis, Tennessee	1994 until Present	Memphis Depot
BRAC Cleanup Team (BCT) Meeting Minutes	1996 until Present	Memphis Depot
Draft Finding of Suitability to Lease Documents	1996	Memphis Depot
Signed Finding of Suitability to Lease Documents	1996	Memphis Depot
Groundwater Characterization Data Report	1998	U.S. Army Corps of Engineers and CH2M Hill
Final BRAC Parcel Summary Reports	1998	U.S. Army Corps of Engineers and CH2M Hill
Final Remedial Investigation Sites Letter Reports	1998	U.S. Army Corps of Engineers and CH2M Hill
Final Screening Sites Letter Reports	1998	U.S. Army Corps of Engineers and CH2M Hill
Final Background Sampling Program Report	1998	U.S. Army Corps of Engineers and CH2M Hill
Final Preliminary Risk Evaluation	1998	U.S. Army Corps of Engineers and CH2M Hill
Draft Final Community Relations Plan	1998	Frontline Corporate Communications and Memphis Depot

TABLE E-1
ASBESTOS IDENTIFICATION SURVEY RESULTS

PARCEL	BUILDING	FACILITY USE	YEAR CONSTRUCTED	RESULTS
1	139	Bus Stop/Waiting Shelter	1959	A
1	144	Office Space	1942	A
1	S145	Main Security Office	1943	A
1	147	Switch Gear Station	1981	N
1	155	Bus Stop/Waiting Shelter	1960	A
2	176	Family Housing	1948	A
2	S178	Garage	1948	A
2	179	Family Housing	1948	A
2	181	Family Housing	1948	A
2	S183	Garage	1948	A
2	184	Family Housing	1948	A
3	193	Pool Pump House	1948	N
3	S195	Golf Clubhouse	1949	A
3	196	Office Space	1952	A
3	197	Golf Cart Shed	1959	N
3	S198	Cooler Shed	1959	A
14	S209	DEMOLISHED	NA	NA
13	210	Warehouse/Office Space	1942	A
13	211	Generator/Uninterrupted Power Supply	1988	N
8	229	Warehouse Space	1942	A
8	230	Warehouse Space	1942	A
7	249	Warehouse Space	1942	A
6	250	Warehouse Space	1942	A
4	251	Thrift Shop/Storage	1942	A
4	252	Base Fitness Center	1942	A
4	253	Motor Pool Shop	1952	A
4	T254	Storage Shed	1944	A
4	257	Gas Pump House	1942	A
4	260	Paint Shop	1952	A
4	263	Garage	1964	N
4	265	Shop Building	1942	A
4	T267	DEMOLISHED	NA	NA
4	270	Engineering	1945	A
4	S271	Former Golf Pro Shop	1958	A
5	T272	Lumber Shed	1942	N
5	274	Cafeteria	1989	A
5	T275	DEMOLISHED	NA	NA
15	304	Electric Switchgear	NI	N

TABLE E-1
ASBESTOS IDENTIFICATION SURVEY RESULTS

PARCEL	BUILDING	FACILITY USE	YEAR CONSTRUCTED	RESULTS
15	S308	Warehouse/Storage	1944	A
15	S309	Warehouse/Storage	1944	A
15	319	Warehouse/Storage	1942	A
8	329	Warehouse Space	1942	A
8	330	Warehouse Space	1942	A
6	349	Warehouse Space	1942	A
6	350	Warehouse Space	1942	A
17	359	Medical Warehouse	1942	A
3	398	Restroom	1962	A
15	T416	Storage	1943	A
15	T417	Storage	1943	A
9	429	Warehouse Space	1942	A
9	430	Warehouse Space	1942	A
9	449	Warehouse Space	1942	A
9	450	Warehouse Space	1942	A
19	S465	Forklift Wash Rack (Shop Building)	1984	N
19	S468	Warehouse/Storage	1960	N
19	S469	Maintenance Shop	1960	N
20	470	Warehouse Space	1954	A
20	489	Warehouse Space	1954	A
20	490	Warehouse Space	1954	A
11	529	Warehouse Space	1942	A
11	530	Warehouse Space	1942	A
10	549	Warehouse Space	1942	A
10	550	Warehouse Space	1942	A
16	S559	Warehouse Space	1942	A
18	560	Warehouse Space	1990	N
12	629	Warehouse Space	1942	A
11	630	Warehouse Space	1942	A
10	649	Warehouse Space	1953	A
10	650	Warehouse Space	1942	A
20	670	Warehouse Space	1953	A
21	685	Shipping Office	1985	A
21	689	Warehouse Space	1953	A
21	690	Warehouse/Shipping	1953	A
15	S702	DEMOLISHED	NA	NA
33	717	Ice House/Public Restroom	1951	A
33	720	Maintenance Shop	1942	A
33	S737	Pesticide Storage	1961	A

TABLE E-1
ASBESTOS IDENTIFICATION SURVEY RESULTS

PARCEL	BUILDING	FACILITY USE	YEAR CONSTRUCTED	RESULTS
33	753	Fire Pump House	1956	A
33	755	San. Sewer Pump Station	1953	A
33	756	Fire Pump House	NI	A
24	770	Base Maintenance Shop	1952	A
24	T771	Restroom/Storage Space	1945	A
23	783	Underground Bunker (Shop Space)	1942	A
23	787	Warehouse (Banding Facility)	1988	N
23	793	Underground Bunker (Shop Space)	1942	N
23	795	Gate B Guard Shelter	1974	N
29	801	FE Storage Shop	1956	A
29	802	Waiting Shelter	1981	N
32	835	Hazardous Materials Warehouse	1988	N
33	T860	Office	1944	A
33	S863	Office	1943	A
32	865	Hazardous Recoup Facility	1988	N
25	S873	Open Storage	1942	A
25	S875	Open Storage	1942	A
26	S970	Open Storage	1942	A
27	S972	Open Storage	1942	A
35	T1084	Office	1953	A
35	S1085	Abandoned Concrete Grease Rack	NI	N
35	1086	Paint Shed	1959	N
35	1087	Paint Booth	1952	A
35	1088	Sand Blasting Shed	1953	N
35	S1090	Paint Storage Warehouse	1952	A
35	S1091	Paint Storage Warehouse	1953	A
36	1184	Storage Building	1956	N
36	1185	Firing Range	NI	N
1	1	Guard Station	1959	A
1	2	Storage Space	1958	A
23	7	Unoccupied	NI	N
23	8	Guard Station	1969	A
29	9	Communication/ Restroom	1946	A
15	15	Guard Station	1979	A
14	22	Unoccupied	1942	A
13	23	Unoccupied	1942	A
13	24	Unoccupied	1961	N
13	25	Unoccupied	1961	N

TABLE E-1
ASBESTOS IDENTIFICATION SURVEY RESULTS

PARCEL	BUILDING	FACILITY USE	YEAR CONSTRUCTED	RESULTS
Buildings not included in the Asbestos Identification Survey				
1	129	Waiting Shelter	1980	A(P)
4	T256	Other	1943	A(P)
4	T261	Vehicle Storage	1994	A(P)
5	T273	Shed	1942	A(P)
34	360	Warehouse	1996	A(P)
17	P459	Training Facility	1990	NA
19	T467	Open Warehouse Facility	1987	NA
25	T874	Sewage Pump Station	1949	A(P)
30	P949	Open Warehouse Facility	1987	NA
23	S995	Metal Handling	1985	NA
28	S1089	General Purpose Warehouse	1960	A(P)

Notes

A: ACM test results positive

A(P): ACM possible based on the year of construction

ACM Asbestos-containing materials

G: Gatehouse

N: Negative. Building surveyed for ACM. If suspect materials were found, ACM test results were negative or less than 1%, no further action required

NA Not applicable (Building was built after survey or has been demolished since survey)

ADMINISTRATIVE RECORD INDEX

Document	Year	Author
Installation Assessment of Defense Depot Memphis, Tennessee Report No. 191	1981	U.S. Army Toxic and Hazardous Materials Agency
Geohydrologic Study No. 38-26-0195-83	1982	U.S. Army Environmental Hygiene Agency
Environmental Audit No. 43-21-1387-86	1985	U.S. Army Environmental Hygiene Agency
Water Quality Biological Study No. 32-0733-86, Investigation of Fire Reservoir	1986	U.S. Army Environmental Hygiene Agency
Ground Water Consultation No. 38-26-0815-87, Collection and Analysis of Ground Water Samples	1986	U.S. Army Environmental Hygiene Agency
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Final Proposed Groundwater Action Plan	1994	U.S. Army Corps of Engineers and CH2M Hill
Groundwater Monitoring Results Report for Defense Depot Memphis, Tennessee, Volumes 1 through 9	1994	Environmental Science & Engineering Inc.
Ordnance and Explosive Waste Chemical Warfare Materiels, Archives Search Report for Memphis Defense Depot	1995	U. S. Army Corps of Engineers - St. Louis
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Final Background Sampling Program Report	1998	U.S. Army Corps of Engineers and CH2M Hill
Final Preliminary Risk Evaluation	1998	U.S. Army Corps of Engineers and CH2M Hill
Draft Final Community Relations Plan	1998	Frontline Corporate Communications and Memphis Depot



IN REPLY
REFER TO

CAAE

**DEFENSE LOGISTICS AGENCY
HEADQUARTERS
8725 JOHN J. KINGMAN ROAD, SUITE 2533
FORT BELVOIR, VIRGINIA 22060-6221**

WP

[illegible]

MEMORANDUM FOR COMMANDERS, INVENTORY CONTROL POINTS
COMMANDERS, SERVICE CENTERS
COMMANDER, DEFENSE DISTRIBUTION CENTER
COMMANDERS, DEFENSE CONTRACT MANAGEMENT
DISTRICTS
COMMANDER, DLA EUROPE
COMMANDER, DLA PACIFIC
ADMINISTRATOR, DEFENSE AUTOMATED PRINTING AND
SUPPORT CENTER
DLA EXECUTIVE TEAM

SUBJECT: DLA Compliance with Executive Order 12898 on Environmental Justice

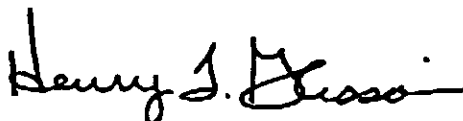
Presidential Executive Order (EO) 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-income Populations, directs Federal agencies to consider "disproportionate impacts on minority and low-income groups." My policy is to act in an open and fair manner when considering an action that may impact human health and the environment. While it does not create any new rights for specific individuals or groups, I expect DLA managers and commanders to review proposed actions to identify disproportionately high adverse impacts on minority and low-income populations. If you determine these will occur, mitigating measures may be necessary to reduce the impacts of those actions.

DLAR 1000.22, Environmental Considerations of DLA Actions in the United States, contains guidance on assessing the impacts of your actions on human health and the environment. Environmental Assessments (EA) and Environmental Impact Statements (EIS) are the documents we generate to identify adverse impacts to human health and the environment and appropriate mitigating measures. Where practical and appropriate, you must gather data to assess impacts on minority and low-income populations. This will allow you to evaluate that information, along with all other considerations, when deciding on a course of action. I expect you to apply your individual judgment, with the assistance of environmental and legal professionals, to reach a case-specific solution.

I also want you to ensure there is sufficient dialog with potentially impacted groups during the scoping process (outlined in DLAR 1000.22) when preparing environmental documents. For actions such as environmental restoration where preparation of an environmental document is not required, other forums may be used such as Restoration Advisory Boards, Technical Review Committees, public notices in local papers, meetings with PTA and church groups, community leaders, etc. This will assure that you have the input you need to make an informed decision.

2.

Please make sure we execute our environmental and public health responsibilities in a manner which is fair, open, unbiased, and fully consistent with the President's direction. Contact Mr. Dennis Lillo, Director, Environmental Quality, CAAE, at DSN 427-6241, or Col Frank Esposito, Associate General Counsel for Environment, GC, at DSN 427-6079 for any additional information regarding the DLA environmental justice policy.



HENRY T. GLISSON
Lieutenant General, USA
Director



H file

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 4

345 COURTLAND STREET, N.E.
ATLANTA, GEORGIA 30365
March 13, 1997

4WD-FFB

Certified Mail

Return Receipt Requested

Colonel Michael J. Kennedy, Commander
Defense Distribution Depot Memphis
2163 Airways Boulevard
Memphis, Tennessee 38114-5210

SUBJ: Concurrence on CERFA Uncontaminated Parcels
Defense Distribution Depot Memphis, Tennessee (DDMT)

Dear Col. Kennedy:

Under CERFA (Public Law 102-426), federal agencies are required to expeditiously identify real property that can be immediately reused and redeveloped. Satisfying this objective requires the identification of real property where no hazardous substances or petroleum products were released or disposed. At National Priorities List sites such as DDMT, the U.S. Environmental Protection Agency (EPA) must concur with such determinations.

EPA Region IV has reviewed the determination of uncontaminated parcels at DDMT as detailed in your letter of December 5, 1996 and the Environmental Baseline Survey (final revisions received by EPA December 20, 1996). EPA concurs that the following (BRAC) parcels are uncontaminated (qualified or unqualified) and ready for immediate reuse: 1.1, 1.2, 1.3, 1.4, 1.5, 1.6, 1.7, 2.1, 2.2, 2.3, 2.4, 2.5, 2.6, 3.1, 3.3, 3.4, 4.1, 4.2, 4.3, 13.1, 13.2, 13.3, 14.1, 15.1, 17.1, 23.1, 23.2, 23.3, 23.4, 23.5, 29.1, 33.1, 33.2, 33.3, 33.4, 33.5, and 34.1.

EPA does **not** concur with the determination that Parcel 3.2 (Building 195) is uncontaminated because of the evidence, at that location, of groundwater contamination at levels above background and ARARs.

If you have any questions please contact me at 404.562.8552.

Sincerely,

Dann Spariosu, Ph.D
Remedial Project Manager

376 217

cc: Jordan English, Tennessee Department of Environment & Conservation
Tim Fields, Acting Assistant Administrator, US EPA
Allison Abernathy, FFRRO, US EPA



376 218
DEFENSE LOGISTICS AGENCY
DEFENSE DISTRIBUTION CENTER
2001 MISSION DRIVE
NEW CUMBERLAND, PA 17070-5000

Mike
Dobbs
DDC-TW

IN REPLY
REFER TO

DDC-AH

received
AUG 20 1998

Ms Pamela J. Henderson
Nuclear Materials Safety Branch 2
Division of Nuclear Materials Safety
Nuclear Regulatory Commission, Region I
475 Allendale Road
King of Prussia, PA 19406-1415


Dear Ms Henderson:

Reference our March 6, 1997 memorandum that provided notification of our intent to conduct a termination radiological survey at the Defense Distribution Depot Memphis, TN (DDMT). Forwarded herewith are the radiological survey reports recommending that DDMT be released for unrestricted use.

All radiological activities have ceased and no radioactive material is on the premises at DDMT. We request that DDMT be removed from the Defense Distribution Center (formerly the Defense Distribution Region East) license 37-30062-01.

Point of contact for any additional information is Mr. Allen Hilsmeier, Radiation Safety Officer, (717) 770-4762, e-mail: ahilsmeier@ddc.dla.mil.

Sincerely,


PAUL OKUM
Director of Administration

Enclosures:

cc:
CAA EH
DDMT-D
DDC-T(BRAC)



PLV
REFER TO

DEFENSE LOGISTICS AGENCY
ADMINISTRATIVE SUPPORT CENTER EAST
14 DEDICATION DRIVE, SUITE 3
NEW CUMBERLAND, PENNSYLVANIA 17070-5011

376 219



15 AUG 1996

ASCE-IW

MEMORANDUM FOR DDMT-D

THROUGH: ASCE-I

9/15/96
ASCE-I

SUBJECT: DDMT Radiological Survey

Two copies of the environmental baseline radiological survey report are forwarded for dissemination. Recommend placing one copy of the report in the archives for DDMT and a copy retained by DDMT.

We would like to commend Mr. Paul Blake, Radiation Protection Officer for DDMT for the invaluable assistance he rendered to the survey officer. He made significant contributions in the coordination, preparation and accumulation of data contained in this report.

This report recommends that the DDMT facilities where radioactive material was previously stored, be released for unrestricted use with the exception of Building 319, Bay 6. This building will require decontamination of the South wall and a thorough radiological survey of the entire bay area before we could recommend its release for unrestricted use.

POC for any additional information is Mr. Allen Hilsmeier, DSN 977-4762 or COM (717) 770-4762.

Allen Hilsmeier
JOHN STAMATELLOS

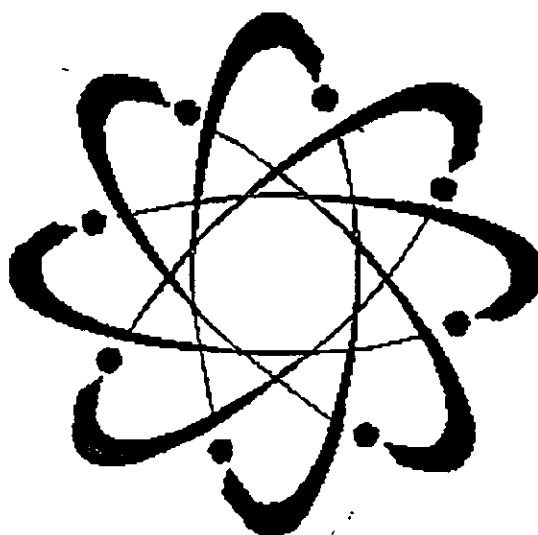
Regional Safety & Occupational Health Manager
ASCE-IW

Attachment:

cc:
DDRE-D/DD
CAAEH
ASCE-D
ASCE-WP

DEFENSE DISTRIBUTION REGION EAST

***ENVIRONMENTAL BASELINE STUDY
RADIOLOGICAL SURVEY
FOR
DEFENSE DISTRIBUTION DEPOT MEMPHIS***



**DDRE RADIOLOGICAL HEALTH GROUP
SAFETY & OCCUPATIONAL HEALTH OFFICE**

***SURVEY CONDUCTED
AUGUST 5-9, 1996***

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EXECUTIVE SUMMARY

This document encompasses a historical search, the sampling protocol to conduct an environmental baseline radiological survey and the survey results for the Defense Distribution Depot Memphis, Tennessee (DDMT). The historical search involved discussions with key persons who were directly knowledgeable of the past radiological operations at DDMT. The radiological survey protocol was developed utilizing the guidance contained in various references that are listed in Appendix A. Also utilized were good health physics practices, and protocols developed by the Department of the Army during previous base closures. The survey results indicate that not all facilities that stored radioactive material can be released for unrestricted use at this time. Remediation of low level contamination in Building 319 must be accomplished before that facility can be released for unrestricted use.

The historical review of radiological activities at DDMT revealed that lantern mantles that contain naturally occurring radioactive thorium were the primary items in storage. Discussion with current and former radiation protection officers and employees did not indicate any evidence of breakage or contamination of any facilities surfaces or the environment. However, this survey identified the South interior wall of Building 319 as having alpha contamination present that was slightly above the release criteria for unrestricted use.

The three other buildings identified by previous and current employees at DDMT were found to be free of any residual contamination. The employees collectively stated that the bulk of the radioactive material was stored over the years in a conex container alongside Building 319. An attempt to locate the conex container was unsuccessful.

BACKGROUND

DDMT was targeted for closure during a Base Realignment and Closure (BRAC) action. DDMT must remove all radioactive material currently in storage and ensure that facilities where radioactive material was stored can be released for unrestricted use.

The radioactive material (RAM) at DDMT was transferred to other DDRE depots. Further, action is underway to direct line item managers to no longer ship their radioactive commodities to DDMT. Any RAM forwarded to DDMT in the future will be regarded as a transshipment and immediately redirected to another Defense Logistics Agency (DLA) depot. They will perform no processing or repackaging of the RAM received.

The primary RAM stored at DDMT were lantern mantles that contain naturally occurring Thorium-232 (Th-232). The lantern mantles are exempt from licensing and control by the Nuclear Regulatory Commission (NRC) because of their low level of radioactivity.

Other radioactive commodities identified as having been stored at DDMT are:

1. Smoke detectors containing generally licensed amounts of americium 241 (Am-241).
2. Electron tubes containing non-licensed amounts of Th-232, tritium (H-3), and radium-226 (Ra-226).
3. Wrist watches containing generally licensed amounts of H-3 and Ra-226.

4. Indicator and toggle switches containing Ra-226.
5. Compasses containing H-3.

No maintenance work took place at DDMT that may have involved the removal of radioactive material from the commodities and no repackaging or unwrapping of RAM occurred. Based upon this background information, DDRE determined that all areas identified as having stored radioactive commodities will be classified as unaffected areas as described in reference 1, Appendix A.

SITE DESCRIPTION

DDMT was first activated as the Memphis General Depot in January 1942 under the U.S. Army. It became a DLA depot in January 1964. It was a primary distribution site for clothing and textiles. It is located in the extreme Southwestern corner of Tennessee in the southern part of the city of Memphis. DDMT occupies 630 acres with 6 million square feet of covered storage.

The four buildings located at DDMT that stored RAM consists of a concrete floor and concrete precast or reinforced concrete walls. Two of the buildings, i.e., Buildings 319 and 629, had an epoxy material covering the floors. The epoxy was probably added after the RAM was no longer stored in the buildings to accommodate other hazardous substances such as corrosives. A radiological survey of the floor for these two buildings would not detect any alpha or beta contamination.

HISTORICAL REVIEW

The historical review of DDMT operations involving RAM indicated that NRC generally licensed and license exempt radioactive sources were stored at the Depot. Interviews were conducted on August 6-7, 1996, with Mr. Woodward Thomas, Radiation Protection Officer (RPO), from 1975 to 1983; Mr. Paul Blake, RPO from 1995 to the present; Mr. Harry Hartwig, Physical Scientist, from 1985 to the present; Mr. William Lovejoy, Chief, Recyclable Materials Branch, from 1981 to 1984 and 1986 to 1987; and Mr. Skip Wallace, Chief, Fire Inspection, from 1982 to the present. In addition, interviews were conducted with Mr. John Tibbels, RPO from 1983 to 1989; Mr. David Luscavage, RPO from 1989 to 1993; and Mr. Charles Crouch, Safety & Occupational Health Manager, from 1979 to 1987.

The interviewees stated that the RAM was primarily stored in a conex container near Building 319 and that no disassembly of items occurred to, in, or from the conex container. The conex container was removed long ago and could not be located. The surface below the conex container had been resurfaced with asphalt. Although the interviewees stated that they could not remember any incidents involving RAM, they had not conducted a radiation survey to verify their statement.

Interviewees stated that radiation surveys had not been conducted in the past because they did not have the necessary equipment. Also, the items were all generally licensed and license exempt which did not require any radiation surveys in accordance with NRC regulations.

At the time of this survey, the storage cage in Building 359 housed about 4000 watches that contained tritium. The watches were removed from the cage immediately and shipped to another DLA depot.

TRAINING

The persons performing this survey were trained on the use of the instrumentation and the procedures to follow during the survey prior to beginning work. The DDRE Health Physicist was responsible overall for the accuracy and adequacy of the data. He was assisted by the DDRE alternate Radiation Safety Officer and the current DDMT RPO.

SURVEY PROCEDURES

OVERVIEW

The facilities identified as having stored radioactive commodities were treated as unaffected areas as defined in NUREG-5849. Each location was considered a separate survey unit. Walls were monitored only if they were in contact with the RAM.

Regarding Building 319, Bay 6, it was used to primarily store lantern mantles but watches, electron tubes, smoke detectors and toggle switches were also stored in the facility. The interviewees indicated that the RAM was mainly stored in the Southeast corner. One interviewee stated, however, that lantern mantles at one time was stored throughout the bay area. The East wall was believed to be installed sometime after RAM was already being stored. Furthermore, there was evidence that a wall was originally installed between Bays 6 and 7 but is now removed. Epoxy material was applied over the floor at some time after the RAM was present and probably after the RAM had been removed from the facility. Even though the area was categorized as an "unaffected area," one square meter grids were drawn on the floor and 2 meters up the wall at the Southeast corner to accurately measure any residual contamination. If no contamination was detected, ten square meter grids or less would be used for the remaining area in Bay 6.

Regarding Building 629, Bay 2, it served as an overflow facility when the conex container or Building 319 was full. The RAM was stored on pallets at least 5 meters from the nearest wall. Epoxy material was applied over the floor at some time after the RAM was present and probably after the RAM had been removed from the facility. The interviewee who remembered that RAM was stored in Building 629 also stated that only lantern mantles were stored there. The surface area was sectioned off in 3 meter grids and monitored for beta and gamma contamination even though it is recognized that the beta radiation would probably not penetrate the epoxy material.

Regarding Building 835, Section 6, a small room was used at one time to store small amounts of radioactive commodities. It was not used regularly and only the East side of the room was needed. Nevertheless, the entire room was monitored for residual alpha, beta, and gamma contamination.

Regarding Building 359, Section 3, the security vault and wire cage were used to store pilferable items such as watches and compasses. These radioactive commodities contained tritium. Reference 6 was a special survey of the vault to detect the presence of any tritium contamination.

The survey was performed in May 1988 by the U.S. Army Environmental Hygiene Agency. Survey results indicated tritium contamination exceeding the release limit, i.e., 5000 DPM/ 100 cm² on the outside of storage boxes but the floor, pallets and tables were well below the release limits. The items were removed and shipped to another depot. At the time of this survey, watches containing tritium were stored in the wire cage only and these items were removed before the conclusion of the survey.

Several interviewees indicated that watches containing RAM were stored in Building 360 at one time. This building has since been torn down. Sampling of the ground surface below and around the former facility was not considered necessary because of the unlikeliness of finding contamination.

Stationary measurements were taken in the facilities using a "box and X" pattern, i.e., 5 measurements were taken in each grid "box." Measurements were taken in each grid corner and in the center of the grid. A scan was also made over the surface of the grid as recommended in reference 1, Appendix A.

Alpha radiation measurements were conducted by using the audio response of a survey meter and counting the total number of clicks over a 30 second time period. This technique was used to reduce the Minimum Detectable Activity (MDA) to as low as possible and yet provide a reasonable time frame to collect the data. The surface was also scanned at a rate of about one detector width per second, i.e., 4 inches per second.

Beta radiation measurements were conducted by reading the meter of the survey meter. The size of the detector, i.e., 100 cm², precluded taking an integrated count because of the relatively high background. The large detector provided, however, the optimum MDA. A scan was also made of the surface at the rate of about 4 inches per second.

Gamma radiation measurements were conducted by reading the meter of the survey meter. Readings were taken on contact with the surface and at one meter. A scan was also made of floor and wall surfaces and on stationary equipment such as shelves, conveyors, etc. Particular attention was given to cracks in surfaces. The audio was used to determine if any elevated contamination levels were present.

The guideline values specified in reference 3, Appendix A, could be observed using the instrumentation described below. The instruments used to measure alpha, beta and gamma radiation had MDAs of 70 DPM/ 100 cm², 1,900 DPM/ 100 cm², and 1 uR/hr, respectively.

At least one wipe test was taken within each grid. For small rooms, numerous wipe tests were taken to provide statistically meaningful results. Random wipe tests were taken on shelves where RAM was previously stored.

INSTRUMENTATION

Instrumentation used for the surveys included a zinc sulfide scintillator for alpha detection, a plastic scintillator for beta detection and a sodium iodide crystal for gamma detection. Each instrument underwent standard quality assurance checks such as a daily source check, background and efficiency determinations, establishment of a MDA and a flag value. Instruments were calibrated by a certified U.S. Army calibration facility on a six month basis.

Specific information on the types of instruments used are:

I. Fixed Contamination:

- a. Alpha Radiation Ludlum Survey Meter, Model 2224, Serial Number 125598
 Ludlum Detector, Model 43-89, Serial Number 134011
 Calibration Date July 29, 1996
 Background at site
 Floor 6 DPM/ 100 cm², (1.0 CPM)
 Wall 16 DPM/ 100 cm², (2.8 CPM)
 Efficiency 18 % for Th-230
 Detector surface area 100 cm²
 MDA 70 DPM/ 100 cm²
 Flag Value 75 DPM/ 100 cm², (13 CPM)
- b. Beta Radiation Ludlum Survey Meter, Model 2224, Serial Number 125598
 Ludlum Detector, Model 43-89, Serial Number 134011
 Calibration Date July 29, 1996
 Background at site
 Floor 3,040 DPM/ 100 cm² (350 CPM)
 Wall 4,870 DPM/ 100 cm² (560 CPM)
 Efficiency 11.5 % for Tc-99
 Detector surface area 100 cm²
 MDA 1,900 DPM/ 100 cm²
 Flag Value 3,750 DPM/ 100 cm², (430 CPM)
- c. Gamma Radiation Ludlum Survey Meter, Model 19, Serial Number 104568
 Ludlum Detector, Model 19, Internal Mounted
 Calibration Date July 23, 1996
 Background 6 uR/hr
 MDA about 1 uR/hr static measurement*
 MDA about 3 uR/hr scanning monitoring*

* Defined in Appendix A, reference 1, Table 5-6.

II. Removable Contamination

- a. Alpha/Beta Radiation Tennelec Model LB-5100 Serial Number 7040614
 Proportional Counter
 Calibration Date August 5, 1996
 Background
 Alpha 3.0 DPM/ 100 cm² (0.74 CPM)
 Beta 6.1 DPM/ 100 cm² (2.73 CPM)
 Efficiency
 Alpha 24.9%
 Beta 44.7%
 MDA
 Alpha 2.7 DPM/ 100 cm²

Beta 2.7 DPM/ 100 cm²

b. Tritium

Beckman Model 6500, Serial Number 7067417
 Liquid Scintillation Counter
 Calibration Date August 12, 1996
 Background 20 DPM/ 100 cm²
 Efficiency 67 %
 MDA 10 DPM/ 100 cm²

QUALITY ASSURANCE CHECK

A daily check for portable survey instruments consisted of a source check and comparison of the measurement to a reading determined after calibration. Measurements conducted before and at the end of the day's survey were within $\pm 20\%$ of the initial value. Additionally, the physical condition of the instrument, to include battery, cables and probes were checked. A daily background check was performed.

The laboratory instrument's efficiency value and MDA were determined using National Institute of Standards and Technology traceable standards. The standards were measured just prior to the wipe tests being counted.

SURVEY TECHNIQUES

Stationary surveys for alpha radiation were performed by holding the probe in contact with the surface surveyed for at least a 30 second count time. The count time was reasonable and ensured that the MDA value was below the guideline values. For example, the guideline values for Ra-226 for fixed contamination are 100 DPM/ 100 cm² and 324 DPM/ 100 cm², per references 4 and 2, Appendix A, respectively. The guideline values for Th-232 for fixed contamination are 1,000 DPM/ 100 cm² and 114 DPM/ 100 cm², per references 4 and 2, Appendix A, respectively. In both cases, the alpha radiation MDA, 70 DPM/ 100 cm² is less than the regulatory guideline values.

Stationary surveys for beta radiation were performed by holding the probe in contact with the surface surveyed for at least 8 seconds. This amount of time encompassed two time constants of the instrument and ensured that the reading had stabilized. The MDA, 1,900 DPM/ 100 cm², is below the guideline value for beta emitting radioisotopes, i.e., 5,000 DPM/ 100 cm², as stated in reference 4, Appendix A.

Stationary surveys for gamma radiation were performed by holding the survey meter in contact with the surface for about 8 seconds. This amount of time ensured that the meter had stabilized. The MDA, 1 uR/hr, is below the guideline value for gamma emitting radioisotopes, i.e., 5 uR/hr as stated in the Acceptance Criteria section below. A stationary survey was also made with a gamma meter on shelves where RAM was stored.

Scanning surveys were made for alpha and beta contamination by moving the probe less than 1 cm from the surface. Scanning surveys for gamma radiation was performed by walking slowly through the area obtaining exposure rate readings on surfaces. Scans were also made on shelves and nearby walls where RAM was stored. The highest reading obtained at a survey point was recorded. If any areas exhibited readings greater than the flag value, they would be subjected to stationary surveys on contact with the surface, and a wipe test conducted.

Survey of the walls was performed if the RAM was in contact with the surface.

BACKGROUND DETERMINATION

Background determinations for gamma dose rate and alpha, beta count rate surveys were made prior to the beginning of the survey. Measurements were made in Building 319 in an adjoining room where RAM had never been stored but of similar construction as the facilities to be surveyed. Twenty measurements were made using alpha, beta and gamma survey meters. The average readings were shown in the Instrumentation section above. The variance of the measurements was such that the beta and gamma readings were within the 95 % confidence level.

The alpha measurements ranged from 0 to 3 CPM in a 30 second time period. This spread, although small in actual size, would nevertheless require over 180 measurements to be taken to establish a statistically accurate average background. This number of background readings is unrealistic to obtain and not considered necessary due to the background reading being a factor of ten below the guideline value for measuring alpha radiation in the storage locations. The background was verified each day the survey occurred.

Background readings were made prior to use of laboratory equipment. These measurements were used to determine the MDA for the several isotopes.

WIPE TESTS

Because of the nature of the RAM stored at DDMT, the possibility of finding loose contamination was small. Nevertheless, wipe tests of the facilities were taken to determine if any residual contamination was present. About 30 wipe tests were taken on the floor and shelves at each storage location. Each alpha/beta-gamma wipe test was conducted by taking a 1.75 inch diameter filter paper and wiping a 10 inch surface in an 'S' pattern. This test resulted in an area wiped of about 100 cm². These wipe tests were counted in a scaler capable of measuring both alpha and medium energy beta radiation.

A wet wipe test was also conducted using a 1 inch square filter paper and wiping a 16 inch surface in an 'S' pattern. The filter paper was dissoluble in a liquid scintillation counter medium. These wipe tests were counted in a liquid scintillation counter to measure any low energy beta emitting radioisotope such as tritium.

ACCEPTANCE CRITERIA

Residual contamination is considered a low probability based upon the kinds and types of radioactive commodities previously located at DDMT. Nevertheless, DDRE believes it prudent to perform reasonable surveys to support this premise. The current standards for unrestricted use are contained in Appendix A, references 1 through 4. These standards formed the basis for the acceptance criteria used by DDRE in the evaluation of DDMT.

The primary acceptance criteria are detailed in the table below:

Table 1: Acceptance Criteria

Radionuclide	Exposure Rate (mRem/Hr) ³	Ave. Gross Contamination ¹	Max. Gross Contamination ²	Removable ¹
U-nat. U-235, u-238, and associated decay products	N/A	5,000 DPM α /100 cm ²	15,000 DPM α /100 cm ²	1,000 DPM α /100 cm ²
Transuramic, Ra-226, Ra-228, Th-230, Pa-231, Ac-227, I-125, I-129	N/A	100 DPM/100 cm ²	300 DPM/100 cm ²	20 DPM/100 cm ²
Th-nat. Th-232, Sr-90, Ra-223, Ra-224, U-232, I-126, I-131, I-133	N/A	1,000 DPM/100 cm ²	3000 DPM/100 cm ²	200 DPM/100 cm ²
Beta-gamma emitters except Sr-90 and other noted above	0.005 mrem/hr	5,000 DPM/100 cm ²	15,000 DPM/100 cm ²	1,000 DPM/100 cm ²

¹ As used in this table, DPM (disintegrations per minute) means the rate of emission by radioactive material as determined by correcting the counts per minute observed by an appropriate detector for background, efficiency, and geometric factors associated with the instrumentation.

² The maximum contamination level applies to an area of not more than 100 cm².

³ The exposure rate criteria of 0.005 mrem/hr (5.0 μ R/hr) was obtained from a Nuclear Regulatory Commission internal memo dated October 29, 1986, from S. Block, Health Physicist, Region V to Peter Erickson, Special and Standardization Project, NRR, subject: Conversion of Regulatory Guide 1.86 Surface Contamination Limits Into Exposure Rate For Release For Unrestricted Use.

A secondary acceptance criteria is outlined in reference 2, Appendix A. These values are as follows for a projected Total Effective Dose Equivalent of 3 millirem per year from fixed and removable surface contamination for a building occupancy (Table B-1).

H-3	5.29E6 DPM/ 100 cm ²
Th-232	1.14E2 DPM/ 100 cm ²
Ra-226	1.91E2 DPM/ 100 cm ²
Am-241	3.71E1 DPM/ 100 cm ²

SURVEY DATA ANALYSIS

Data obtained for the four locations are provided in Appendix C. The data were compared to both primary and secondary acceptance criteria.

Regarding the direct measurement for alpha contamination in Bay 6 of Building 319, three wall grids had an average net value that slightly exceeded the guideline values for all alpha emitting radioisotopes that were previously stored at DDMT. Repeat readings were taken at two of the grids and in general, the readings were in agreement. One of the repeat readings at grid W8, i.e., 328 net DPM/ 100 cm², slightly exceeded the maximum allowable contamination level specified in reference 4, Appendix A. If either of these conditions occur during the course of the survey, the area must be reclassified from an "unaffected" to an "affected" area. The testing requirements become more rigorous as defined in reference 1, Appendix A. The direct measurement for alpha contamination in the other facilities were all below the regulatory requirements.

Regarding the direct measurement for beta contamination in the facilities, all the readings were within the statistical fluctuations of background radiation. The data indicate that no significant, if any, fixed contamination was present from beta emitting radioisotopes.

Regarding the direct measurement for gamma contamination in the facilities, the highest net value at any location was 1 uR/hr. The data indicate that no significant, if any, fixed contamination was present that emits gamma radiation.

Regarding the removable alpha/beta-gamma contamination measurements in all the facilities, all readings were below the primary acceptance criteria for Ra-226, i.e., 20 DPM/ 100 cm². Radium-226 has the most stringent acceptance criteria. The data indicate that no significant removable contamination was present.

Regarding the removable tritium contamination measurements in the facilities and especially in Building 359 where the bulk of the items containing tritium was stored, all measurements were well below the primary and secondary acceptance criteria for tritium, i.e., 1,000 DPM/ 100 cm², and 5.29E6 DPM/ 100 cm², respectively.

CONCLUSION


The data indicate that one of the DDMT facilities where RAM was stored in the past, i.e., Building 319, Bay 6, was slightly contaminated above allowable limits for fixed alpha radiation. In its present condition, it could not be released for unrestricted use. The facility does not present a health hazard because of the low level of contamination present which is not readily removable. The other facilities were all well within the limits and could be released for unrestricted use.

RECOMMENDATION

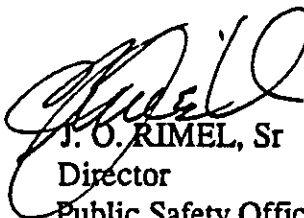
It is recommended that: 1) Building 319, Bay 6, be restricted to limited access and controlled by the DDMT RPO until it can be decontaminated; 2) that the entire area undergo a termination survey as an "affected" area in accordance with reference 1, Appendix A; 3) The epoxied floor in Building 319, Bay 6, be scraped sufficiently to allow alpha measurements to be taken to determine

if residual contamination is on the floor; and 4) The other facilities at DDMT where RAM was previously stored be released for unrestricted use.

Submitted by:


ALLEN E. HILSMEIER
DDRE Health Physicist

Approved by:


J. O. RIMEL, Sr
Director
Public Safety Office

APPENDIX A***REFERENCES***

1. NUREG/CR - 5849, Manual for Conducting Radiological Surveys in Support of License Termination, June 1992 (Draft).
2. NUREG - 1500, Working Draft Regulatory Guide on Release Criteria for Decommissioning: NRC Staff's Draft for Comment, August 1994.
3. NRC Regulatory Guide 1.86, Termination of Operating Licenses for Nuclear Reactors, June 1974.
4. NRC Guidelines for Decontamination of Facilities and Equipment Prior to Release for Unrestricted Use of Termination of Licenses for Byproduct, Source, or Special Nuclear Materials, USNRC, August 1987.
5. Draft Radioactive Commodity Radiation Survey Protocol, Department of the Army, January 3, 1996.
6. Report, Radiation Protection Study No. 27-43-0163-89,.....Defense Depot Memphis, Tennessee, 9-10 May 1988, U.S. Army Environmental Hygiene Agency, 27 February 1989.

APPENDIX B

ABBREVIATIONS

Am-241	Americium-241
BRAC	Base Realignment and Closure
cm ²	square centimeters
CPM	counts per minute
DDMT	Defense Distribution Depot Memphis, Tennessee
DDRE	Defense Distribution Region East
DLA	Defense Logistics Agency
DPM	disintegrations per minute
DPM/ 100 cm ²	disintegrations per minute per 100 square centimeters
H-3	tritium
MDA	Minimum Detectable Activity
mrem/hr	millirem per hour
NRC	Nuclear Regulatory Commission
NUREG	Nuclear Regulatory Commission Regulation
Ra-226	Radium-226
RAM	radioactive material
RPO	Radiation Protection Officer
Th-232	Thorium-232
uR/hr	microrentgens per hour

APPENDIX C
SURVEY RESULTS

BUILDING 319, BAY 6

DEFENSE DISTRIBUTION DEPOT MEMPHIS, TENNESSEE

DIRECT MEASUREMENT										REMOVABLE								
Loc	Gross					Gross					Gross							
	Alpha					Beta					Gamma			Alp	Bet	H-3	Alp/Bet	H-3
											Sc	St	IM	DPM/100cm²		ID	ID	
F1	0	11	11	0	22	2440	2610	2610	3650	2780	6	6	5	3.8	6.5	108	1	T1
F2	11	22	11	22	11	3130	3300	3300	3480	3480	5	5	5	3.0	6.5		2	
F3	33	11	0	22	33	3480	3130	2610	3300	3480	6	6	6	2.0	7.5		3	
F4	22	0	11	22	11	3480	3130	2610	3480	2780	5	5	5	2.0	6.9		4	
F5	11	0	22	44	33	2610	2780	3300	3480	3480	6	6	6	2.6	4.7		5	
F6	11	22	11	11	22	2610	2960	2610	3480	3480	6	6	6	7.9	5.9	83	6	T2
F7	11	44	22	0	44	2780	2960	3300	2610	3480	6	6	6	3.0	6.0		7	
F8	33	11	22	33	22	3480	2610	3300	3300	3130	6	6	6	3.5	6.6		8	
F9	11	11	33	22	44	3130	3130	3300	3130	3830	5	5	6	2.7	6.5		9	
W1						2130	2400	1870	2000	1600	5	5	5	2.7	5.7	93	11	T3
W2						2000	2000	1870	2270	2270	6	5	5	2.7	6.1		12	
W3						2130	2270	2270	2130	2270	5	5	6	1.6	6.4		13	
W4						2130	2000	2400	2270	2270	6	6	6	2.2	5.1		14	

W5					2530	2270	2130	2270	2130	5	5	5	2.7	5.6		15	
W6	33	0	22	0	11	2000	2130	2270	2130	5	5	5	3.4	6.3	93	16	T4
W7					2270	2400	2400	2400	2130	5	5	5	2.4	6.3		17	
W8	111	67	122	56	200	2670	2530	2530	2400	4	5	5	3.1	6.6		18	
W9	67	100	122	156	44								5.0	13.0		S1	
W10	111	67	344	56	200								3.5	12.0		S2	
W11						2270	2400	2530	2270	2130	5	5	3.3	6.3		19	
W12	100	100	244	122	144	2400	2670	2670	2400	6	5	6	4.3	9.7		20	
W13	122	144	133	122	122								6.5	11.1		S3	
W14	156	111	189	167	89								4.6	9.8		S4	
W15	100	100	244	122	144								4.2	10.0		S5	
W16						2400	2530	2400	2670	2530	5	5	4.5	10.3		21	
W17						2270	2400	2530	2400	2400	6	5	4.0	10.3	67	22	T5
W18						2130	2130	2000	2000	2000	5	5	2.0	6.6		23	
W19	144	78	133	133	122												
W20	11	11	0	11	0												
W21	22	11	11	11	11												
W22	11	0	11	11	0												
W23	44	11	56	33	33												
W24	11	22	0	11	11								2.7	6.3		S6	

BUILDING 835, SECTION 6, SMALL ROOM

DEFENSE DISTRIBUTION DEPOT MEMPHIS, TENNESSEE

DIRECT MEASUREMENT											REMOVABLE					
oc	Gross					Gross					Gross			Gross		
	Alpha					Beta					Gamma			Alp	Bet	Wipe
	DPM/100cm ²					DPM/100cm ²					uR/hr					Test
											Sc	St	1M			
1	0	0	0	0	0	2000	2130	2130	2070	2130	6	6	6	4.9	7.5	1
														2.7	7.8	2
														2.7	7.5	3
														3.1	5.7	10
														3.5	5.8	11
														2.7	5.8	12
														2.3	6.1	13
														3.1	5.4	14
														2.4	6.0	15
2	11	0	0	0	0	2200	2070	2130	2130	2070	6	6	6	3.5	7.0	4
														3.2	7.4	5
														2.2	6.9	6
														3.8	6.9	7
														2.6	5.8	8
														2.6	6.5	9
														2.4	5.5	16
														2.0	6.6	17
														2.6	7.1	18

0	0	0	0	0	2130	2130	2070	2000	2000	7	7	7	2.2	6.3	22	
													2.6	6.8	23	
													3.4	5.4	24	
													2.2	6.3	25	
													2.0	6.0	26	
													3.5	6.5	27	
4	0	0	11	11	0	2130	2000	2200	2070	2130	7	7	7	2.6	5.3	19
													2.1	6.3	20	
													2.8	4.8	21	
													2.7	5.4	28	
													2.4	6.1	29	
													2.2	6.6	30	

Direct Measurement

Background - Alpha

Floor 6 DPM/100cm²Wall 16 DPM/100cm²

Beta

3000 DPM/100cm²

Gamma

6 uR/hr

Removable

Alpha 3 DPM/100cm²Beta 6 DPM/100cm²

Abbreviations: Loc - Location

Sc - Scan

Alp - Alpha

St - Stationary

Bet - Beta

BUILDING 629, BAY 2

DEFENSE DISTRIBUTION DEPOT MEMPHIS, TENNESSEE

DIRECT MEASUREMENT						REMOVABLE					
Loc	Gross					Gross			Gross		
	Beta					Gamma			Alp	Bet	ID
						Sc	St	IM			
F1	2130	2000	2130	2270	2270	5	5	5	2.3	6.6	31
									2.4	6.6	32
F2	2270	2130	2000	2270	2070	5	5	5	2.0	6.3	45
									2.3	6.3	46
F3	2000	2200	2270	2130	2000	5	5	5	2.0	5.1	47
									2.3	5.7	48
									2.6	6.1	57
F4	2000	2130	2270	2130	2000	5	5	5	3.4	5.7	49
									2.7	5.2	50
									2.4	5.1	56
F5	2200	2000	2130	2070	2130	5	5	5	2.8	5.4	43
									2.9	6.9	44
F6	2130	2130	2270	2070	2130	5	5	5	2.6	7.3	33
									3.5	5.2	34
F7	2130	2130	2000	2070	2200	5	5	5	2.3	5.8	35
									2.0	5.8	36
F8	2000	2000	2130	2130	2130	5	5	5	1.8	5.0	41
									2.2	5.7	42

F9	2000	2070	2200	2130	2070	5	5	5	2.8	6.8	51
									3.2	5.1	52
									2.6	7.0	55
F10	2070	2000	2200	2000	2000	5	5	5	3.6	6.3	53
									2.6	5.7	54
F11	2070	2200	2000	2000	2130	5	5	5	2.3	6.2	39
									3.0	6.3	40
F12	2270	2130	2200	2130	2070	5	5	5	2.6	6.4	37
									1.5	5.5	38

Direct Measurement

Background - Beta 2130 DPM/100cm²
 Gamma 6 uR/hr

Removable

Alpha 3 DPM/100cm²
 Beta 6 DPM/100cm²

Abbreviations: Loc - Location Alp - Alpha Bet - Beta
 Sc - Scan St - Stationary

BUILDING 359, SECTION 3

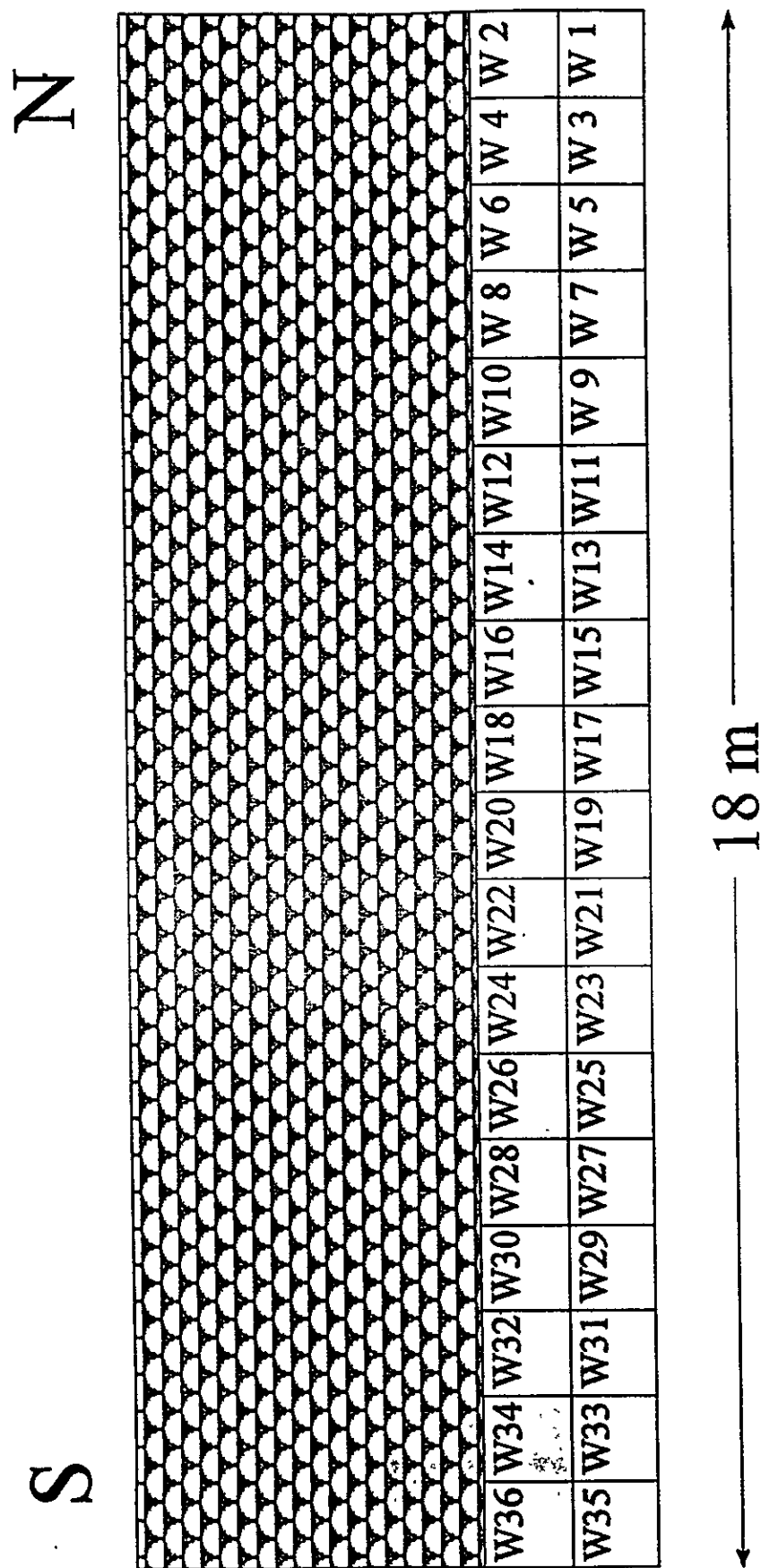
DEFENSE DISTRIBUTION DEPOT MEMPHIS, TENNESSEE

		REMOVABLE			REMOVABLE
	Location	H-3		Location	H-3
	ID	DPM/100cm ²		ID	DPM/100cm ²
Wire Cage			Vault		
	H1	68		V21	52
	H2	77		V22	57
	H3	61		V22R	22
	H3R	23		V23	44
	H4	61		V24	58
	H5	59		V24R	21
	H6	72		V25	54
	H7	73		V26	47
	H8	76		V26R	18
	H9	69		V27	42
	H10	74		V28	50
	H11	55		V29	47
	H12	74		V30	43
	H13	85		V31	48
	H14	70		V32	51
	H15	61		V33	58
	H16	53		V34	49
	H16R	21		V35	50
	H17	52		V36	45
	H18	51		V37	49

	H19	51		V38	49
	H20	113		V39	44
				V40	50
				V41	56
				V42	57
				V43	44
				V44	49
				V45	52
				V46	46

APPENDIX D
SURVEY LOCATIONS

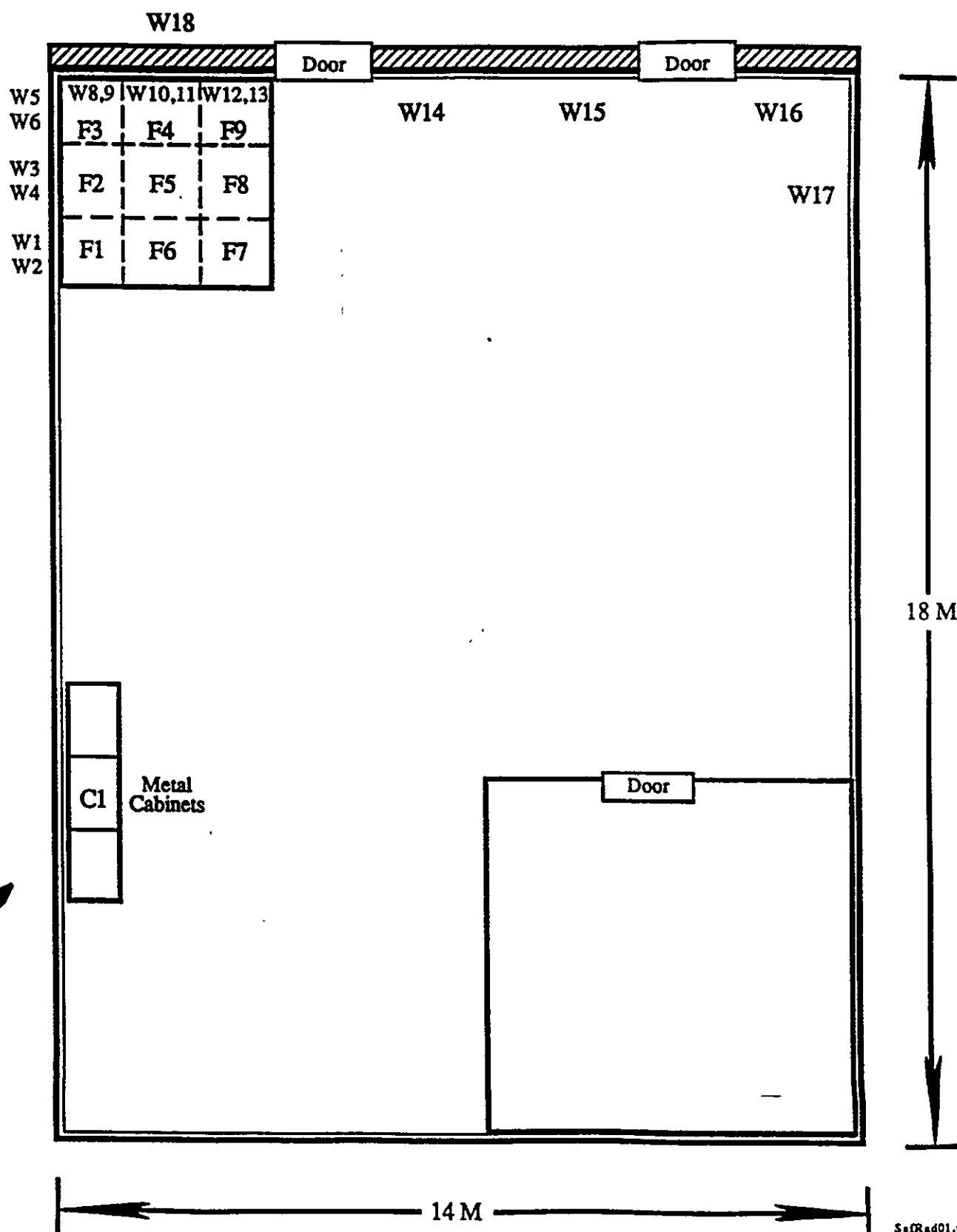
Interior of West Wall



BUILDING 319

BAY 6

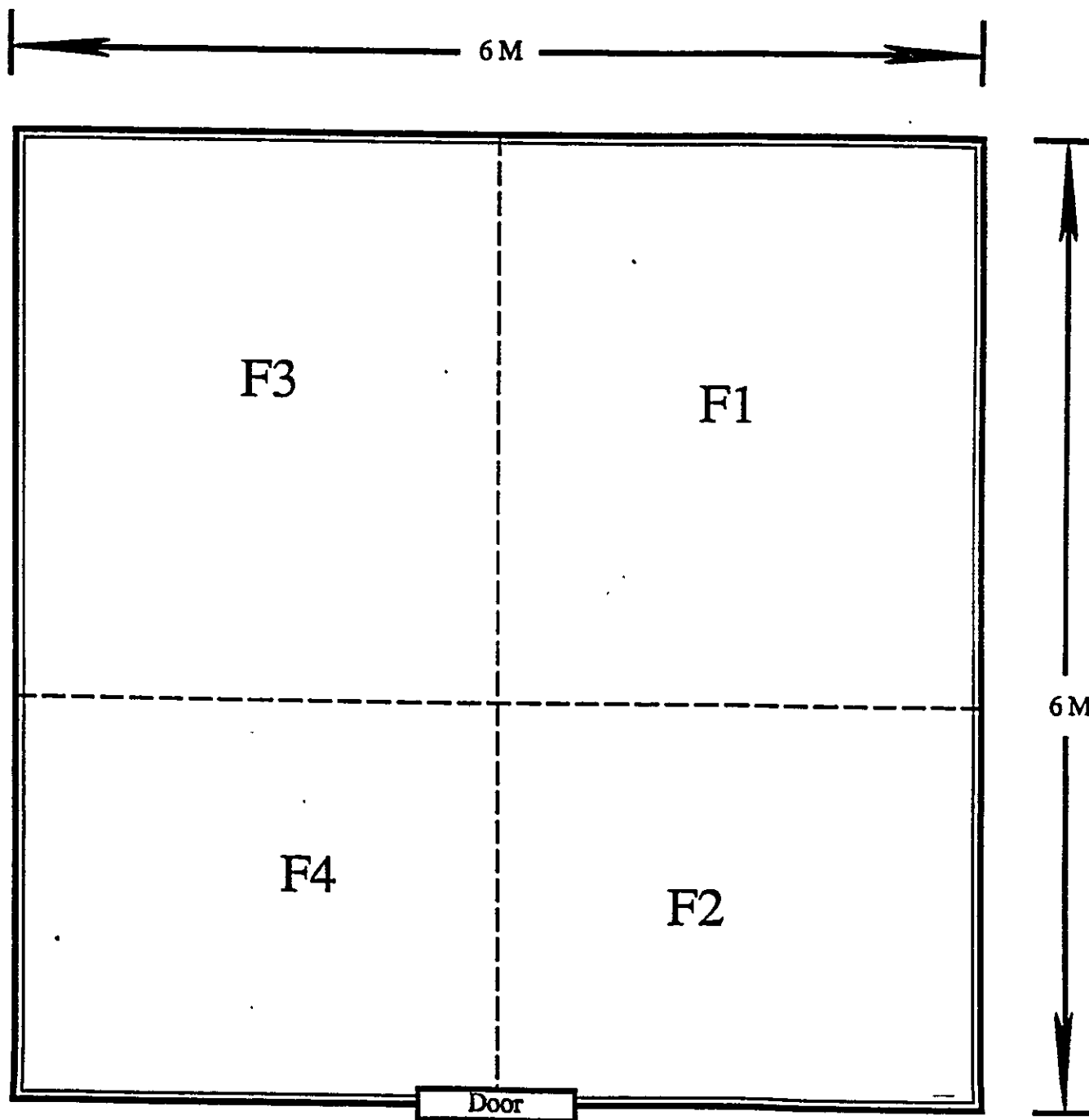
Defense Distribution Depot Memphis Tennessee



BUILDING 835

SMALL ROOM

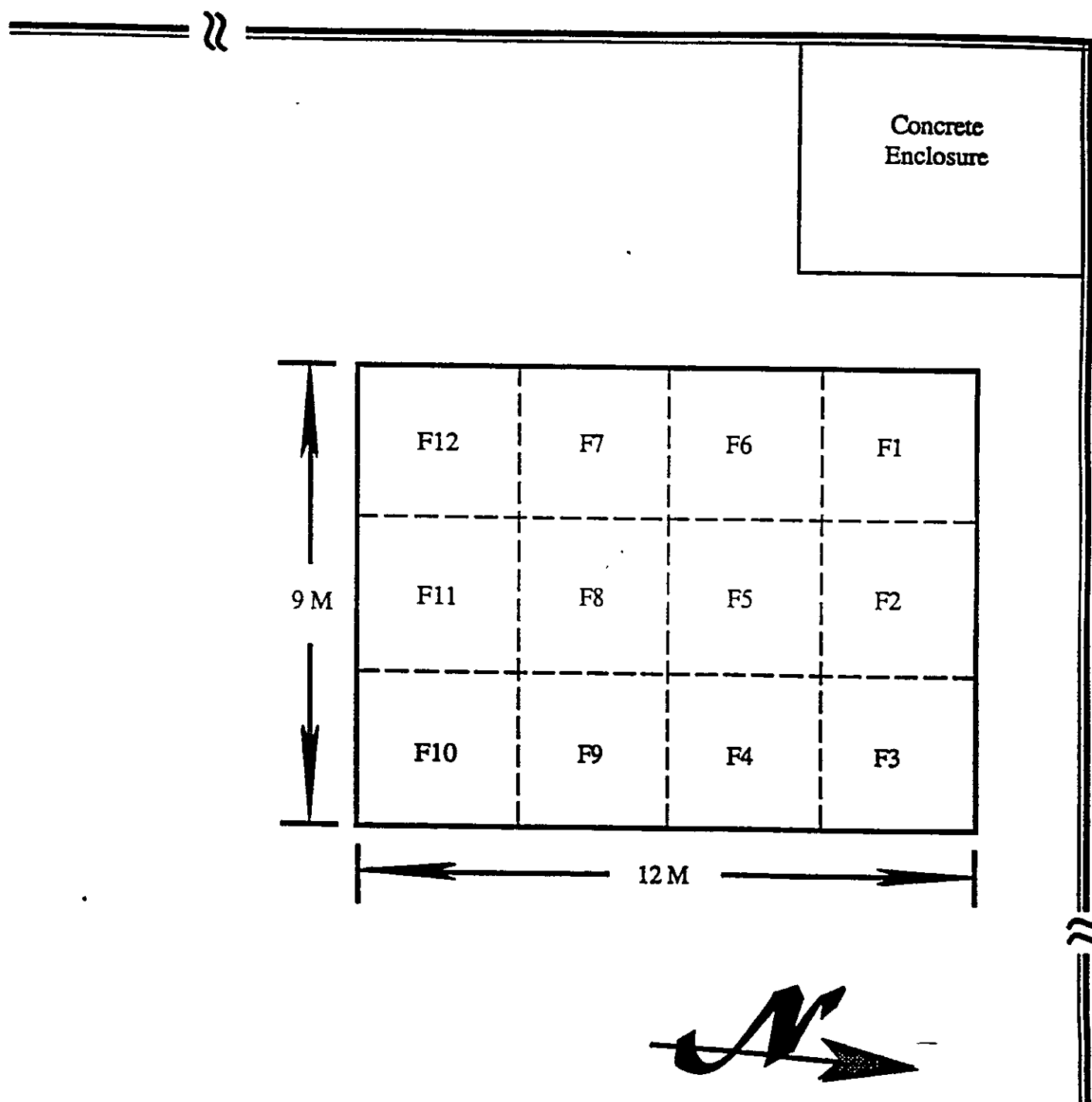
Defense Distribution Depot Memphis Tennessee



BUILDING 629

BAY 2

Defense Distribution Depot Memphis Tennessee

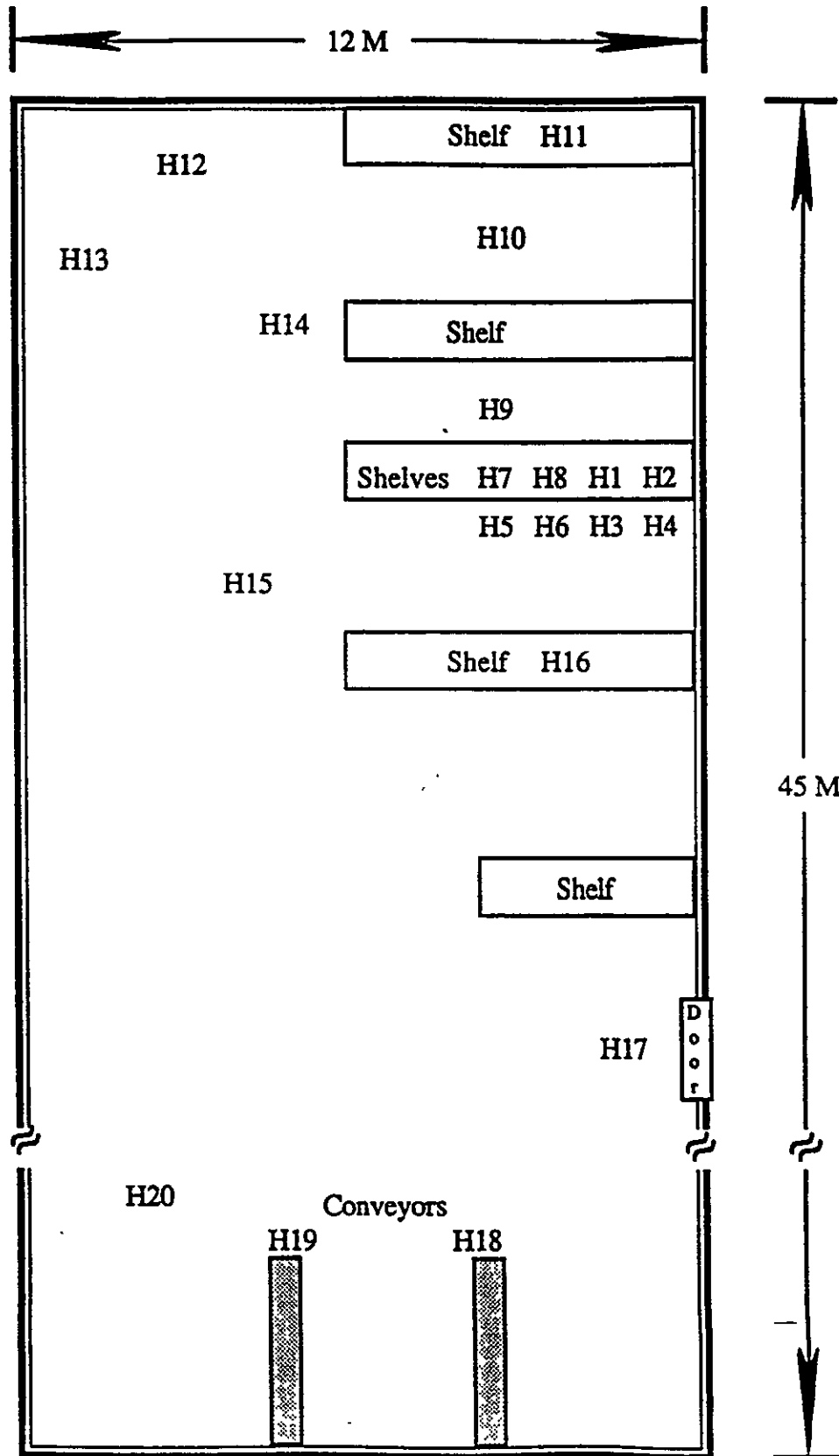


BUILDING 359

376 249

SECTION 3 WIRE CAGE

Defense Distribution Depot Memphis Tennessee

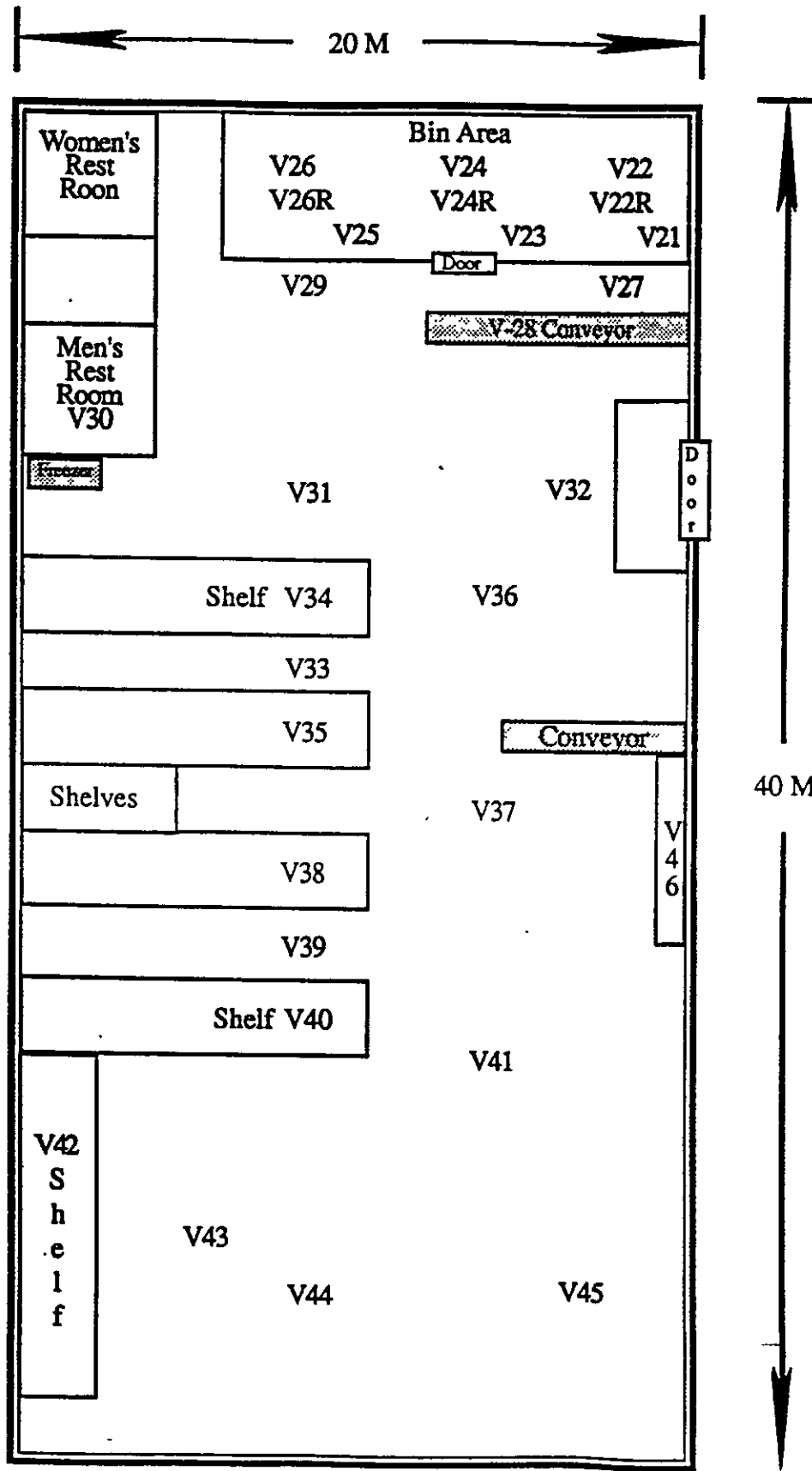


BUILDING 359

376 250

SECTION 3 SECURITY VAULT

Defense Distribution Depot Memphis Tennessee



DEFENSE DISTRIBUTION CENTER

***TERMINATION RADIOLOGICAL SURVEY
FOR
DEFENSE DISTRIBUTION DEPOT MEMPHIS
BUILDING 319, BAY 6***

**RADIOLOGICAL HEALTH GROUP
SAFETY & OCCUPATIONAL HEALTH OFFICE
DIRECTOR OF ADMINISTRATION**

***SURVEY CONDUCTED
APRIL 7-11, 1997***

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EXECUTIVE SUMMARY

This document encompasses a historical search, the sampling protocol to conduct a termination radiological survey and the survey results for Building 319, Bay 6, at the Defense Distribution Depot Memphis, Tennessee (DDMT). The historical search involved discussions with key persons who were directly knowledgeable of the past radiological operations at DDMT. The radiological survey protocol was developed utilizing the guidance contained in reference 1, Appendix A. The survey results indicate that Building 319 can be released for unrestricted use.

The historical review of radiological activities at DDMT revealed that lantern mantles that contain naturally occurring radioactive thorium were primarily stored in Bay 6, Building 319. Discussion with current and former radiation protection officers and employees did not indicate any destruction of the mantles or contamination of any facility surfaces or the environment. A radiological environmental baseline study conducted at DDMT in August 1996 (see Appendix A, reference 4), concluded that all facilities could be released for unrestricted use with the exception of Building 319, Bay 6. The baseline data indicated that Building 319 had several wall surfaces with alpha radiation above the alpha background radiation level. The report recommended that additional characterization be performed to determine the cause of the slightly elevated alpha radiation in the facility.

The characterization study was completed on April 11, 1997. This report provides the data analysis of the study which concludes that the higher levels of alpha radiation are a result of naturally occurring radioactivity in pre-cast concrete.

BACKGROUND

This characterization survey report is a continuation of the Environmental Baseline Study referenced in Appendix A. This Environmental Baseline Study identified a slight but elevated amount of alpha radiation on the South wall in Bay 6, Building 319. The study indicated that the alpha radiation level exceeded release criteria specified in Appendix A, reference 2, but was well below the release criteria specified in Appendix A, reference 3.

Reference 2 in the Study, Table B-1, specified a surface concentration limit of 114 dpm/100 cm² for Thorium 232 (Th-232) in equilibrium with its daughter products for unrestricted release of a building. This value corresponds to a dose rate for building occupancy of 3 mRem/year. The dose rate value has subsequently been superseded by a value of 25 mRem/year (Appendix A, reference 6). This new value corresponds to a surface concentration release limit of about 950 dpm/100 cm², which is essentially the same limit that NRC adopted in their release criteria stated in reference 3, Appendix A, i.e., 1000 dpm/100 cm².

The walls for Building 319 were pre-formed and then layered into place. The concrete sections are about 8 inches wide and 8 feet long. Natural background radioactivity in the concrete could vary if the ingredients came from different geographical locations. To test this potentiality, radiation measurements were taken on an exterior wall where no contamination could have occurred. Elevated alpha radiation readings were recorded at isolated spots which were similar to

the readings inside the building. Further, wipe tests on surfaces indicated that the radioactive material (RAM) was not removable. Reference 7, Appendix A, stated that Tennessee has a significantly higher Uranium concentration than most of the United States, i.e., 50-80 parts per million (ppm) to 1-2 ppm, respectively.

No maintenance work took place at DDMT that may have involved the alteration or destruction of RAM from the time of manufacture. Also, no repackaging or unwrapping of RAM occurred. Based upon this background information, DDC determined that Building 319 would be classified as an unaffected area as described in reference 1, Appendix A.

SITE DESCRIPTION

Persons interviewed stated that Building 319, Bay 6 was primarily used to store lantern mantles but watches, electron tubes, smoke detectors and toggle switches were also stored in the facility. They stated that most items were stored in the Southeast corner which prompted biased sampling to take place there. One interviewee stated that lantern mantles at one time were stored throughout the bay. The East wall was believed to be installed sometime after RAM was already being stored. Furthermore, there was evidence that a wall was originally installed on the West side between Bays 6 and 7 but is now removed. Epoxy material was applied over the floor at some time after the RAM was present and probably after the RAM had been removed from the facility for subsequent storage of hazardous chemicals.

HISTORICAL REVIEW

The historical review of Building 319 operations involving RAM indicated that NRC generally licensed and license exempt radioactive sources were stored in the building. Interviews were documented in Appendix A, reference 4. Interviewees stated that radiation surveys had not been conducted in the past.

TRAINING

The persons performing this survey were trained on the use of the instrumentation and the procedures to follow during the survey prior to beginning work. The DDC Health Physicist was responsible overall for the accuracy and adequacy of the data. He was assisted by the DDMT RPO.

SURVEY PROCEDURES

OVERVIEW

Building 319, Bay 6, was treated as an unaffected area as defined in NUREG-5849. It was considered a single survey unit. After the slightly elevated alpha radiation measurements were observed during the environmental baseline study, the bay was reevaluated to determine if it should be reclassified to an affected area. The characterization data supported the position that the radioactive material was within the concrete walls and the bay could be treated as an unaffected area.

Stationary measurements were taken in the facility using a "box and X" pattern, i.e., 5 measurements were taken in each 1 square meter grid "box." Measurements were taken in each grid corner and in the center of the grid. For floor measurements, at least a 100 square centimeter area was sanded before the alpha/beta survey meter was placed on the surface. A gamma radiation scan was also made over the surface of the grid as recommended in reference 1, Appendix A.

Alpha radiation measurements were conducted using two techniques. Wall surfaces where the alpha radiation exceeded 3 times background as determined by the audio and ratemeter response, were counted for 1 minute using an integrated count. This type of measurement improved the Minimum Detectable Activity (MDA) and accuracy. Surfaces that indicated only background radiation were counted over at least 2 time constants, i.e., 8 seconds, in the ratemeter mode to expedite the survey. The MDA was higher but still below acceptable limits by a factor of 10.

Beta radiation measurements were conducted by using the ratemeter mode of the survey meter. The size of the detector, i.e., 100 cm², provided an optimum MDA. Surfaces that indicated only background radiation were counted over at least 2 time constants, i.e., 8 seconds, in the ratemeter mode to expedite the survey.

Gamma radiation measurements were conducted by using the audio response and reading the meter of the survey meter. Readings were taken on contact with the surface and at one meter. A scan was also made of floor and wall surfaces. Particular attention was given to cracks in surfaces.

The guideline values specified in reference 3, Appendix A, could be observed using the instrumentation described below. Each instrument's MDA for various surfaces are provided in the Instrumentation Section.

Wipe tests were taken throughout the facility. Each alpha/beta-gamma wipe test was conducted by taking a 1.75 inch diameter filter paper and wiping about a 10 inch surface in an 'S' pattern. This test resulted in an area wiped of about 100 cm². These wipe tests were counted in a scaler capable of measuring both alpha and medium energy beta radiation.

INSTRUMENTATION

Instrumentation used for the surveys included a zinc sulfide scintillator for alpha detection, a plastic scintillator for beta detection and a sodium iodide crystal for gamma detection. Each instrument underwent standard quality assurance checks such as a daily source check, background

and efficiency determinations, establishment of a MDA and a flag value. Instruments were calibrated by a certified U.S. Army calibration facility on a six month basis.

Specific information on the types of instruments used are:

I. Fixed Contamination:

- a. Alpha Radiation Ludlum Survey Meter, Model 2224, Serial Number 125598
 Ludlum Detector, Model 43-89, Serial Number 134011
 Calibration Date January 22, 1997
 Background at site
 Floor 11 dpm/ 100 cm², (2.0 CPM)
 Inner Concrete Block Wall 13 dpm/ 100 cm², (2.3 CPM)
 Pre-Cast Concrete Wall 35 dpm/ 100 cm², (6.25 CPM)
 Tile Wall 21 dpm/ 100 cm², (3.8 CPM)
 Efficiency 18 % for Th-230
 Detector surface area 100 cm²
 MDA
 Floor 100 dpm/ 100 cm²
 Inner Concrete Block Wall 107 dpm/ 100 cm²
 Pre-Cast Concrete Wall 80 dpm/ 100 cm²
 Tile Wall 138 dpm/ 100 cm²

- b. Beta Radiation Ludlum Survey Meter, Model 2224, Serial Number 125598
 Ludlum Detector, Model 43-89, Serial Number 134011
 Calibration Date January 22, 1997
 Background at site
 Floor 2,071 dpm/ 100 cm² (290 CPM)
 Inner Wall 1,628 dpm/ 100 cm² (228 CPM)
 Concrete Wall 1,614 dpm/ 100 cm² (226 CPM)
 Tile Wall 3,745 dpm/ 100 cm² (524 CPM)
 Efficiency 14 % for Tc-99
 Detector surface area 100 cm²
 MDA
 Floor 1,550 dpm/ 100 cm²
 Inner Wall 1375 dpm/ 100 cm²
 Concrete Wall 519 dpm/ 100 cm²
 Tile Wall 2,085 dpm/ 100 cm²

- c. Gamma Radiation Ludlum Survey Meter, Model 19, Serial Number 104568
 Ludlum Detector, Model 19, Internal Mounted
 Calibration Date January 22, 1997
 Background at site

Floor Surface 6 uRem/hr; 1 Meter 6 uRem/hr
 Inner Wall Surface 6 uRem/hr; 1 Meter 6 uRem/hr
 Concrete Wall Surface 5 uRem/hr; 1 Meter 6 uRem/hr
 Tile Wall Surface 12 uRem/hr; 1 Meter 10 uRem/hr

MDA about 1 uR/hr static measurement*

MDA about 3 uR/hr scanning monitoring*

* Defined in Appendix A, reference 1, Table 5-6.

II. Removable Contamination

Alpha/Beta Radiation Ludlum Dual Scaler Model 2929 Serial Number 39100
 Ludlum Detector Model 43-10-1 Serial Number 133993
 Calibration Date April 24, 1997

Background

Alpha 1.0 dpm/ 100 cm² (0.35 CPM)

Beta 434 dpm/ 100 cm² (138 CPM)

Efficiency

Alpha 34 %

Beta 31 %

MDA

Alpha 5.5 DPM/ 100 cm²

Beta 132 DPM/ 100 cm²

QUALITY ASSURANCE CHECK

A daily check for portable survey instruments consisted of a source check and comparison of the measurement to a reading determined after calibration. Measurements conducted before and at the end of the day's survey were within $\pm 20\%$ of the initial value. Additionally, the physical condition of the instrument, to include battery, cables and probes were checked. A daily background check was performed.

The laboratory instrument's efficiency value and MDA were determined using National Institute of Standards and Technology traceable standards. The standards were measured just prior to the wipe tests being counted.

SURVEY TECHNIQUES

This second phase, the characterization study, involved confirming the original slightly elevated alpha readings in the Environmental Baseline Study. Once the readings were confirmed, an area was sanded rigorously with a mechanical sander. Health physics precautions were implemented which included: donning of a full face respirator and protective outer garments; and covering the floor with plastic to collect the concrete dust. Measurements were retaken to determine if the alpha readings had been reduced. These data are presented in Appendix D.

Stationary surveys for alpha radiation were performed by holding the probe in contact with the surface surveyed for at least 2 time constants, i.e., 8 seconds. The time period was reasonable

and ensured that the MDA values were below the guideline value. As stated earlier, wall surfaces where the alpha radiation exceeded 3 times background were counted for 1 minute using an integrated count.

Stationary surveys for beta radiation were performed by holding the probe in contact with the surface surveyed for at least 2 time constants, i.e., 8 seconds. The MDAs for the various surfaces were slightly above the guideline value for Th-232 but below the guideline value for beta-gamma emitting radioisotopes, i.e., 1,000 dpm/100 cm² and 5,000 dpm/ 100 cm², respectively.

Stationary surveys for gamma radiation were performed by holding the survey meter in contact with the surface and at a distance of 1 meter for about 8 seconds. This amount of time ensured that the meter had stabilized. The MDA, 1 uR/hr, is below the guideline value for gamma emitting radioisotopes, i.e., 5 uR/hr as stated in the Acceptance Criteria section below.

Scanning surveys for gamma radiation was performed by walking slowly through the area obtaining exposure rate readings on surfaces. The highest reading obtained at a survey point was recorded.

BACKGROUND DETERMINATION

Background determinations for gamma dose rate and alpha, beta count rate surveys were made prior to the beginning of the survey. Measurements were made in Building 319 in an adjoining room where RAM had not been stored but of similar construction as the facilities to be surveyed. Further, alpha radiation measurements were taken on the West exterior wall of Bay 6 to determine if any localized, elevated alpha radiation readings might be present. A total of 342 measurements were made using alpha, beta and gamma survey meters. The readings are shown in Appendix C.

The alpha measurements ranged from 0 to 1 counts per 8 seconds for the floor and inner wall. The alpha measurements for the concrete wall ranged from 2 to 5 CPM. The number of measurements required to be statistically accurate was about the same as the actual number of measurements taken. The background was verified each day the survey occurred.

Background readings were made prior to use of laboratory equipment. These measurements were used to determine the MDA for the several isotopes.

WIPE TESTS

Because of the nature of the RAM stored in Building 319, the possibility of finding loose contamination was small. Nevertheless, wipe tests of the facilities were taken to determine if any residual contamination was present. Eighty two wipe tests were taken on the floor and walls. These wipe tests were counted in a scaler capable of measuring both alpha and medium energy beta radiation.

ACCEPTANCE CRITERIA

The current standards for unrestricted use are contained in Appendix A, reference 3. These standards formed the basis for the acceptance criteria used by DDC in the evaluation of Building 319.

The acceptance criteria are detailed in the table below:

Table 1: Acceptance Criteria

Radionuclide	Exposure Rate (mRem/Hr) ³	Ave. Gross Contamination ¹	Max. Gross Contamination ²	Removable ¹
U-nat, U-235, u-238, and associated decay products	N/A	5,000 DPM α /100 cm ²	15,000 DPM α /100 cm ²	1,000 DPM α /100 cm ²
Transuranic, Ra-226, Ra-228, Th-230, Pa-231, Ac-227, I-125, I-129	N/A	100 DPM/100 cm ²	300 DPM/100 cm ²	20 DPM/100 cm ²
Th-nat, Th-232, Sr-90, Ra-223, Ra-224, U-232, I-126, I-131, I-133	N/A	1,000 DPM/100 cm ²	3,000 DPM/100 cm ²	200 DPM/100 cm ²
Beta-gamma emitters except Sr-90 and other noted above	0.005 mrem/hr	5,000 DPM/100 cm ²	15,000 DPM/100 cm ²	1,000 DPM/100 cm ²

¹ As used in this table, dpm (disintegrations per minute) means the rate of emission by radioactive material as determined by correcting the counts per minute observed by an appropriate detector for background, efficiency, and geometric factors associated with the instrumentation.

² The maximum contamination level applies to an area of not more than 100 cm².

³ The exposure rate criteria of 0.005 mrem/hr (5.0 μ R/hr) was obtained from a Nuclear Regulatory Commission internal memo dated October 29, 1986, from S. Block, Health Physicist, Region V to Peter Erickson, Special and Standardization Project, NRR, subject: Conversion of Regulatory Guide 1.86 Surface Contamination Limits Into Exposure Rate For Release For Unrestricted Use.

SURVEY DATA ANALYSIS

Data obtained for Building 319, Bay 6 are provided in Appendix D.

Regarding the direct measurement for alpha contamination in Bay 6 of Building 319, all measurements were well below the guideline value, i.e., 1,000 dpm/100 cm². All but one reading were at least a factor of 10 below the acceptance criteria. All individual readings were at least a factor of 10 below the maximum allowable limit, i.e., 3,000 dpm/100 cm².

The readings obtained during this characterization study patterned the original data obtained for the Environmental Baseline Study. The areas where there were slightly elevated alpha readings continued to show readings at the same level and areas where no elevated alpha readings occurred were reconfirmed as not having readings above background. One area that had a slightly elevated alpha reading was sanded and resurveyed. The results, tabulated in Appendix D, show that the

readings taken before and after sanding were essentially unchanged. Two wall chips were sent to an independent laboratory for alpha/beta measurement and a gamma spectrum analysis. The laboratory confirmed the slightly elevated alpha reading on the South wall chip but no alpha reading on the West wall chip. A similar slightly elevated reading was measured for beta radiation. The gamma spectrum analysis did not reveal any peaks for thorium-230 or thorium-232 by analyzing for bismuth-214 and actinium-228, respectively. The data indicate that no significant, if any, fixed contamination was present from the storage of gas lantern mantles. The alpha readings were a result of natural background radioactivity in the concrete.

Regarding the direct measurement for beta contamination in the facility, only one average reading taken at the North Interior Wall, location NE1, slightly exceeded the guideline value for Th-232. This reading, 5 % over the limit, was attributed to the closeness of the guideline value to the statistical variation of background radiation. All individual readings were well below the maximum guideline value for Th-232, i.e., 3,000 dpm/100 cm². The data indicate that no significant, if any, fixed contamination was present from beta emitting radioisotopes or Th-232.

Regarding the direct measurement for gamma contamination in the facility, the highest net value at any location was 4 uRem/hr, which is less than the acceptance criteria, i.e., 5 uRem/hr. The data indicate that no significant, if any, fixed contamination was present that emits gamma radiation.

Regarding the removable net alpha contamination measurements in the facility, all readings were well below the acceptance criteria for natural thorium, i.e., 200 dpm/ 100 cm². The removable net beta contamination measurements were also well below the acceptance criteria. The data indicate that no significant removable contamination was present.

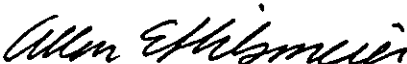
CONCLUSION

The data indicate that Building 319, Bay 6, had several wall locations that had slightly elevated alpha radiation readings. These readings are attributed to the natural radioactivity found in building materials and is consistent with soil levels in the area. Regardless, the readings were well below the guideline values for unrestricted release of a facility. There is no internal or external radiation hazard in the facility. The data indicate that Building 319 can be released for unrestricted use.


RECOMMENDATION

It is recommended that Building 319, Bay 6, be released for unrestricted use.

Submitted by:


ALLEN E. HILSMEIER
DDC Health Physicist

Approved:


PAUL OKUM
Director of Administration

APPENDIX A***REFERENCES***

1. NUREG/CR - 5849, Manual for Conducting Radiological Surveys in Support of License Termination, June 1992 (Draft).
2. NUREG - 1500, Working Draft Regulatory Guide on Release Criteria for Decommissioning: NRC Staff's Draft for Comment, August 1994.
3. Guidelines for Decontamination of Facilities and Equipment Prior to Release for Unrestricted Use or Termination of Licenses for Byproduct, Source or Special Nuclear Material, USNRC, April 1993.
4. DDRE Environmental Baseline Study, Radiological Survey for Defense Distribution Depot, Memphis, August 5-9, 1996.
5. Report, Radiation Protection Study No. 27-43-0163-89,.....Defense Depot Memphis, Tennessee, 9-10 May 1988, U.S. Army Environmental Hygiene Agency, 27 February 1989.
6. NRC Approves Maximum Permissible Radiation Levels for License Termination, Document No 97-083, May 21, 1997.
7. Lauder and Solomon, Background Radiation Report N.Y.O.-4712, US Atomic Energy Commission, Washington, D C., 1956.

APPENDIX B***ABBREVIATIONS***

cm ²	square centimeters
CPM	counts per minute
DDMT	Defense Distribution Depot Memphis, Tennessee
DDC	Defense Distribution Center
DDRE	Defense Distribution Region East
DLA	Defense Logistics Agency
dpm	disintegrations per minute
dpm/ 100 cm ²	disintegrations per minute per 100 square centimeters
MDA	Minimum Detectable Activity
mRem/hr	millirem per hour
NRC	Nuclear Regulatory Commission
NUREG	Nuclear Regulatory Commission Regulation
RAM	radioactive material
RPO	Radiation Protection Officer
Th-232	Thorium-232

APPENDIX C
BACKGROUND MEASUREMENTS

DDMT RADIOLOGICAL SURVEY BACKGROUND DATA

Alpha-Beta Survey Meter: Ludlum Model 2224, Serial No. 125598 with
Detector Model 43-89, Serial No. 134011
Calibrated: January 22, 1997

Gamma Survey Meter: Ludlum Model 19, Serial No. 104568
Calibrated: January 22, 1997

LOCATION (Floor)	ALPHA CP8SEC	ALPHA CPM	BETA CPM	GAMMA-UREM/HR SURFACE	1 M
Building 319	0	0	280	6	5
Bay 5	0	0	280	6	6
	0	0	300	6	6
	0	0	280	7	6
	1	8	300	6	5
	0	0	280	6	5
	1	8	300	6	5
	0	0	300	6	5
	1	8	350	6	5
	0	0	320	6	5
	0	0	300	6	8
	0	0	300	7	7
	0	0	250	7	8
	0	0	320	7	7
	0	0	260	6	7
	0	0	240	6	7
	1	8	280	7	8
	1	8	280	7	7
	0	0	320	8	7
	1	8	300	7	7
	0	0	300	7	7
	1	8	300	6	6
	0	0	320	6	8
	0	0	250	7	8
	0	0	260	6	7
	0	0	280	7	7
	0	0	280		
	0	0	300		
	1	8	280		
	0	0	300		

Alpha \bar{X} = 2 CPM = 2 CPM/0.18 Efficiency
= 11 dpm/100 cm² < 10% Guideline Value (1,000 dpm/100 cm²)

$$\begin{aligned}\text{Beta } \bar{X} &= 290 \text{ CPM} = 290 \text{ CPM}/0.14 \text{ Efficiency} \\ &= 2071 \text{ dpm}/100 \text{ cm}^2 > \text{Guideline Value (1,000 dpm}/100 \text{ cm}^2)\end{aligned}$$

$$S_x = 24$$

$$\begin{aligned}N_b &= [1.699 \times 24 / 0.2 \times 290]^2 \\ &= 0.5 < 30 \text{ readings, therefore, 30 readings are sufficient}\end{aligned}$$

Gamma

$$\text{Surface } \bar{X} = 6 \text{ uRem/hr}$$

$$1 \text{ M } \bar{X} = 6 \text{ uRem/hr}$$

DDMT RADIOLOGICAL SURVEY BACKGROUND DATA

Alpha-Beta Survey Meter: Ludlum Model 2224, Serial No. 125598 with
Detector Model 43-89, Serial No. 134011
Calibrated: January 22, 1997

Gamma Survey Meter: Ludlum Model 19, Serial No. 104568
Calibrated: January 22, 1997

LOCATION (Precast Concrete)	ALPHA CPM	BETA CPM	GAMMA-UREM/HR	
			SURFACE	1 M
Building 319	2	229	6	6
Inner South Wall	5	193	5	6
Bay 4	3	224	5	6
	2	243	6	5
	2	201	5	6
	5	227	6	6
	5	220	5	6
	3	208	5	6
	2	217	6	6
	3	226	5	5
Outer South Wall	3	300		
Bay 6				
Outer West Wall	12			
Bay 6	5			
	8			
	13			
	10			
	10			
	11			
	10			
	11			

Alpha \bar{X} = 6.25 CPM = 6.25 CPM/0.18 Efficiency
= 35 dpm/100 cm² < 10% Guideline Value (1,000 dpm/100 cm²)

Beta \bar{X} = 226 CPM = 226 CPM/0.14 Efficiency
= 1614 dpm/100 cm² > Guideline Value (1,000 dpm/100 cm²)

$$S_x = 28.2$$

$$N_b = [1.812 \times 28.2 / 0.2 \times 226]^2$$

$$= 1.3 < 11 \text{ readings, therefore, 11 readings are sufficient}$$

Gamma

$$\text{Surface } \bar{X} = 5 \text{ uRem/hr}$$

$$1 \text{ M } \bar{X} = 6 \text{ uRem/hr}$$

DDMT RADIOLOGICAL SURVEY BACKGROUND DATA

Alpha-Beta Survey Meter: Ludlum Model 2224, Serial No. 125598 with
Detector Model 43-89, Serial No. 134011
Calibrated: January 22, 1997

Gamma Survey Meter: Ludlum Model 19, Serial No. 104568
Calibrated: January 22, 1997

LOCATION (Concrete Block)	ALPHA CP8SEC	ALPHA CPM	BETA CPM	GAMMA-UREM/HR SURFACE	1 M
Building 319	0	0	220	6	6
Bay 5	0	0	220	5	6
Interior Wall	1	8	220	6	6
	0	0	210	6	5
	0	0	220	5	6
	1	8	220	6	6
	0	0	230	6	5
	0	0	230	5	5
	0	0	250	5	6
	1	8	260	5	6

Alpha \bar{X} = 2.3 CPM = 2.3 CPM/0.18 Efficiency
= 13 dpm/100 cm² < 10% Guideline Value (1,000 dpm/100 cm²)

Beta \bar{X} = 228 CPM = 228 CPM/0.14 Efficiency
= 1628 dpm/100 cm² > Guideline Value (1,000 dpm/100 cm²)

$$S_x = 15.7$$

$$N_b = [1.833 \times 15.7 / 0.2 \times 228]^2$$

= 0.4 < 10 readings, therefore, 10 readings are sufficient

Gamma

Surface \bar{X} = 6 uRem/hr

1 M \bar{X} = 6 uRem/hr

DDMT RADIOLOGICAL SURVEY BACKGROUND DATA

Alpha-Beta Survey Meter: Ludlum Model 2224, Serial No. 125598 with
Detector Model 43-89, Serial No. 134011
Calibrated: January 22, 1997

Gamma Survey Meter: Ludlum Model 19, Serial No. 104568
Calibrated: January 22, 1997

LOCATION (Tile)	ALPHA CP8SEC	ALPHA CPM	BETA CPM	GAMMA-UREM/HR SURFACE	1 M
Building 319	0	0	500	13	10
Bay 4	0	0	500	12	9
	1	8	400	13	9
	0	0	500	13	9
	0	0	600	12	9
	1	8	500	12	10
	0	0	600	12	10
	1	8	600	13	10
	0	0	500	12	10
	0	0	500	12	10
	0	0	400	12	9
	1	8	600	12	9
	1	8	500	13	10
	1	8	500	12	10
	0	0	600	12	9
	0	0	500	12	10
	1	8	600	12	
	1	8	500	12	
	0	0	600	13	
	1	8	500	12	
	1	8	500		

Alpha $\bar{X} = 3.8 \text{ CPM} = 3.8 \text{ CPM}/0.18 \text{ Efficiency}$
 $= 21 \text{ dpm}/100 \text{ cm}^2 < 10\% \text{ Guideline Value } (1,000 \text{ dpm}/100 \text{ cm}^2)$

Beta $\bar{X} = 524 \text{ CPM} = 524 \text{ CPM}/0.14 \text{ Efficiency}$
 $= 3745 \text{ dpm}/100 \text{ cm}^2 > \text{Guideline Value } (1,000 \text{ dpm}/100 \text{ cm}^2)$

$$S_x = 62.5$$

$$N_0 = [1.725 \times 62.5 / 0.2 \times 524]^2$$

$= 1 < 21 \text{ readings, therefore, 21 readings are sufficient}$

Gamma

Surface $\bar{X} = 12 \text{ uRem/hr}$

1 M $\bar{X} = 10 \text{ uRem/hr}$

APPENDIX D
SURVEY RESULTS

DEFENSE DISTRIBUTION DEPOT MEMPHIS, TN
Building 319, Bay 6
Floor

	Direct Measurement												Removable				
Loc	Gross Alpha						Gross Beta						Gross Gamma	Alpha	Beta		
	(dpm/100 · cm ²)						(dpm/100 cm ²)						(uRem/hr)	(dpm/100 cm ²)		Ident	
	TL	TR	C	BL	BR	AVG	TL	TR	C	BL	BR	AVG	Scan	1 M	Gross		
A3	0	0	0	0	44	9	1790	1790	1790	1790	1790	1790	5	6	0	446	F1
A7	0	0	0	44	0	9	1430	1790	1860	2000	1860	1788	5	6	0	412	F2
B2	0	0	0	0	0	0	1790	1790	2000	1790	1790	1832	6	6	0	425	F3
B5	0	44	0	0	44	18	1710	1570	1570	1790	1710	1670	6	6	3	390	F4
C4	0	0	44	0	0	9	2140	1860	2000	2140	1860	2000	6	6	0	374	F5
D3	44	0	0	0	0	9	1570	1790	1790	1860	1860	1774	6	6	3	450	F6
D4	0	0	0	44	0	9	1570	2000	1710	1860	1790	1786	5	6	0	409	F7
D8	0	0	0	0	0	0	1860	2140	1790	1860	1860	1902	6	7	0	469	F8
D10	44	0	0	0	0	9	1710	2000	2000	1710	1790	1842	6	6	0	440	F27
E2	0	0	0	0	0	0	1710	1860	1710	1710	1570	1712	6	7	0	377	F9
F6	0	0	44	0	0	9	1710	1570	1570	1790	1570	1642	6	6	3	440	F10
F13	0	0	0	0	0	0	1710	1790	1710	1710	1570	1698	6	6	0	402	F28
G1	44	0	0	0	44	18	1860	1570	2000	2140	1860	1886	9*	9*	0	491	F11
H7	0	0	0	0	0	0	1790	2000	1570	1860	1790	1802	7	7	0	475	F12
I2	0	0	0	0	0	0	1570	2140	1710	1710	1860	1798	8*	8*	3	443	F13
I5	0	0	0	0	0	0	2000	1790	1790	1710	1790	1816	6	8	3	428	F14
J3	44	0	0	0	0	9	1860	1860	2000	1790	1860	1874	9	9	0	472	F15
J10	0	0	0	0	0	0	1790	1710	1860	1790	1710	1772	6	7	3	437	F29
K7	0	44	0	0	0	9	2000	2140	2140	1790	1790	1972	7	8	0	516	F16
L1	0	44	44	0	0	18	2140	2140	2140	2430	2140	2198	10*	12*	0	497	F17
L8	0	0	0	0	0	0	2140	1790	1570	1790	1790	1816	8	8	0	381	F18
L9	44	0	0	0	0	9	1710	1430	1790	2140	1790	1772	6	6	0	415	F26
M4	0	0	0	0	0	0	2140	2000	2290	2290	2140	2172	7	7	0	418	F19
N2	0	44	0	0	44	18	2140	1790	2140	2000	2000	2014	9	9	0	453	F20
N7	0	44	0	0	0	9	1790	2140	2290	1860	1790	1974	6	7	3	465	F21
N11	0	0	0	0	0	0	1790	1790	1710	1790	1710	1758	8	8	3	340	F30
O2	0	0	0	0	0	0	1710	2140	2140	1860	2000	1970	9	10	3	465	F22
O12	0	0	0	0	0	0	1860	2000	1790	1860	2000	1902	7	7			
P3	0	44	0	0	0	9	2290	1860	2290	2290	1790	2104	8	8	0	409	F23
Q4	0	0	0	0	0	0	2290	1860	1790	2000	2140	2016	7	8	3	415	F24
R6	44	44	0	0	44	26	1790	1860	2000	2000	2000	1930	6	7	0	381	F25

Direct Measurement Background:

Alpha 11 dpm/100 cm² (2 cpm)
Beta 2,070 dpm/100 cm² (290 cpm)
Gamma 6 uRem/hr Surface Scan
6 uRem/hr at 1 meter

Removable Background:

Alpha 1 dpm/100 cm² (0.35 cpm)
Beta 434 dpm/100 cm² (138 cpm)

TL Top Left
TR Top Right
C Center
BL Bottom Left
BR Bottom Right
AVG Average

* Measurement near tile wall

DEFENSE DISTRIBUTION DEPOT MEMPHIS, TN
Building 319, Bay 6
West Interior Wall

[illegible]

DEFENSE DISTRIBUTION DEPOT MEMPHIS, TN
Building 319, Bay 6
Center Wall

	Direct Measurement														Removable		
Loc	Gross Alpha						Gross Beta						Gross Gamma		Alpha	Beta	
	(dpm/100 cm ²)						(dpm/100 cm ²)						(uRem/hr)		(dpm/100 cm ²)		Ident
	TL	TR	C	BL	BR	AVG	TL	TR	C	BL	BR	AVG	Scan	1 M	Gross		
IW1	17	11	22	17	6	15	2145	2860	2145	2500	2500	2430	9	8	1.5	588	10
IW2	0	28	11	0	28	13	2860	2145	2500	2500	2500	2501	8	8	0	615	11
IW3	17	17	11	33	28	21	3215	2500	2860	2145	2145	2573	9	7	0	487	12
IW4	22	33	6	6	11	16	2145	2860	2500	2145	2500	2430	9	8	0	458	13

Direct Measurement Background:

Alpha 13 dpm/100 cm² (2.3 cpm)

Beta 1630 dpm/100 cm² (228 cpm)

Gamma 6 uRem/hr Surface Scan

6 uRem/hr at 1 Meter

TL Top Left

TR Top Right

C Center

BL Bottom Left

BR Bottom Right

AVG Average

Removable Background:

Alpha 1 dpm/100 cm² (0.35cpm)

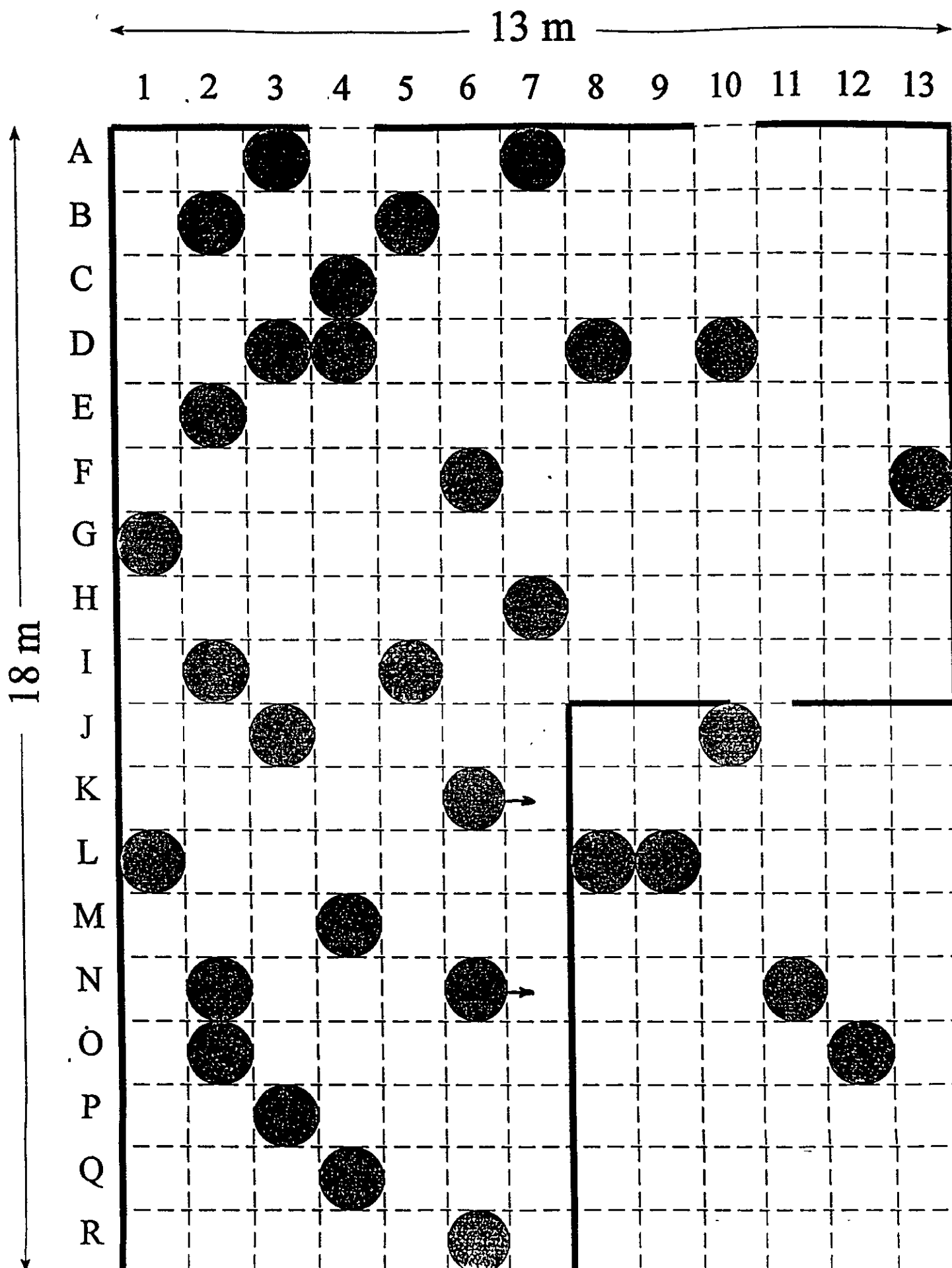
Beta 434 dpm/100 cm² (138 cpm)

376 276

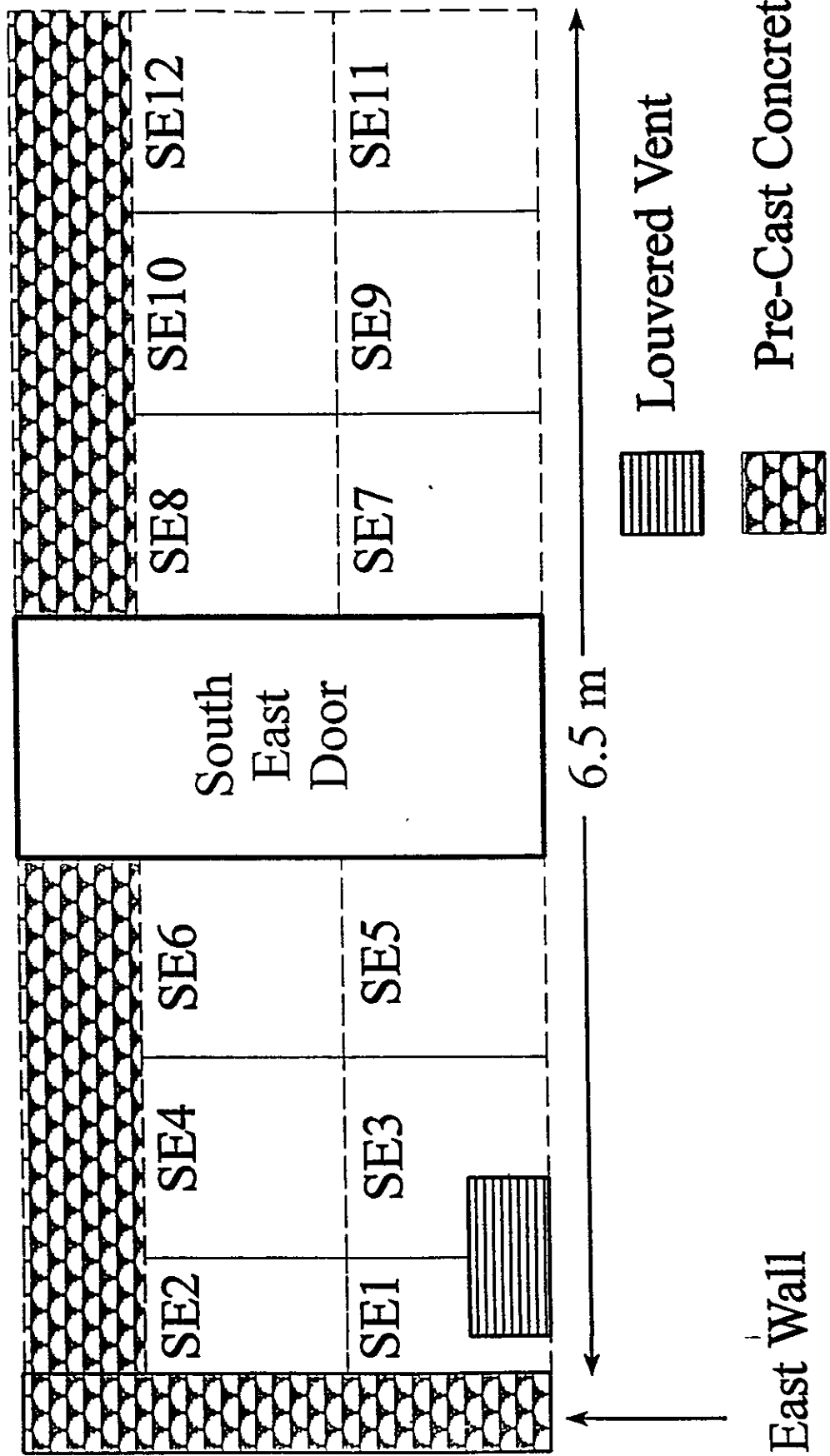
DEFENSE DISTRIBUTION DEPOT MEMPHIS, TN
Building 319, Bay 6
South Interior Wall

[illegible]

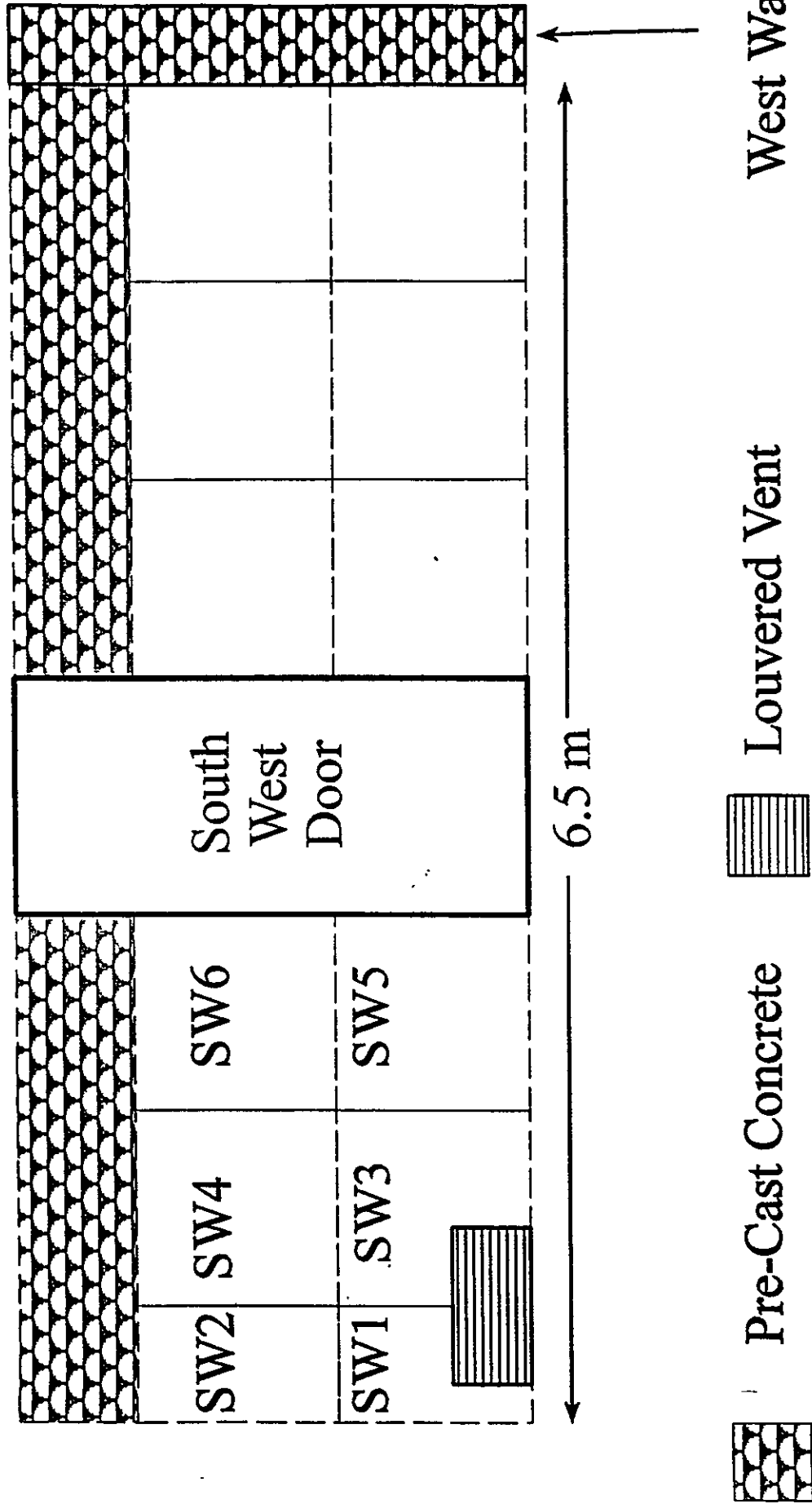
APPENDIX E
SURVEY LOCATIONS



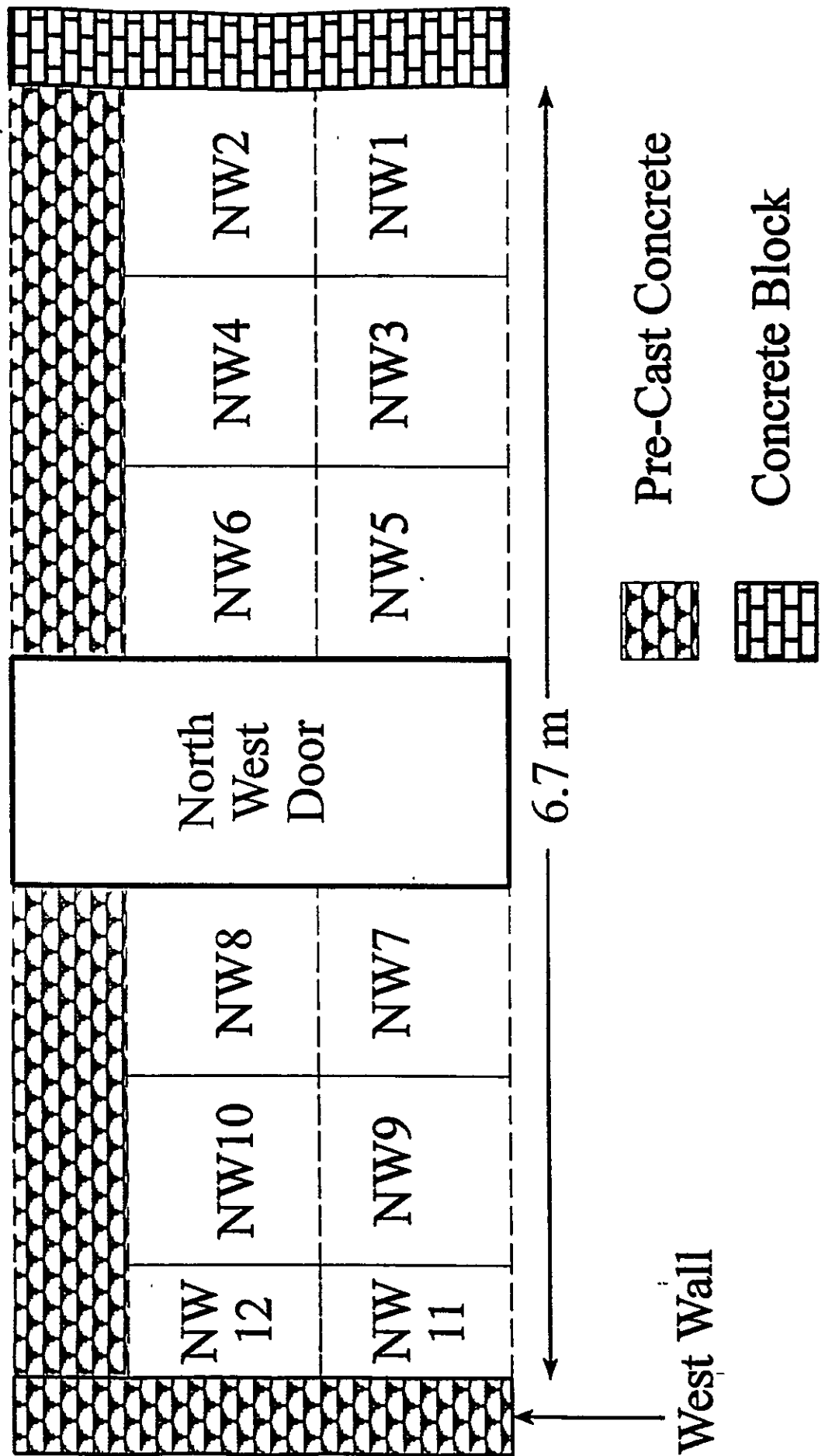
South Wall East Side



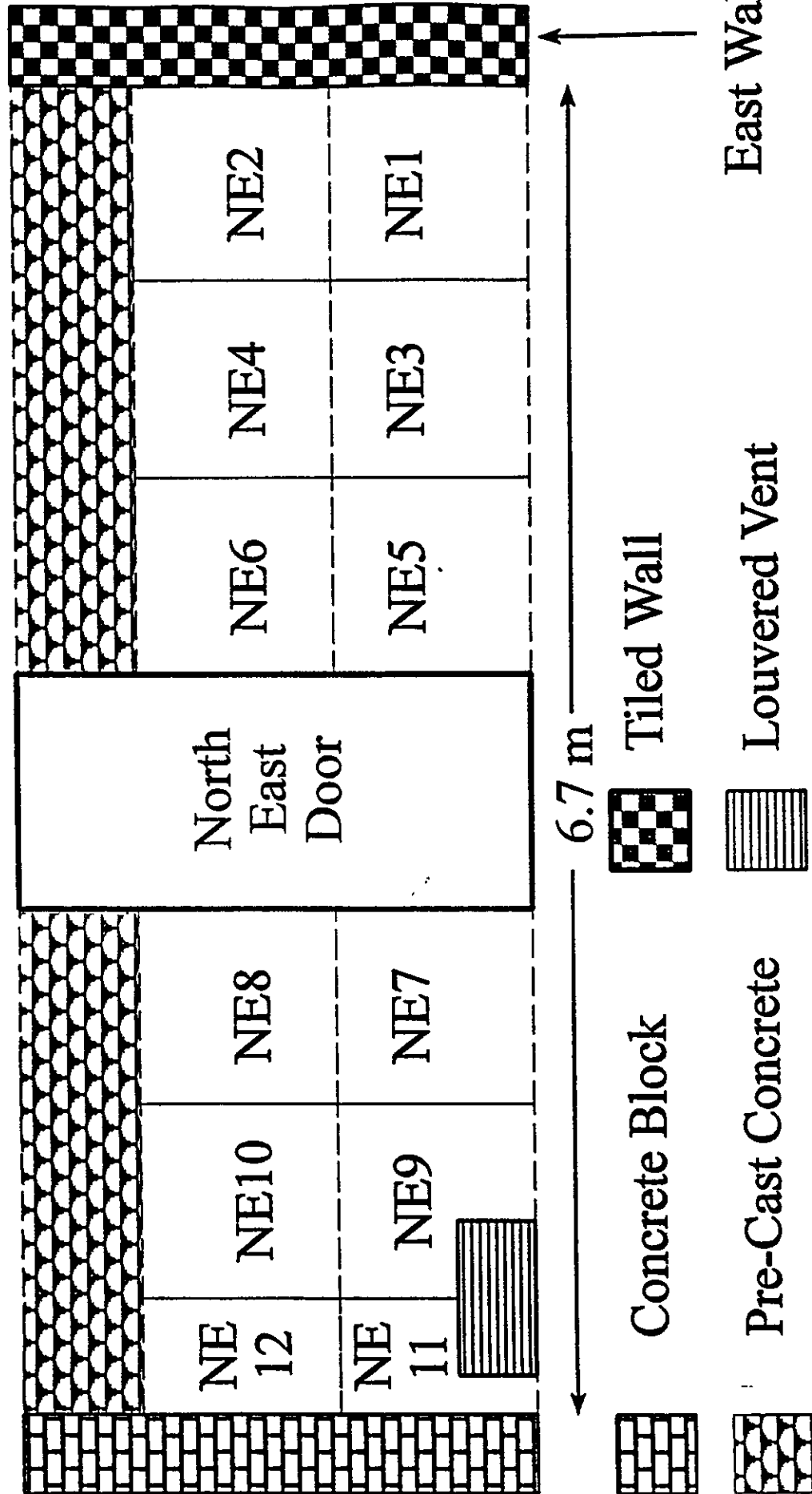
South Wall West Side



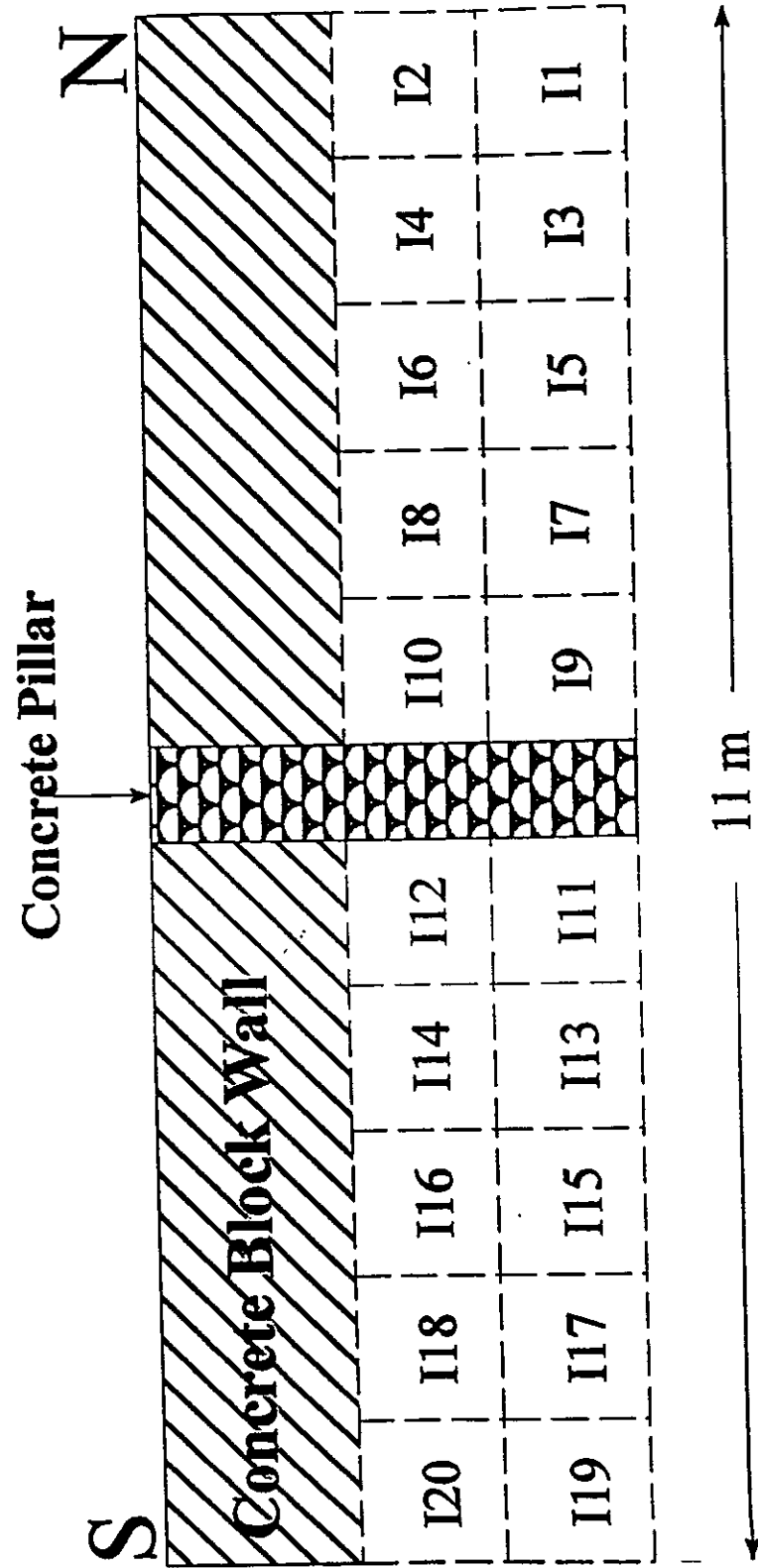
North Wall West Side



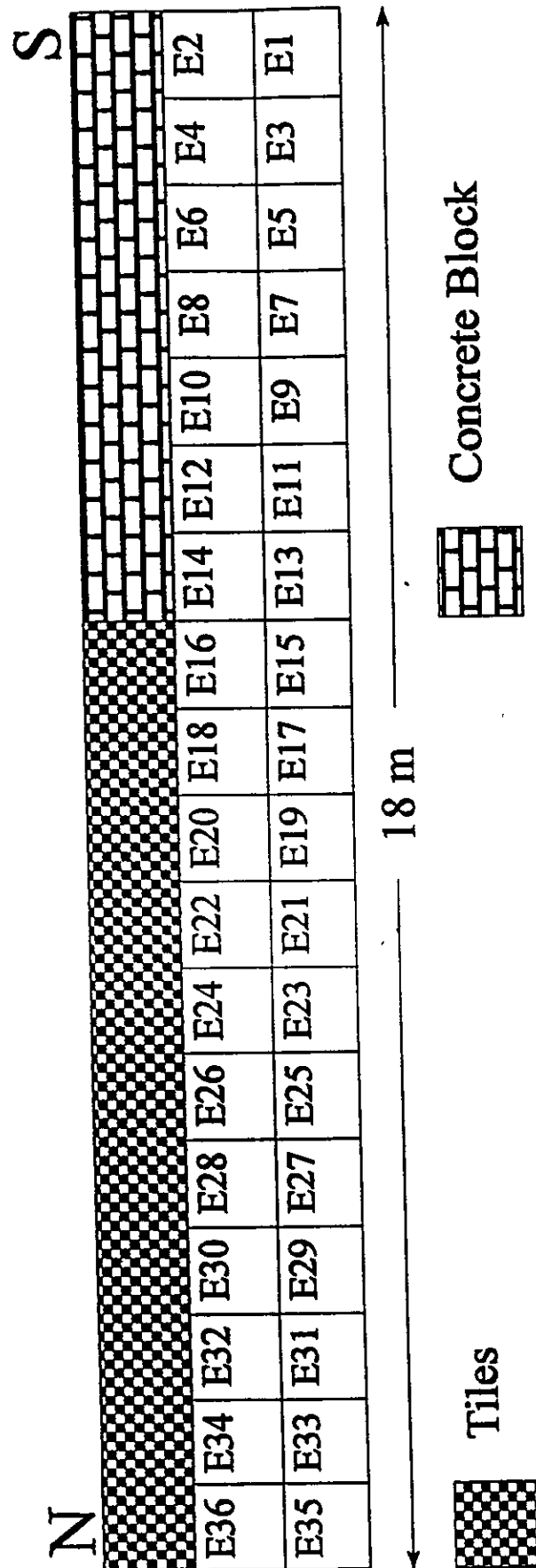
North Wall East Side



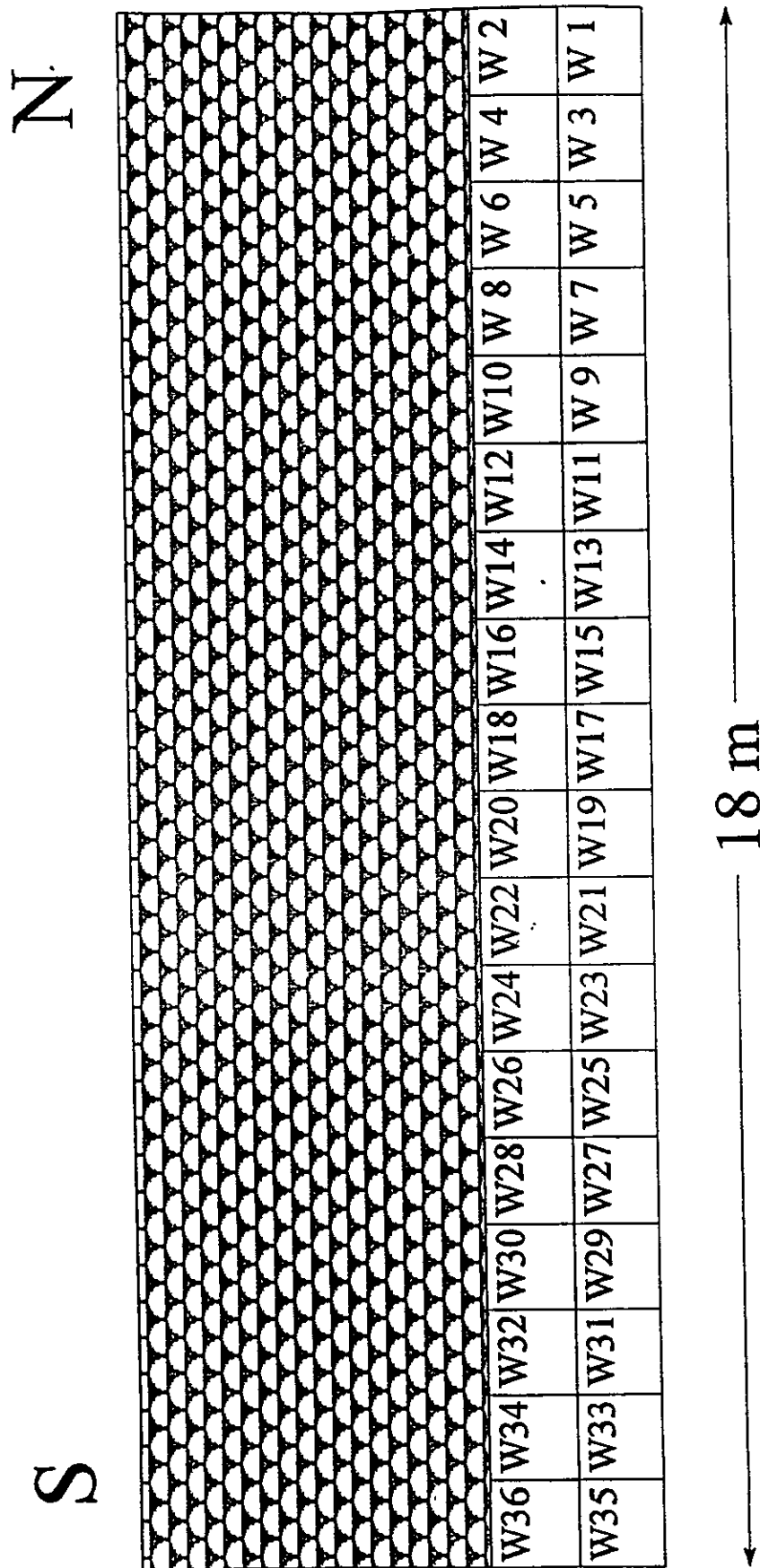
Center Interior Wall



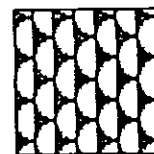
East Interior Wall



Interior of West Wall



Pre-Cast Concrete



**FINDING OF SUITABILITY (FOSL)
TO LEASE**

DEFENSE DISTRIBUTION DEPOT MEMPHIS

NOVEMBER 1996
REVISED APRIL 1997

ENVIRONMENTAL PROTECTION AND SAFETY OFFICE
DEFENSE DISTRIBUTION DEPOT MEMPHIS

**FINDING OF SUITABILITY TO LEASE
(FOSL)
DEFENSE DISTRIBUTION DEPOT MEMPHIS**

APRIL 1997

1. INTRODUCTION

In my capacity as Deputy Assistant Secretary of the Army for Environment, Safety, and Occupational Health, I have determined that certain parcels consisting of 48 buildings at Defense Distribution Depot Memphis, Tennessee (DDMT) are suitable for lease to the Memphis Redevelopment Agency (MDRA). This property is suitable for lease for like use without posing a threat to human health and the environment. The purpose of this Finding Of Suitability To Lease (FOSL) is to document environmentally-related findings for the proposed lease property and present use restrictions as specified in the attached environmental protection provisions.

2. PROPERTY DESCRIPTION

A site map of the proposed lease buildings is at enclosure 1. Information regarding each building addressed in this FOSL is included in Table 1, enclosure 2..

3. REGULATORY COORDINATION

The Tennessee Department of Environment and Conservation (TDEC) and the U.S. Environmental Protection Agency (EPA) Region IV were notified of the initiation of the FOSL. Regulatory comments received during the FOSL development were reviewed and incorporated into the document at enclosure 3. All comments received from TDEC and the EPA during review were resolved and incorporated into the FOSL.

4. EXISTING ORDERS/AGREEMENTS

On October 14, 1992, the EPA placed DDMT on the National Priority List (NPL) for environmental restoration. DDMT has since entered into a Federal Facilities Agreement (FFA) with the TDEC and the EPA. The FFA established regulatory coordination procedures and a schedule for environmental investigation and restoration activities.

5. NATIONAL ENVIRONMENTAL POLICY ACT (NEPA) COMPLIANCE

The environmental impacts associated with leasing the subject facilities have been adequately analyzed in accordance with the National Environmental Policy Act (NEPA). The results of this analysis have been documented in the Final Environmental Assessment for Master Interim Lease, Defense Distribution Depot Memphis, Tennessee, dated September 1996.

The proposed use of this property is consistent with the Defense Distribution Depot Memphis Reuse Plan. The environmental effects of the reuse activities anticipated under the proposed lease were determined to not be significant. The proposed lease will not have an adverse effect on human health and the environment.

6. ENVIRONMENTAL BASELINE SURVEY FINDINGS

A determination of the environmental condition of the facilities has been made in the form of a Community Environmental Response Facilitation Act (CERFA) evaluation, and Environmental Baseline Survey (EBS), dated September 1996. The information provided is a result of a complete search of agency files during the development of the EBS. The EBS documents the environmental condition of the property being offered for lease with regard to the storage, release, or disposal of hazardous substances and petroleum products.

6.1 Environmental Condition of Property Categories

The property addressed by this FOSL, is classified as Department of Defense (DoD) Environmental Condition of Property (ECP) Categories 1, 2, 3, and 4. The facilities are listed according to the appropriate ECP Categories.

Category 1¹: Areas where storage, release, or disposal of hazardous substances or petroleum has occurred (including no migration of these substances from adjacent areas).

Category 2¹: Areas where only storage of petroleum products has occurred, but no release, disposal, or migration has occurred.

Category 3: Areas where release, disposal, and/or migration of hazardous substances has occurred; and at concentrations that do not require a removal or remedial response.

Category 4: Areas where release disposal and/or migration of hazardous substances has occurred; and all removal or remedial actions to protect human health and the environment have been taken.

The EBS determined that the following 38 facilities are considered to be ECP Category 1: 1, 2, 7, 8, 9, 15, 22, 23, 24, 25, 129, 139, 144, 145, 155, 176, 178, 179, 181, 183, 184, 193, 195, 196, 198, 252, 270, 271, 360, 459, 727, 754, 755, 756, 787, 795, T860, S995.

6.2 Hazardous Substances

The EBS determined that 11 of the buildings being offered for lease contain areas considered as ECP Categories 2, 3, and 4. There is evidence that hazardous substances or petroleum products were stored and released at 12 areas within or outside buildings: 210, 470, 489, 490, 560, 670, 685, 689, 690, 753, and 756. Releases were the result of spills inside the buildings, except building 756 which had a fuel tank outside. The releases were remediated in accordance with federal, state, and local regulations. Although hazardous substances were stored or released in the subject facilities, these facilities can be leased without risk to human health or the environment and without interference to the environmental restoration process. Notification of hazardous substance and petroleum product storage, release, or disposal on the property shall be provided in the lease documents as required by DoD FOSL Guidance, and is at Table 2, enclosure 4.

¹ Changes in the FY97 Appropriations Act have since changed the definitions of Categories 1 and 2 to allow the inclusion of former hazardous substance and petroleum product storage areas.

6.3 Asbestos

Asbestos surveys indicate asbestos containing materials are present in all of the buildings proposed for lease with the exception of Buildings 24, 25, 193, 360, and 560. The buildings meet all local, state, and federal regulations for asbestos and do not pose a threat to human health or the environment. The lease will include the asbestos warning and covenant included in the Environmental Protection Provisions of this FOSL.

6.4 Lead-Based Paint (LBP)

Based on their age (construction prior to 1978), all of the buildings proposed for lease are assumed to contain lead-based paint with the exception of Buildings 360 and 560. The lease will include the lead-based paint warning and covenant included in the Environmental Protection Provisions of this FOSL.


6.5 Unexploded Ordnance

None of the buildings or surrounding land proposed for lease are known to have unexploded ordnance present.

7. FINDING OF SUITABILITY TO LEASE

On the basis of the above results from the site-specific EBS and subsequent investigations, certain terms, conditions, reservations, restrictions, and notifications are required for the proposed lease. Environmental Protection Provisions are at enclosure 5 and will be included in all lease documents. The subject property may be used by the Lessee pursuant to the terms and conditions specified in the lease, including the use restrictions detailed in the enclosed Environmental Protection Provisions, without posing a threat to human health and the environment or interference with environmental remediation efforts. Notifications of hazardous substance storage, release, and disposal on the property shall be provided in the lease documents, as required under DoD FOSL Guidance.

Based on the information detailed in the EBS and references cited therein, I have concluded that all Department of Defense requirements to reach a Finding of Suitability to Lease have been fully met for the subject properties.


Raymond J. Fatz
Deputy Assistant Secretary of the Army
(Environment, Safety, and Occupational Health)
OASA(I,L&E)

4 Enclosures

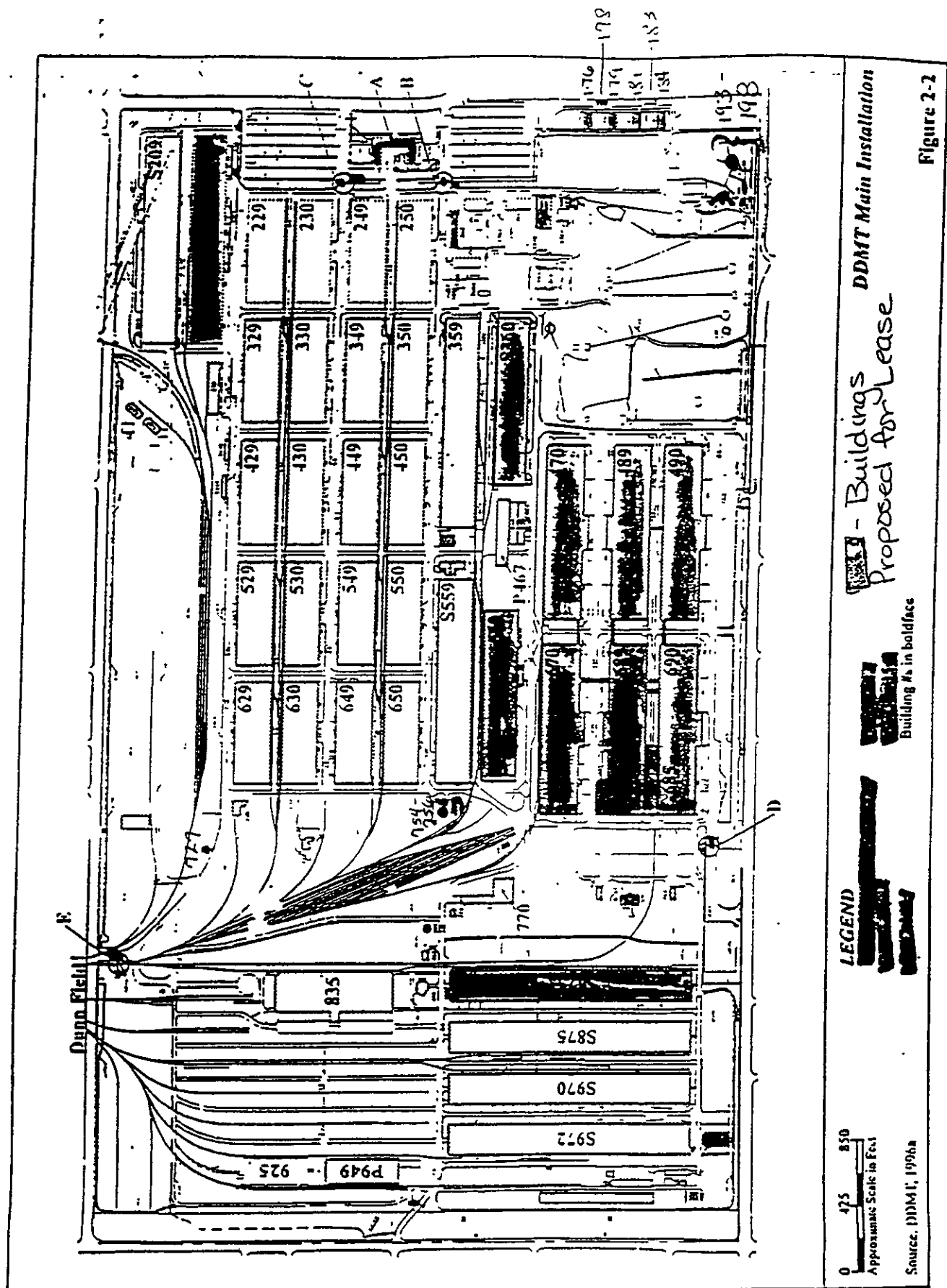


TABLE 1

Gate 1	Sentry Station Gate #1	1	Sentry Post	Sentry Post	1959	280
Gate 2	Sentry Station Gate #2	1	Sentry Post	Sentry Post	1958	280
Gate 7	Sentry Station Gate #7	23	Sentry Post	Sentry Post	Unknown	67
Gate 8	Sentry Station Gate #8	23	Sentry Post	Sentry Post	1969	675
Gate 9	Sentry Station Gate #9	29	Sentry Post	Sentry Post	1946	420
Gate 15	Sentry Station Gate #15	15	Sentry Post	Sentry Post	1979	196
Gate 22	Sentry Station Gate #22	14	Sentry Post	Sentry Post	1942	67
Gate 23	Sentry Station Gate #23	13	Sentry Post	Sentry Post	1942	67
Gate 24	Sentry Station Gate #24	13	Sentry Post	Sentry Post	1961	100
Gate 25	Sentry Station Gate #25	13	Sentry Post	Sentry Post	1961	100
Building 129	Waiting Shelter	1	Shelter	Shelter	1980	75
Building 139	Waiting Shelter	1	Shelter	Shelter	1959	144
Building 144	Depot Headquarters Building	1	Administration	Administration	1942	13500
Building S145	Security Building	1	Pass and Identification	Security	1943	860
Building 155	Waiting Shelter	1	Shelter	Shelter	1960	144
Building 176	Military Family Housing (MFH)	2	Residential	Residential	1948	4787
Building S178	Detached Garage-Family Housing	2	Automobile parking, maintenance	Automobile parking, maintenance	1948	1440
Building 179	Military Family Housing (MFH)	2	Residential	Residential	1948	4835
Building 181	Military Family Housing (MFH)	2	Residential	Residential	1948	4835
Building S183	Detached Garage-Family Housing	2	Automobile parking, maintenance	Automobile parking, maintenance	1948	1440
Building 184	Military Family Housing (MFH)	2	Residential	Residential	1948	4739
Building 193	Outdoor Swimming Pool	3	Recreation	Recreation	1948	426
Building S195	Community Club	3	Recreation	Recreation	1949	4254
Building 196	MWR Office/Public Toilet	3	Recreation	Recreation	1952	896
Building S198	Equipment Shed	3	Dry goods	Dry goods	1959	323
Building 210	Admin/Computer Center - General Purpose Warehouse	13	Offices, equipment storage	Offices, storage, small photo lab	1942	240000
Building 252	Physical Fitness Center	4	Recreation	Unknown	1942	8455
Building 270	Facility Installation Services	4	Administration	Maintenance shop	1945	14400
Building S271	Engineer Admin. Building (USACE)	4	Administration	Former Golf Course Club House	1958	1436
Building 360	General Purpose Warehouse	34	Unused	None (new building)	1996	174665
Building P459	Training Facility	17	Classrooms	Parking lot	1990	4000
Building 470	General Purpose Warehouse	20	Equipment/ clothing storage	Equipment/clothing storage	1954	218000
Building 489	General Purpose Warehouse	20	Equipment/ clothing storage	Equipment/clothing storage	1954	218000
Building 490	General Purpose Warehouse	21	Central receiving facility	Microfiche developing, historic dipping of machine parts as preservation	1954	218000
Building 560	General Purpose Warehouse	18	Medical and general supplies	Unknown	1990	174665
Building 670	General Purpose Warehouse	20	Equipment/ clothing storage	Equipment/clothing storage	1953	218000
Building 685	General Purpose Warehouse	21	Vehicle maintenance supplies	Unknown	1985	32000
Building 689	General Purpose Warehouse	21	Material handling equipment and materials awaiting shipment	Hazardous waste, Safety Kleen, unknown wastes	1953	228000
Building 690	General Purpose Warehouse	21	Material handling equipment and materials awaiting shipment	Unknown wastes, vehicle maintenance supplies	1953	218000
Building 727	Sentry Station	33	Vacant	None	1994	280
Building 753	Pump Station	33	Fire extinguisher	Pump station	1956	513

			refilling			
Building 754	Water Storage Tank	33	Water tank	Water tank	Unknown	1963
Building 755	Sewage Pump	33	Sewage pump house	Sewage pump house	1953	237
Building 756	Water Pump	33	Water distribution	Water distribution	Unknown	2400
Building 787	General Purpose Warehouse	23	Recycling warehouse	Steel processing	1988	5038
Building 795	Waiting Shelter	23	Shelter	Shelter	1974	240
Building T860	Admin. General Purpose	33	Administration	Administration	1944	800
Building S995	Transportation - Steel Building	23	Steel storage and handling	Unknown	Unknown	8000

BRAC UNIT

ID:404-562-8518

NOV 12 '96 15:44 No.013 P.02



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 4
ATLANTA FEDERAL CENTER
100 ALABAMA STREET, S.W.
ATLANTA, GEORGIA 30333-3104

November 12, 1996

4WD-FFB

Certified Mail
Return Receipt Requested

Colonel Michael J. Kennedy, Commander
Defense Distribution Depot Memphis
2163 Airways Boulevard
Memphis, Tennessee 38114-5210

SUBJ: Comments on Finding of Suitability for Lease (FOSL)
Defense Distribution Depot Memphis, Tennessee

Dear Col. Kennedy:

The U.S. Environmental Protection Agency (EPA) Region IV has reviewed the above referenced document (see attached comments).

If you have any questions please contact me at 404.562.8552.

Sincerely,

A handwritten signature in dark ink, appearing to read "Dann Spariosu", is written over the typed name.

Dann Spariosu, Ph.D.
Remedial Project Manager

cc: Jordan English, Tennessee Department of Environment & Conservation

BRAC UNIT

ID: A04-562-9512

NOV 12 '96 15:44 No. 013 P.03

ATTACHMENT

I. INTRODUCTION

As per the FOSL provided, DDMT intends to lease buildings numbered 1, 2, 7-9, 15, 22-25, 129, 139, 144, 145, 155, 176, 179, 181, 184, 193, 195, 196, 198, 252, 270, 271, 360, 459, 727, 754-756, 187, 795, T860, 995, 210, 690, 753, 470, 489, 490, 560, 670, 685, 689, S873, 210/2, 690/2, 753/2, 470/2, 489/4, 490/4, 560/4, 670/4, 685/4, 689/4 and 873/4 at Defense Distribution Depot Memphis, Memphis, Tennessee to the Memphis Depot Redevelopment Authority. As required, lease terms are provided together with attendant lease restrictions. This information is decidedly pertinent to EPA's comments, required under CERCLA as amended by CERFA, as well as, DoD guidance.¹ I remain confident, based on the standard language contained herein, that the Defense Logistics Agency will comply with this provision via notification of the EPA upon the execution of a lease.

II. COMMENTS

The FOSL and EBS provided are DRAFT only, therefore, these comments are draft in nature. Further, the FOSL states in substance that "[h]azardous substances were stored on the property for more than one year in Buildings 210/2, 690/2, 753/2, 470/2, 489/4, 490/4, 560/4, 670/4, 685/4, 689/4, 873/4. Further, the FOSL states in substance that the property can be used, pursuant to the proposed lease, and "...will not be adverse to human health and the environment." The required language pursuant to the MOU should say that the property may be used pursuant to the proposed lease without risk to human health or the environment and without interference with the environmental restoration process.

EPA should agree with the statement, once added, since the installation has complied with all the CERFA, CERCLA 120(h)(1) and DoD guidance requirements in arriving at its EBS

¹ CERFA requires that "(i)n the case of real property owned by the United States, on which any hazardous substance or any petroleum product or its derivatives (including aviation fuel and motor fuel) was stored for one year or more, known to have been released, or disposed of, and on which the United States plans to terminate Federal Government operations, the head of the Department, agency, or instrumentality of the United States with jurisdiction over the property shall notify the state in which the property is located of any lease entered into by the United States that will encumber the property beyond the date of termination of operations on the property. Such notification shall be made before entering into the lease and shall include the length of the lease, the name of the person to whom the property is leased, and a description of the uses that will be allowed under the lease of the property and buildings and other structures on the property."

determination,² with respect to buildings numbered 1, 2, 7-9, 15, 22-25, 129, 139, 144, 145, 155, 176, 179, 181, 184, 193, 195, 196, 198, 252, 270, 271, 360, 459, 727, 754-756, 187, 795, T860, 995, 210, 690, 753, 470, 489, 490, 560, 670, 685, 689, S873, since all aforementioned are CERFA category 1, clean parcels. However, with respect to the remaining 11 buildings, EPA should reservedly agree with the statement, since the FOSL does not indicate whether the reuse will be residential, although the installation itself has listed the risks and specific lease restrictions associated with the identified areas of concern.³ Further, the facility has through standard language contained herein, committed itself to provide prospective tenants, as well as the EPA, notice of the results of ongoing investigations, if any.

1. The FOSL should contain a statement as to the review of appropriate local community reuse plans, if such a review has taken place. DoD policy requires that the DoD component Official, review "any appropriate local community reuse plans" prior to signing a FOSL.⁴ Similarly, 32 CFR Parts 90 and 91 yokes the facility with a similar responsibility.

In the instant case, the facility has fully complied with this requirement by the statement: "(t)he property lease proposed by this FOSL is consistent with the Defense Distribution Depot Memphis Reuse Plan."

2. The FOSL, as required, gives notice as to the type of hazardous times of release, but is silent as to quantity. However the facility does indicate via a footnote to table 2, that "{q}uantities stored are not documented."

___Complete notice of all hazardous substances, as identified

² DoD FOSL Guidance requires in § III B. (2a-2i), the following steps in arriving at an EBS:

- a. search of DoD Records (i.e. RFA, RFI).
- b. Review of Federal, state and local government records.
- c. Analysis of aerial photographs.
- d. interviews with current and former employees.
- e. visual inspection of property, noting inter alia, environmental impacts.
- f. Identification of sources of contamination on property and adjoining property.
- g. Ongoing response actions or actions which have been taken at or adjacent to the parcel in question.
- h. Physical inspection of adjacent property.
- i. Sampling.

³ Id. § III C(3) states in pertinent part: "The specific lease restrictions on the use of the parcel to protect human health and the environment and the environmental restoration process will be listed in the FOSL."

⁴ Id. at § III C.

BRAC UNIT

ID:404-562-9518

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in the FOSL and EBS, must be given in the lease/contract. This may be accomplished simply by referring to 40 CFR 373 and then including the facilities Hazardous Material Inventory.

3. Under DoD policy, the FOSL must contain notice of the existence of a Federal Facility Agreement (FFA), Interagency Agreement (IAG), or other regulatory agreement or order for environmental restoration. In the instant case the facility has not identified its NPL listing as an existing order.

4. The 'Environmental Restoration, Defense,' provision in the Department of Defense Appropriations Act of 1993 (H.R. 5504, 102d Cong.) provides that if DoD transfers or leases real property to a state or the political subdivision of a state, the U.S. shall hold harmless, defend and indemnify the State or political subdivision from all claims, demands, losses, damages, liens, liabilities, injuries deaths, penalties, fines, lawsuits and other proceedings, judgements awards and costs and expenses arising out of, or in any manner of any hazardous substance, pollutant or contaminant resulting from DoD activities, including the activities of any lessee, licensee or other person on the property during any time that the property was under DoD control. The FOSL does not indicate the existence of such a provision, but it is a statutory imperative, that the lease agreement include such a provision.

III. CONCLUSION

The FOSL is acceptable as drafted save for its draft status and the fact that they must meet the below delineated criteria in order to comport with DoD guidance and applicable Laws.

—Prior to final submission of comments on the FOSL, final documents must be provided, as well as a copy of the attendant, proposed lease.

—The final lease must provide notice of duration and quantity of hazardous substance released, disposed or stored.

—Listing of the Risks and other specific lease restrictions.

—If the military chooses not to respond to our comments afore-delineated, then EPA should consider characterizing our comments as "...unresolved regulatory comments..." pursuant to DoD policy on FOSLs, and have said comments placed as an attachment to the lease agreement.

—EPA requests executed leases by the lessee to ensure the inclusion of any unresolved regulatory comments and in order to properly augment our records.

BRAC UNIT

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NOV 12'96 15:46 No.013 P.06

-- Finally, DoD should be placed on notice that their failure to comply with the above-delineated CERCLA requirements, may subject the Facility to citizen suits under CERCLA § 310 for "...failure to perform specified, non-discretionary duties.

This is one of the best attempts at a well drafted POSL, to date.



DEFENSE LOGISTICS AGENCY
DEFENSE DISTRIBUTION DEPOT MEMPHIS
2163 AIRWAYS BOULEVARD
MEMPHIS, TENNESSEE 38114-5210



IN REPLY
REFER TO

DDMT-DE

NOV 14 1996

Mr. Dann Spariosu
BRAC Unit
Environmental Protection Agency
100 Alabama Street, S.W.
Atlanta, GA 30303-3104

Dear Mr. Spariosu:

The Defense Distribution Depot Memphis (DDMT) received your comments on the Finding of Suitability to Lease (FOSL). We appreciate your input. Please find attached responses to your comments. Your comments will be included in the ROA package, which includes the FOSL.

For more information contact me at (901) 775-4508.

Sincerely,

DENISE K. COOPER
Environmental Protection Specialist

Attachment

Response to Comments
from EPA Region IV
on Finding of Suitability for Lease (FOSL)
Defense Distribution Depot Memphis, Tennessee (DDMT)

Response to Comment No. I: EPA will be notified of a lease.

Response to Comment No. II: The required language has been added to Section 6.2.

Response to Comment No. II.1: Comment noted.

Response to Comment No. II.2: A list of hazardous substances stored will be provided in the lease.

Response to Comment No. II.3: Reference to the DDMT's NPL listing and the Federal Facility Agreement has been added as Section 4, Existing Orders/Agreements.

Response to Comment No. II.4: The required language has been added as Section 7, Indemnification Clause.

Response to Comment No. III: Final documents will be provided, as well as a copy of the proposed lease. The notice of duration and quantity of hazardous substances, released, disposed, or stored which is contained in the FOSL will be provided with the final lease.

Response



STATE OF TENNESSEE
DEPARTMENT OF ENVIRONMENT AND CONSERVATION
MEMPHIS ENVIRONMENTAL FIELD OFFICE
SUITE E-645, PERIMETER PARK
2510 MT. MORIAH
MEMPHIS, TENNESSEE 38115-1520

Received
NOV 07 1996
DDMT-DE

October 31, 1996

Commander
Defense Distribution Depot Memphis
ATTN: DDMT-DE (Mike Dobbs)
2163 Airways Blvd.
Memphis, Tennessee 38114-5210


RE. Finding of Suitability to Lease, Record of Availability
October 1996. TDEC/DSF #79-736. cc 82

Dear Mr. Dobbs:

The Tennessee Division of Superfund (TDSF) Memphis Field Office (MFO), on behalf of the Tennessee Department of Environment and Conservation, has completed review of the above-referenced documents received in this office by fax at 11:16 on October 25, 1996.

Pursuant to the DSMOA and FFA, TDSF is providing the attached comments. TDSF understands that there may be a revised version of this document that would need our review as well. Should you have any questions or concerns regarding this review please call me at (901) 368-7953.

Sincerely,


Jordan English, Manager
Memphis Field Office
Tennessee Department of Environment & Conservation

c: DSF, NCO - file
DSF, MFO - file
Dann Spariosu
United States Environmental Protection Agency
Waste Management Division
100 Alabama Street, SW
Atlanta, GA 30303

**FINDING OF SUITABILITY TO LEASE
RECORD OF AVAILABILITY
COMMENTS
TDEC/DSF
#79-736**

General Comments

This draft FOSL includes many references to the EA which is in need of revisions. Carry-over edits references from the EA should be made where appropriate.

Page numbers are not included on the FOSL. This makes referencing specific parts of the document more difficult. Please include.

Specific Comments: FINDING OF SUITABILITY TO LEASE

1. Table 1-- Building S873, Open Shed Warehouse, is described in the EA as having "brittle and unpredictable trusses". Is this a building DoD is willing to transfer?
2. 4., NEPA Compliance--The "Final" EA is far from final. See general comment above.
3. Table 2, Bldg. # 470--How can a release occur from where material was not stored. Batteries stored battery acid, estimate quantity

Specific Comments: RECORD OF AVAILABILITY

1. Page 5, #7-- Are the answers in this section consistent with the EA?
2. Page 8, #3-- Doesn't the old pistol range located on the golf course presumably contain ammunition?
3. Page 9, #5-- The way this first line reads it suggests that the applicant may dispose of DoD toxic or hazardous substances. Clarify.
4. Page 10, #7-- This section has no check mark.



DEFENSE LOGISTICS AGENCY
DEFENSE DISTRIBUTION DEPOT MEMPHIS
2163 AIRWAYS BOULEVARD
MEMPHIS, TENNESSEE 38114-5210



IN REPLY
REFER TO

DDMT-DE

NOV 14 1996

Mr. Jordan English, Manager
Memphis Field Office
Tennessee Department of Environment and Conservation
Division of Superfund
Suite E-645, Perimeter Park
2510 Mt. Moriah
Memphis, TN 38115-1520

Dear Mr. English:

The Defense Distribution Depot Memphis (DDMT) received your comments on the Finding of Suitability to Lease (FOSL) and the Record of Availability (ROA). We appreciate your input. Please find attached responses to your comments. Your comments will be included in the ROA package, which includes the FOSL.

For more information contact me at (901) 775-4508.

Sincerely,

DENISE K. COOPER
Environmental Protection Specialist

Attachment

Response to Comments
Finding of Suitability to Lease and Record of Availability

TDEC General Comments:

This draft FOSL includes many references to the EA which is in need of revisions. Carry-over edits references from the EA should be made where appropriate.

Page numbers are not included on the FOSL. This makes referencing specific pages of the document more difficult. Please include.

DDMT Response.

Comments noted and FOSL edited where appropriate and page numbers added.

Specific Comments on the Finding of Suitability to Lease

TDEC Specific Comment 1:

Table 1 -- Building S873, Open Shed Warehouse, is described in the EA as having brittle and unpredictable trusses." Is this a building DoD is willing to transfer?

DDMT Response:

The EA and this FOSL are for leasing and do not cover property disposal/transfer actions. DoD will be transferring the DDMT property, for the most part, as is. The Memphis Depot Redevelopment Agency has also indicated that building S873 may be demolished as part of MDRA redevelopment plans.

TDEC Specific Comment 2:

NEPA Compliance Section -- The "Final EA" is far from final. See general comment above.

DDMT Response:

We are working with the Corps of Engineers, Mobile District to incorporate your comments regarding the EA.

Response
Attachment

TDEC Specific Comment 3:

Table 2, Bldg. #470 -- How can a release occur from where material was not stored. Batteries store battery acid, estimate quantity.

DDMT Response:

Batteries are not considered storage locations. The CERFA category 2 associated with Building 470 resulted from the release of battery acid at the recharge station.

Specific Comments on the Record of Availability**TDEC Specific Comment 1:**

Page 5, #7 -- Are the answers in this section consistent with the EA?

DDMT Response:

Answer changed to NO in order to be consistent with EA.

TDEC Specific Comment 2:

Page 8, #3 -- Doesn't the old pistol range located on the golf course presumably contain ammunition?

DDMT Response:

No. The old pistol range has been classified as an unexploded ordnance site.

TDEC Specific Comment 3:

Page 9, #5 -- The way this first line reads it suggests that the applica . may dispose of DoD toxic or hazardous substances. Clarify.

DDMT Response:

Contractors working for DoD that may generate DoD waste may dispose of it. Lessees will not be allowed to bring hazardous materials onto the facility, therefore generating no hazardous waste.

TDEC Specific Comment 4:

Page 10, #7 -- This section has no check mark.

DDMT Response:

Comment noted and section corrected.

TABLE 2

ENVIRONMENTAL CONDITION CATEGORY NUMBER	FACILITY(S)	PARCEL NUMBER AND LABEL	APPROXIMATE SIZE (ACRES)	HAZARDOUS SUBSTANCE AND PETROLEUM PRODUCT STORAGE, RELEASE, OR DISPOSAL NOTIFICATION	REMEDIATION/MITIGATION
2	Building 210	13.4(2)HS	5.5	Satellite drum accumulation, Building 210. Old photographic developing lab in bay 7 of Building 210.	Proposed NFA Site 41. No remediation is necessary.
2	Building 690	21.1(2)HS	5.0	Building 690 has been used to store hazardous materials before shipment.	No remediation is necessary.
2	Building 753	33.10(2)	0.01	This parcel is associated with Building 753. There has been no documented storage of hazardous substances or petroleum products; nor has there been release or migration from an adjacent property of hazardous substances or petroleum products.	No remediation is necessary.
2	Building 756	33.11(2)	0.25	This parcel is associated with an area outside Building 756. The original tank supplying the emergency generator was removed in June 1994. Soil was sampled for TPH and found to be less than 20 ppm.	No remediation is necessary.
3	Building 489	20.1(3)PR	0.46	A 1-gallon oil spill was reported on November 3, 1995 at the north dock of Building 489, Section 4. The precise location of the spill is unknown.	Absorbent was applied to the spill. No further remediation necessary.
4	Building 470	20.3(4)HS/HR	5.0	Building 470 has corrosion on the floor (acid leak) near the battery charging station. All remedial actions (neutralize acid leaks) have occurred. No CERCLA requirement to further investigate area, however, BCT agreed on July 18, 1996 that Lessee must be made aware that lead contamination may exist in concrete.	No remediation is necessary.
4	Building 489	20.4(4)HS/HR	5.0	Building 489 has corrosion on the floor (acid leak) near the battery charging station. All remedial actions (neutralize acid leaks) have occurred. No CERCLA requirement to further investigate area, however, BCT agreed on July 18, 1996 that Lessee must be made aware that lead contamination may exist in concrete.	No remediation is necessary.
4	Building 490	21.2(4)PS/HS/HR	5.0	A 1-gallon spill of sulfuric acid/battery acid was reported on December 15, 1995 inside Building 490, Section 5. Petroleum products, microfiche developing chemicals, and Safety Kleen are stored in Building 490.	Spill was neutralized and contained for disposal. Proposed NFA Site 40 (Safety Kleen Unit only).
4	Building 560	18.1(4)HS/HR	4.0	Building 560 has two drop inlets inside the building that lead to the storm drainage system. In addition, two spills (5 gallons and 15 gallons) of aqueous film forming foam were reported on October 17, 1995 and November 14, 1995 inside Building 560, Section 3.	The damaged containers were moved to the recoupment facility and absorbent was applied to the spill.
4	Building 670	20.2(4)HS/HR	5.0	Significant corrosion on floor observed during visual inspection due to acid leaks at charging station. In addition, a 1-gallon spill of hydraulic fluid was reported on August 30, 1995 inside Building 670, Section 1. In addition, a 10-gallon spill of battery electrolyte was reported on May 4, 1990 outside of Building 670. The precise location of the outside spill is unknown.	Absorbent was applied to the spills.
4	Building 685	21.4(4)HS/HR	0.73	Potential contamination due to acid leaks from batteries in the fork lift area at Building 685. Staining observed. All remedial actions (neutralize acid leaks) have occurred. No CERCLA requirement to further investigate area; however, BCT agreed on July 18, 1996 that Lessee must be made aware that lead contamination may exist in concrete.	No remediation is necessary.

ENVIRONMENTAL CONDITION CATEGORY NUMBER	FACILITY(S)	PARCEL NUMBER AND LABEL ^a	APPROXIMATE SIZE (ACRES) ^c	HAZARDOUS SUBSTANCE AND PETROLEUM PRODUCT STORAGE, RELEASE, OR DISPOSAL NOTIFICATION	REMEDIATION/MITIGATION
4	Building 689	21.3(4)HS/HR	5.2	Eleven spills are documented from May 8, 1990 through November 16, 1995 inside and outside of Building 689. The materials spilled include nitric acid, corrosion removing compound, hydraulic fluid, oil, and sulfuric acid. Building 689 historically stored alcohol, acetone, toluene, and hydrofluoric acid before transport. Site 78 is located in the northern portion of this building. No previous sampling for the site. Site 75 is situated between Buildings 689 and 670. The area was not bermed and is adjacent to a storm sewer inlet. No previous sampling for the site.	Absorbent was applied to all spills. Screening Sites 75 and 78 - Surface and subsurface soil sampling proposed to evaluate the presence of a contaminant release.

Notes:

^a There are 11 buildings in ECP s 2, 3, and 4 being offered for lease; however, 12 areas are included in hazardous substance notification

^b Parcel label definitions are as follows:

PS = petroleum storage

PR = petroleum release or disposal

HS = hazardous substance storage

HR = hazardous substance release or disposal

^c Acreage figures are approximate; they have been calculated using AutoCad Release 12.

^d Hazardous substance storage quantities were not available nor was it practicable to estimate due to the varied nature of storage activities over the life of the facilities. Where available, quantities of spills was provided.

ENVIRONMENTAL PROTECTION PROVISIONS

INTERIM LEASE DEFENSE DISTRIBUTION DEPOT MEMPHIS, TENNESSEE (DDMT)

1. The sole purpose for which the leased premises and any improvements thereon may be used, in the absence of prior written approval of the Government for any other use, is for uses similar or comparable to past or current activities of the Depot. These include light industry, storage, sorting operations, receiving, packaging and shipping, support activities, mechanical shop to support material handling equipment, recreation, welfare activities, residential, training, education and general office.
2. The Lessee shall neither transfer nor assign this Lease or any interest therein or any property on the leased premises, nor sublet the leased premises or any part thereof or any property thereon, nor grant any interest, privilege, or license whatsoever in connection with this Lease without the prior written consent of the Government. Such consent shall not be unreasonably withheld or delayed. Every sublease shall contain the Environmental Protection provisions herein.
3. The Lessee and any sublessee shall comply with the applicable Federal, state, and local laws, regulations, and standards that are or may become applicable to Lessee's activities on the Leased Premises.
4. The Lessee and any sublessee shall be solely responsible for obtaining at its cost and expense any environmental permits required for its operations under the Lease, independent of any existing permits.
5. The 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 the Government is responsible for enforcing them. Such inspections are without prejudice to the right of duly constituted enforcement officials to make such inspections. The Government normally will give the Lessee or sublessee twenty-four (24) hours prior notice of its intention to enter the Leased Premises unless it determines the entry is required for safety, environmental, operations, or security purposes. The Lessee shall have no claim on account of any entries against the United States or any officer, agent, employee, or contractor thereof.
6. The Government acknowledges that Defense Distribution Depot Memphis (DDMT) has been identified as a National Priority List (NPL) Site under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) of 1980, as amended. The Lessee acknowledges that the Government has provided it with a copy of the DDMT Federal Facility Agreement (FFA) entered into by the United States Environmental Protection Agency (EPA) Region IV, the State of Tennessee, and the Department of the Army and effective on March 6, 1995, and will provide the Lessee with a copy of any amendments thereto. The Lessee agrees that should any conflict arise between the terms of such agreement as it presently exists or may be amended ("FFA," "Interagency Agreement" or "IAG") and the provisions of this Lease, the terms of the FFA [or IAG] will take precedence. The Lessee further agrees that notwithstanding any other provisions of the Lease, the Government assumes no liability to the Lessee or its sublessees or licensees should implementation of the FFA interfere with the Lessee's or any sublessee's or licensee's use of the

Leased Premises. The Lessee shall have no claim on account of any such interference against the United States or any officer, agent, employee or contractor thereof, other than for abatement of rent.

7. The Government, EPA, and the Tennessee Department of Environment and Conservation and their officers, agents, employees, contractors, subcontractors, have the right, upon reasonable notice to the Lessee and any sublessee, to enter upon the Leased Premises for the purposes enumerated in these subparagraph and for such other purposes consistent with any provision of the FFA:

(a) to conduct investigations and surveys, including, where necessary, drilling, soil and water sampling, test-pitting, testing soil borings and other activities related to the DDMT Installation Restoration Program (IRP), FFA or IAG;

(b) to inspect field activities of the Government and its contractors and subcontractors in implementing the DDMT IRP, FFA or IAG;

(c) to conduct any test or survey required by the EPA or the Tennessee Department of Environment and Conservation relating to the implementation of the FFA or environmental conditions at the Leased Premises or to verify any data submitted to the EPA or the Tennessee Department of Environment and Conservation by the Government relating to such conditions;

(d) to construct, operate, maintain or undertake any other response or remedial action, as required or necessary under the DDMT IRP or the FFA or IAG, including, but not limited to monitoring wells, pumping wells, and treatment facilities;

(e) to conduct Environmental Compliance Assessment System Surveys (ECAS).

- 8 The Lessee and any sublessee shall comply with the provisions of any health and safety plan in effect under the IRP or the FFA during the course of any of the above described response or remedial actions. Any inspection, survey, investigation, or other response or remedial action will, to the extent practicable, be coordinated with representative designated by the Lessee and any sublessee. The Lessee and any sublessee shall have no claim on account of such entries against the United States or any office, agent, employee, contractor, or subcontractor thereof. In addition, the Lessee and any sublessee shall comply with all applicable Federal, state, and local occupational safety and health regulations.
9. The Lessee further agrees that in the event of any assignment or sublease of the Leased Premises, it shall provide to the EPA and Tennessee Department of Environment and Conservation 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. The 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.
10. The Lessee shall strictly comply with the hazardous waste permit requirements under Resource Conservation and Recovery Act (RCRA), or its DDMT equivalent. Except as specifically authorized by the Government in writing, the Lessee must provide at its own expense hazardous waste management facilities, complying with all laws and regulations. Government hazardous waste management facilities will not be available to the Lessee. Any violation of the requirements of this condition shall be deemed a material breach of this Lease.

11. Department of Defense (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 the DoD Component.
12. The Lessee shall prepare and maintain a Government-approved plan for responding to hazardous waste, fuel, and other chemical spills prior to commencement of operations on the leased premises. Such a plan shall be independent of the DDMT and, except for initial fire response and/or spill containment, shall not rely on installation 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 said officer conducting timely cleanup actions, the Lessee agrees to reimburse the Government for its costs.
13. The Lessee shall not construct or make or permit its sublessees or assigns to construct or make any alterations, additions, or improvements to, or installations upon or otherwise modify or alter the leased premises in any way which may adversely affect the environmental program, environmental cleanup, human health, the environment, cultural and historic resources, and endangered or threatened species without the 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 or alterations, additions, modifications, improvements or installations (collectively "work") in the proximity of operable units that are a part of a National Priority List (NPL) site, such consent may include a requirement for 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.
14. The Lessee shall not conduct or permit its sublessees to conduct any subsurface excavation, digging, drilling or other disturbance of the surface without the prior written approval of the Government.
15. The Lessee shall strictly comply with the hazardous waste permit requirements under the Resource Conservation and Recovery Act (RCRA), or its state equivalent and any other applicable laws, rules or regulations. The Lessee must provide at its own expense such hazardous waste storage facilities which comply with all laws and regulations as it may need for such storage. Any violation of the requirements of this provision shall be deemed a material breach of this Lease.

16. NOTICE OF THE PRESENCE OF LEAD-BASED PAINT AND COVENANT:

a. The Lessee is hereby informed and does acknowledge that all buildings on the Leased Premises, which were constructed or rehabilitated prior to 1978, are presumed to contain lead-based paint. Lead from paint, paint chips, and dust can pose health hazards if not managed properly. Lead exposure is especially harmful to young children and pregnant women. Before renting pre-1978 residential housing, lessors must disclose to lessees and sublessees the presence of lead-based paint and/or lead-based paint hazards therein. "Residential Housing" means any housing constructed prior to 1978, except housing for the elderly (households reserved for and composed of one or more persons 62 years of age or more at the time of initial occupancy) or persons with disabilities (unless any child who is less than 6 years of age resides or is expected to reside in such housing) or any 0-bedroom dwelling. A risk assessment or inspection for possible lead-based paint hazards by the Lessee is recommended prior to lease.

b. Available information concerning known lead-based paint and/or lead-based paint hazards, the location of lead-based paint and/or lead-based paint hazards, and the condition of painted surfaces is contained in the Environmental Baseline Survey, which has been provided to the Lessee. All lessees and sublessees must also receive the federally-approved pamphlet on lead poisoning prevention. The Lessee hereby acknowledges receipt of all of the information described in this subparagraph.

c. The Lessee acknowledges that it has received the opportunity to conduct a risk assessment or inspection for the presence of lead-based paint and/or lead-based paint hazards prior to execution of this Lease.

d. The Lessee shall not permit the occupancy or use of any buildings or structures as residential housing without complying with this section and all applicable federal, state, and local laws and regulations pertaining to lead-based paint and/or lead-based paint hazards. Prior to permitting the occupancy of residential housing, if required by law or regulation, the Lessee, at its sole expense, will abate and eliminate lead-based paint hazards by treating any defective lead-based paint surface in accordance with all applicable laws and regulations.

e. The Army assumes no liability for remediation or damages for personal injury, illness, disability, or death, to the Lessee, its successors or assigns, sublessees or to any other person, including members of the general public, arising from or incident to possession and/or use of any portion of the Leased Premises containing lead-based paint as residential housing. The Lessee further agrees to indemnify and hold harmless the Army, its officers, agents and employees, from and against all suits, claims, demands or actions, liabilities, judgments, costs and attorneys' fees arising out of, or in any manner predicated upon, personal injury, death or property damage resulting from, related to, caused by or arising out of the possession and/or use of any portion of the Leased Premises containing lead-based paint as residential housing. This section and the obligations of the Lessee hereunder shall survive the expiration or termination of this Lease and any conveyance of the Leased Premises to the Lessee. The Lessee's obligation hereunder shall apply whenever the United States of America incurs costs or liabilities for actions giving rise to liability under this section.

17. NOTICE OF THE PRESENCE OF ASBESTOS AND COVENANT

a. The Lessee is hereby informed and does acknowledge that friable and non-friable asbestos or asbestos-containing materials ("ACM") has been found on the Leased Premises, as described in the final base-wide EBS. The ACM on the Leased Premises does not currently pose a threat to human health or the environment. All friable asbestos that posed a risk to human health has either been removed or encapsulated.

b. The Lessee covenants and agrees that its use and occupancy of the Leased Premises will be in compliance with all applicable laws relating to asbestos; and that the Lessor assumes no liability for future remediation of asbestos or damages for personal injury, illness, disability, or death, to the Lessee, its successors or assigns, sublessee or to any other person, including members of the general public, arising from or incident to the purchase, transportation, removal, handling, use, disposition, or other activity causing or leading to contact of any kind whatsoever with asbestos on the Leased Premises described in this Lease, whether the lessee, its successors or assigns have properly warned or failed to properly warn the individual(s) injured. The Lessee agrees to be responsible for any future remediation of asbestos found to be necessary on the Leased Premises.

18. Subject property is eligible for listing in the National Register of Historic Places. The buildings will be maintained by the Lessee in accordance with the recommended approaches in the *Secretary of the Interior's Standards for Rehabilitation and Illustrated Guidelines for Rehabilitating Historic Buildings* (U.S. Department of the Interior, National Park Service 1992) (Secretary's Standards). The Lessee will notify the Department of the Army and the State Historic Preservation Officer (SHPO) of any proposed rehabilitations and structural or landscape alterations to these buildings prior to undertaking said rehabilitation or alteration. Any approved rehabilitation or structural or landscape alteration to this building must adhere to the Secretary's Standards. If the Lessee does not receive a written objection from the Department of the Army or the SHPO within 30 days, the Lessee may proceed with the proposed rehabilitation or alterations.
19. The Lessee shall not use the Leased Premises for the storage or disposal of non-Department of Defense owned hazardous or toxic materials, as defined in 10 U.S.C. 2692, unless authorized under 10 U.S.C. 2692 and properly approved by the Government.
20. The Army may impose any additional environmental protection conditions and restrictions during the terms of this lease that it deems necessary by providing written notice of such restrictions to the Lessee.

FINDING OF SUITABILITY TO LEASE

(FOSL)

Parcel 5.1, Parcel 5.2, Parcel 30.1

Defense Distribution Depot Memphis, Tennessee

(FOSL Number 2)

November 5, 1997

1. PURPOSE

The purpose of this Finding Of Suitability To Lease (FOSL) is to document the environmental suitability of certain parcels of property at Defense Distribution Depot Memphis, Tennessee for leasing to the Depot Redevelopment Corporation consistent with the Department of Defense (DOD) and Army policy. In addition, this FOSL identifies use restrictions as specified in the text and attached Environmental Protection Provisions (enclosure 4) necessary to protect human health or the environment and to prevent interference with any existing or planned environmental restoration activities. Uses of the property will be restricted to light industry, storage, sorting operations, receiving, packaging and shipping, support activities, mechanical shop to support material handling equipment, recreation, welfare activities, training, education, and general office.

2. PROPERTY DESCRIPTION

The proposed property to be leased consists of 3.39 acres that include three buildings. The three buildings are identified as Building 274 ("J" Street Cafeteria), Building T272, and Building 925. A site map of the property proposed to be leased can be found at enclosure 1

3. ENVIRONMENTAL CONDITION OF THE PROPERTY

A determination of the environmental condition of the facilities has been made based on the Community Environmental Response Facilitation Act (CERFA) Letter Report, dated December 5, 1996 and an Environmental Baseline Survey (EBS), dated November 6, 1996. The information provided is a result of a complete search of agency files during the development of the CERFA Letter Report and EBS. The following documents also provided information on environmental conditions of the property: Final Remedial Investigation Report (Law Environmental, August 1990), Final Environmental Assessment for Master Interim Lease (Tetra Tech, September 1996), Remedial Investigation Soil Sampling Letter Report (CH2M Hill, May 1997), OU - 3 and OU - 4 Field Sampling Plans (CH2M Hill, September 1995), RCRA Facilities Assessment (A.T. Kearney, Inc., January 1990), and the Installation Assessment (USAEHA, March 1981).

3.1 Environmental Condition of Property Categories

The properties that are being considered for lease are classified as (DOD) Environmental Condition of Property (ECP) Categories 3, 4, and 6. The ECP Categories for the specific buildings and/or parcels are as follows:

ECP Category 3.	Parcel 5.1 to include Building T272
ECP Category 4:	Parcel 30.1 that is Building 925
ECP Category 6.	Parcel 5.2 to include Building 274

A summary of the ECP Categories for specific buildings or parcels is provided in

Table 1 – Description of Property (enclosure 2)

3.2 Storage, Release, Treatment or Disposal of Hazardous Substances

It was determined that no hazardous substances were stored, released, or disposed in excess of the 40 CFR Part 373 reportable quantities in Building T272. Accordingly, there is no need for any notification of hazardous substance storage, release, treatment, or disposal for this building.

It was determined that even though no hazardous substances were released or disposed in Building 274 in excess of the 40 CFR Part 373 reportable quantities, there was a possible previous spill involved with this area. Building 274 was constructed on a former transformer storage area. Prior to construction of the cafeteria, a spill probably occurred in this area as evidenced by the information obtained from the CH2M Hill sampling conducted in 1997. One out of five samples taken indicate a level of PCB's in the grassy area immediately surrounding the cafeteria slightly above the Residential Risk Based Concentration (RBC) for soil ingestion (1.39 mg/kg vs 0.83 mg/kg). DDE, DDT, DDD, and Dieldrin levels found in the five samples were all below the RBC for soil ingestion.

It was determined that even though no hazardous substances were released or disposed in Building 925 in excess of the 40 CFR Part 373 reportable quantities, there was a previous spill involved with this area. The release of hazardous substances was remediated at the time of the release as an emergency response. Building 925 was previously known as X - 25, an open storage area where flammable materials and petroleum products were stored in an earthen and then concrete bermed area. At one time the concrete bermed area was covered with a fabric tension structure that was called a spandome. This building was labeled Building T925. On January 19, 1988, during a period of inclement weather (wind/rain), the spandome collapsed resulting in a release of hazardous substances in the bermed area. In order to safely remove the collapsed laminate roof and associated steel girders, the bermed area needed to be emptied. Two tanker trucks with pumps removed approximately 36,000 gallons of product and rain water that had accumulated. The following is a list of the impacted products and the 40 CFR Part 373 reportable quantity associated with them: Toluene (1,000 pounds), Xylene (100 pounds), Methyl Ethyl Ketone (5,000 pounds), Methyl IsoButyl Ketone (5,000 pounds), Acetone (5,000 pounds), and Isopropyl Alcohol (5,000 pounds). It was later determined that approximately 325 gallons of product had been spilled although the exact proportions are now unknown. Therefore, a worst case scenario would assume that it was possible for Xylene to exceed the 40 CFR Part 373 reportable quantity of 100 pounds (13.92 gallons) and/or Toluene to exceed the 40 CFR Part 373 reportable quantity of 1,000 pounds (137 gallons).

Temporary Building 925 was replaced in 1993/1994 with Building 925. While Building 925 stored hazardous materials (acetone, methyl ethyl ketone, methanol, ethanol) and petroleum products, it was determined that there was no evidence of any release or disposal in excess of 40 CFR Part 373 reportable quantities. A summary of the buildings in

which hazardous substances were stored, released, or disposed in excess of 40 CFR Part 373 reportable quantities is provided in Table 2 - Notification of Hazardous Substance and Petroleum Products, Storage, Release, or Disposal (enclosure 3).

3.3 Petroleum and Petroleum Products

3.3.1 Storage, Release, or Disposal of Petroleum or Petroleum Products

There is no evidence that any petroleum or petroleum products were stored, released, or disposed at the properties listed in this FOSL except for the area involving Building 925. Building 925 was built on the former earthen and then concrete bermed area of X - 25 and Building T925. There is no evidence that any petroleum or petroleum products were released or disposed in this area. The January 19, 1988 spill did not contain petroleum products. A summary of the building or area in which petroleum or petroleum products were stored, released, or disposed is provided in Table 2 - Notification of Hazardous Substances and Petroleum Products Storage, Release, or Disposal (enclosure 3).

3.3.2 Underground and Above-Ground Storage Tanks (UST/AST)

The EBS and visual site inspection (VSI) reported or identified **no** underground storage tanks and **no** above-ground storage tanks on the property listed in this FOSL. There is no evidence of petroleum contamination at these sites.

3.4 Polychlorinated Biphenyls (PCB) Equipment

There are no PCB containing transformers or other PCB containing equipment located on the property listed in this FOSL. However, Building 274 was built on the location of a former storage area for electrical transformers that contained PCB's. During the Installation Assessment conducted in March 1981, two transformers were observed in the storage area. Testing of the fluid in the transformers indicated concentrations of less than 50 parts per million of PCBs. The site's date of initial operations is unknown but assumed to be prior to 1981. Activities ceased in the mid-1980's because of the construction of the new DDMT cafeteria.

Surface soil sampling in the grassy areas surrounding Building 274 revealed one out of five samples indicating a slightly elevated level of PCB (Aroclor - 1260) above the residential risk-based concentration for soil ingestion (1.39 mg/kg vs 0.83 mg/kg). There is no surface exposure. This site is a candidate for an early removal action or Baseline Risk Assessment to support a Record of Decision for No Further Action. A restriction associated with this Building will be that no digging (soil disturbance) will be allowed in any of the grassy areas surrounding the "J" Street Cafeteria without the express permission of the Government.

The lease will include the PCB notification provision included in the Environmental Protection Provisions (enclosure 4).

3.5 Asbestos

The EBS and the Asbestos Identification Survey (Pickering, December 1993 and January 1994) indicate asbestos containing materials (ACM) are present in Building 274. The tile mastic contained 3% to 5% chrysotile. The ACM does not currently pose a threat to human health or the environment because there is no friable asbestos. The lease will include the asbestos warning and covenant included in the Environmental Protection Provisions (enclosure 4).

3.6 Lead-Based Paint (LBP)

Based on the age of Buildings 925 and 274 (constructed after 1978), they are presumed to contain no lead-based paint. The construction date of Building T272 (lumber storage shed) was 1942, and therefore it is presumed to contain lead-based paint.

No residential use is to be permitted under the terms of the lease.

The lease will include the lead-based paint warning and covenant included in the Environmental Protection Provisions (enclosure 4).

3.7 Radiological Sources or Contamination

There is no evidence that the Army or DDMT used or stored radioactive sources on the property listed in this FOSL.

3.8 Radon

In keeping with DOD policy to not perform radon assessment and mitigation prior to transfer of BRAC property unless otherwise required by applicable law, there were no radon surveys conducted in the buildings listed in this FOSL. Radon surveys were conducted in accordance with regulations in the following residential structures at DDMT: Buildings 176, 179, 181, and 184. Radon was not detected above the EPA residential action level of 4 picocuries per liter (pCi/L) in these buildings.

3.9 Unexploded Ordnance

Based on a review of existing records and available information, none of the buildings or surrounding land proposed for lease are known to contain unexploded ordnance.

3.10 Other Hazardous Conditions

There are no other known hazardous conditions that present a threat to human health or the environment.

4. REMEDIATION

In October 1992, the U.S. Environmental Protection Agency (EPA) placed DDMT on the National Priorities List (NPL) for environmental restoration. DDMT has since entered into a Federal Facilities Agreement (FFA) with the Tennessee Department of Environment and Conservation (TDEC) and the EPA. Environmental contamination on the property does not present a hazard to leasing the property. In addition, environmental conditions on adjacent property do not present a hazard to the leasing of the property. Regulators have concurred with DDMT that the property does not pose risks above levels deemed protective provided that the property is used for the proposed purpose. The lease will include a provision reserving the Army's right to conduct remediation activities in the Environmental Protection Provisions (enclosure 4).

5. REGULATORY COORDINATION

TDEC and EPA Region 4 were notified of the initiation of the FOSL. Regulatory comments received during the FOSL development and the BRAC Cleanup Team meetings were reviewed and incorporated as appropriate. All comments received from TDEC and the EPA during the review process were resolved and incorporated into the FOSL. No written comments were received from the public.

6. NATIONAL ENVIRONMENTAL POLICY ACT (NEPA) COMPLIANCE AND CONSISTENCY WITH LOCAL REUSE PLAN

The environmental impacts associated with the proposed lease of the property have been adequately analyzed in accordance with the National Environmental Policy Act (NEPA). The results of this analysis have been documented in the Final Environmental Assessment for Master Interim Lease, Defense Distribution Depot Memphis, Tennessee, dated September 1996. The environmental effects of the activities anticipated under the proposed lease were determined not to be significant.

The proposed lease addressed by this FOSL is consistent with the reuse alternatives stated in the above referenced NEPA document and with the intended reuse of the property set forth in the Memphis Depot Redevelopment Plan dated May 1997.

7. ENVIRONMENTAL PROTECTION PROVISIONS

On the basis of the above results from the site-specific EBS, any subsequent or additional investigations, surveys, or studies identified in the FOSL, and in consideration of the intended use of the property, certain terms, conditions, reservations, and restrictions are required for the proposed lease. The Environmental Protection Provisions are at enclosure 4 and will be included in the proposed lease and all subleases.

8. FINDING OF SUITABILITY TO LEASE

Based on the information detailed in the EBS, the references cited therein, and this FINDING OF SUITABILITY TO LEASE, I have concluded that all Department of Defense requirements to reach a FINDING OF SUITABILITY TO LEASE have been fully met for the subject property. The subject property is suitable to lease by the Lessee for the intended purpose, subject to the terms, conditions, reservations, and restrictions set forth in the Environmental Protection Provisions attached to this FOSL, without posing an ~~unreasonable-unacceptable~~ risk to human health or the environment and without interference with the environmental remediation process at Defense Distribution Depot Memphis, Tennessee, and the uses contemplated for the lease are consistent with protection of human health and the environment.

As required by CERCLA section 120(h)(3)(B), I have determined that the Environmental Protection Provisions of the lease and the terms of the lease provide adequate assurances that the United States will take any additional remedial action found to be necessary to protect human health and the environment with respect to any hazardous substances remaining on the property on the date of the lease which has not been taken on the date of the lease.

Notification of hazardous substance or petroleum product storage, release, treatment, or disposal on the property, Table 2 - Notification of Hazardous Substance or Petroleum Product Storage, Release, Treatment or Disposal (enclosure 3) shall be provided in the lease documents, as required under the DOD FOSL Guidance

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Colonel, GS
Deputy Chief of Staff
for Engineering, Housing,
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Logistics

4 Enclosures

- Encl 1 Site Map of Proposed Lease Area
- Encl 2 Table 1 - Description of Property
- Encl 3 Table 2 - Notification of Hazardous Substance or Petroleum
Product Storage, Release, or Disposal
- Encl 4 Environmental Protection Provisions

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8. FINDING OF SUITABILITY TO LEASE

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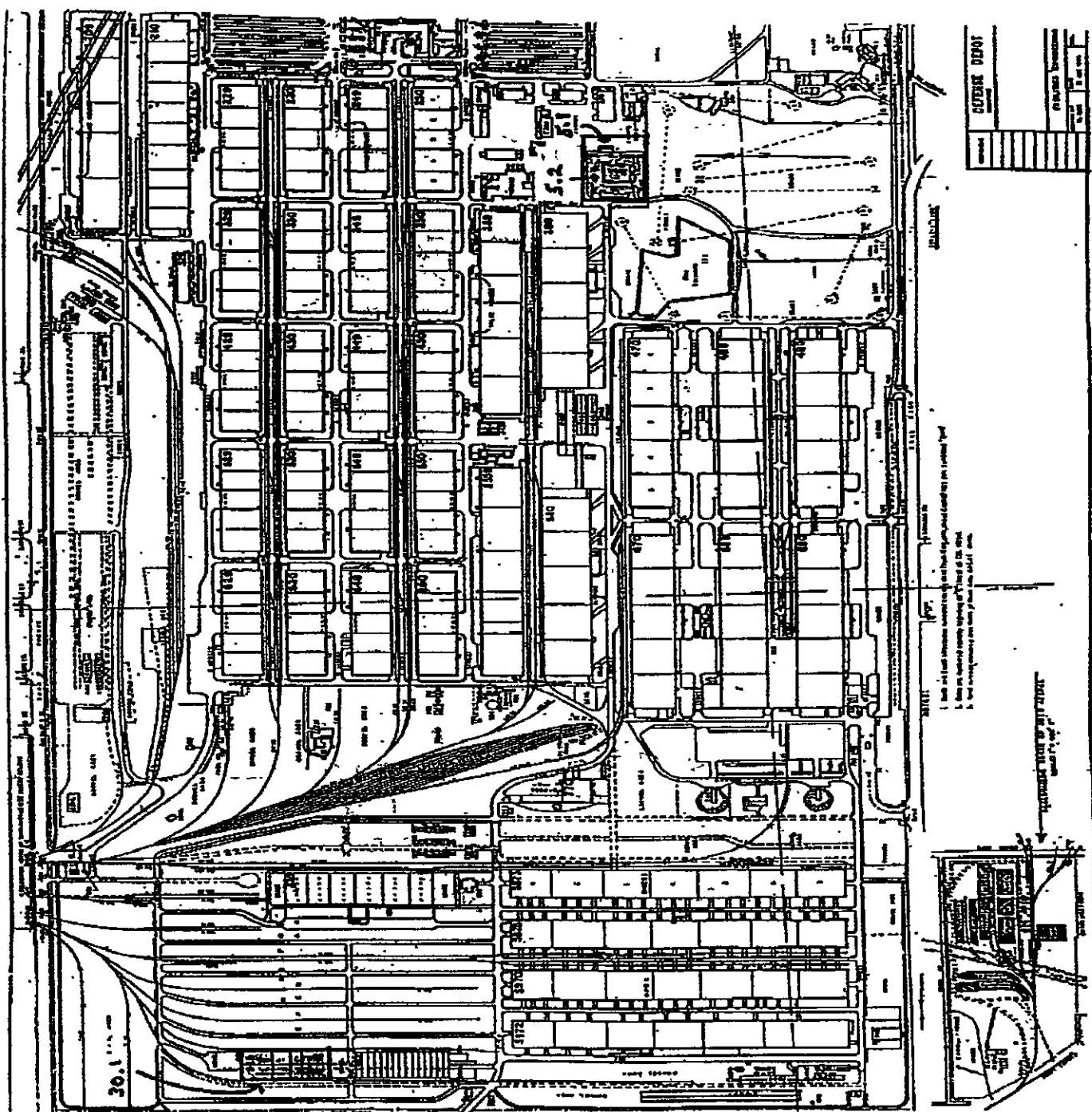
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Product Storage, Release, or Disposal
- Encl 4 Environmental Protection Provisions



Enclosure 1

TABLE 1 - Identification of Property and Environmental Conditions

Facility Identification and Description of Relevant Activities ^a	Corresponding EBS Identification	Environmental Condition Category Number	Environmental Condition of Property and Former, Ongoing, or Planned Remedial Action ^b
Building T272 is a 1,440 square foot building erected in 1942 as the Lumber and P Shed Facility. It is currently being used to store lumber.	Parcel 5.1	3	This building and the surrounding area were possibly subjected to historic pesticide application. There is a grassy strip approximately 10 feet by 100 feet that runs along the back wall of the building that was sampled (CH2M Hill, 1997). No pesticides were found that exceeded BRAC Cleanup Team screening levels. Therefore, while pesticides may or may not have been applied in this area, pesticides are not present at concentrations that require removal or remedial action.
Building 274 is a 13,500 square foot building erected in 1989 as the post restaurant known as the "J" Street Cafe. Its only use has been the cafeteria.	Parcel 5.2	6	A release of polychlorinated biphenyls (PCB's) occurred on this property prior to the construction of Building 274. Soil sampling (CH2M Hill, 1997) indicated that three (3) out of five (5) surface soil sampling locations from grassy areas directly outside of Building 274 contained low levels of PCB's with the highest detection being 1.39 mg/kg. This level exceeded BRAC Cleanup Team screening levels. The BCT has planned a shallow (0 - 12 inches) soil removal with offsite disposal for the areas around the three positive sample locations. This action will occur in 1998.
Building 925 is a 60,000 square foot building erected in 1994 as a special purpose warehouse. It occupies the site of the area formerly known as X - 25, an earthen and then concrete bermed area that contained flammable material and petroleum products. A spandome was placed on this area and was called Building T925. The spandome collapsed in 1988 and Building 925 was erected in the same area.	Parcel 30.1	4	In 1988 the former Building T925 (spandome) collapsed resulting in a spill of approximately 325 gallons of material that mixed with over 30,000 gallons of rainwater. Records show that the spill was contained in the bermed area and properly removed and disposed in accordance with all Federal, state, and local regulations.

^a Acreage figures are approximate. They have been calculated using AutoCad Release 12.

^b Quantity of spills are reported as noted from historical documents.

**Table 2 - Notification of Hazardous Substance or Petroleum Product
Storage, Release, or Disposal**

Facility Identification and Description of Relevant Activity	Identity of Hazardous Substances or Petroleum Products	Parcel Number/ ECP Category	Date of Storage, Release, Treatment, or Disposal Activities	Former, Ongoing, or Planned Remedial Actions
Building 274 was constructed in 1989 as the post cafeteria. Prior use of the area was for transformer storage. Parcel 5.2 consists of Building 274, sidewalks, parking areas, and small grassy areas immediately surrounding the building.	A release of polychlorinated biphenyls (PCB's) occurred at this site prior to the construction of Building 274. One out of five samples taken by CH2M Hill in 1997 indicated a level of PCB's slightly above the Residential Risk Based Concentration (RBC) for Soil Ingestion (1.39 mg/kg vs 0.83 mg/kg). DDT, DDE, and DDD, and Dieldrin levels were all below the RBC for Soil Ingestion.	Parcel 5.2 ECP 6	Releases occurred prior to the construction of the building in 1989.	The BRAC Cleanup Team has planned a shallow (0 - 12 inches) soil removal in 1998 with offsite disposal for the grassy area surrounding Building 274
Building 925 was constructed in 1994 as a special purpose warehouse. Prior use was the X - 25 area, an earthen then concrete bermed area used for storage of flammable and hazardous materials. A spandome was placed over the concrete bermed area and the building was designated T925.	The following substances have been stored in Building 925 or in the area where Building 925 now stands: Toluene, Xylene, Methyl Ethyl Ketone, Methyl IsoButyl Ketone, Acetone, Isopropyl Alcohol, Methanol, Ethanol, Naphtha, Ethyl Acetate, Morpholine, Cyclohexylamine, and antifoam agent.	Parcel 30.1 ECP 4	In January 1988, a release occurred in Building T925 due to the collapse of the spandome. Approximately 36,000 gallons of rain water and product were recovered from the area. Approximately 325 gallons of product was determined to have been spilled.	The release was immediately handled as an emergency response action in January 1988. No further action is planned for this site.

ENCLOSURE 4 – ENVIRONMENTAL PROTECTION PROVISIONS

The following conditions will be placed in the lease to ensure there will be no unacceptable risk to human health or the environment and no interference with Defense Distribution Depot Memphis, Tennessee (DDMT) missions or to the Defense Distribution Depot Memphis, Tennessee Installation Restoration Program (IRP), and to ensure regulatory requirements for the IRP and other compliance programs administered by DDMT are met.

1. The sole purpose for which the leased premises and any improvements thereon may be used, in the absence of prior written approval of the Government for any other use, is for uses similar or comparable to past or current activities of the Depot. These include light industry, storage, sorting operations, receiving, packaging and shipping, support activities, mechanical shop to support material handling equipment, recreation, welfare activities, training, education, and general office.
2. The Lessee shall neither transfer nor assign this Lease or any interest therein or any property on the leased premises, nor sublet the leased premises or any part thereof or any property thereon, nor grant any interest, privilege, or license whatsoever in connection with this Lease without the prior written consent of the Government. Such consent shall not be unreasonably withheld or delayed. Every sublease shall contain the Environmental Protection Provisions herein.
3. The Lessee and any sublessee shall comply with the applicable Federal, state, and local laws, regulations, and standards that are or may become applicable to the Lessee's or sublessee's activities on the Leased Premises. These include the DDMT NPDES and Industrial Wastewater Discharge Permits.
4. The Lessee and any sublessee shall be solely responsible for obtaining at its cost and expense any environmental permits required for its operations under the Lease, independent of any existing permits.
5. The 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 the Government is responsible for enforcing them. Such inspections are without prejudice to the right of duly constituted enforcement officials to make such inspections. The Government normally will give the Lessee or sublessee twenty-four (24) hours prior notice of its intention to enter the Leased Premises unless it determines the entry is required for safety, environmental, operations, or security purposes. The Lessee shall have no claim on account of any entries against the United States or any officer, agent, employee, or contractor thereof.

6. The Government acknowledges that Defense Distribution Depot Memphis, Tennessee has been identified as a National Priorities List (NPL) site under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) of 1980, as amended. The Lessee acknowledges that the Government has provided it with a copy of the Defense Distribution Depot Memphis, Tennessee Federal Facility Agreement (FFA) entered into by the United States Environmental Protection Agency (EPA) Region 4, the State of Tennessee, and DDMT that became effective March 1995, and will provide the Lessee with a copy of any amendments thereto. The Lessee agrees that should any conflict arise between the terms of such agreement as it presently exists or may be amended and the provisions of this Lease, the terms of the FFA will take precedence. The Lessee further agrees that notwithstanding any other provisions of the Lease, the Government assumes no liability to the Lessee or its sublessees or licensees should implementation of the FFA interfere with the Lessee's or any sublessee's or licensee's use of the Leased Premises. The Lessee shall have no claim on account of any such interference against the United States or any officer, agent, employee, or contractor thereof, other than for abatement of rent.

7. The Government, EPA, and the Defense Distribution Depot Memphis, Tennessee and their officers, agents, employees, contractors, subcontractors, have the right, upon reasonable notice to the Lessee and any sublessee, to enter upon the Leased Premises for the purposes enumerated in these subparagraphs and for such other purposes consistent with any provision of the FFA:

(a) to conduct investigations and surveys, including, where necessary, drilling, soil and water sampling, test-pitting, testing soil borings and other activities related to the Defense Distribution Depot Memphis, Tennessee Installation Restoration Program (IRP) or FFA;

(b) to inspect field activities of the Government and its contractors and subcontractors in implementing the Defense Distribution Depot Memphis, Tennessee IRP or FFA,

(c) to conduct any test or survey required by the EPA or TDEC relating to the implementation of the FFA or environmental conditions at the Leased Premises or to verify any data submitted to the EPA or TDEC by the Government relating to such conditions;

(d) to construct, operate, maintain or undertake any other response or remedial action, as required or necessary under the Defense Distribution Depot Memphis, Tennessee IRP or FFA, including but not limited to monitoring wells, pumping wells, and treatment facilities;

(e) to conduct Environmental Compliance Assessment System Surveys (ECAS).

8. The Lessee and any sublessee shall comply with the provisions of any health and safety plan in effect under the IRP or the FFA during the course of any of the above described

response or remedial actions. Any inspection, survey, investigation, or other response or remedial action will, to the extent practicable, be coordinated with a representative or representatives designated by the Lessee and any sublessee. The Lessee and any sublessee shall have no claim on account of such entries against the United States or any office, agent, employee, contractor, or subcontractor thereof. In addition, the Lessee and any sublessee shall comply with all applicable Federal, state, and local occupational safety and health regulations.

9. The Lessee further agrees that in the event of any assignment or sublease of the Leased Premises, it shall provide to the EPA and TDEC by certified mail a copy of the agreement or sublease of the Leased Premises (as the case may be) within fourteen (14) days after the effective date of such transaction. The 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.

10. The Lessee shall strictly comply with the hazardous waste requirements under the Resource Conservation and Recovery Act (RCRA) or its Tennessee equivalent. Except as specifically authorized by the Government in writing, the Lessee must provide at its own expense hazardous waste management facilities, complying with all laws and regulations. Government hazardous waste management facilities will not be available to the Lessee. Any violation of the requirements of this condition shall be deemed a material breach of this Lease.

11. Defense Distribution Depot Memphis, Tennessee accumulation points for hazardous and other wastes will not be used by the Lessee or any sublessee. Neither the Lessee nor the sublessee will permit its hazardous wastes to be commingled with hazardous waste of DDMT.

12. The Lessee shall prepare and maintain a Government-approved plan for responding to hazardous waste, fuel, and other chemical spills prior to commencement of operations on the leased premises. Such a plan shall be independent of the Defense Distribution Depot Memphis, Tennessee and shall not rely on installation 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 any Government officer conducting timely cleanup actions, the Lessee agrees to reimburse the Government for its costs.

13. The Lessee shall not construct or make or permit its sublessees or assigns to construct or make any alterations, additions, or improvements to, or installations upon or otherwise modify or alter the leased premises in any way that may adversely affect the Defense Distribution Depot Memphis, Tennessee environmental program, environmental cleanup, human health, or the environment, without the 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 or alterations, additions, modifications, improvements, or installations (collectively "work") in the proximity of

operable units that are a part of a National Priorities List (NPL) site, such consent may include a requirement for 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.

14. The Lessee shall not conduct or permit its sublessees to conduct any subsurface excavation, digging, drilling or other disturbance of the surface without the prior written approval of the Government. This is to include all soil disturbances such as landscaping.

15. The Lessee shall strictly comply with the hazardous waste permit requirements under the Resource Conservation and Recovery Act (RCRA), or its state equivalent and any other applicable laws, rules or regulations. The Lessee must provide at its own expense such hazardous waste storage facilities that comply with all laws and regulations as it may need for such storage. Any violation of the requirements of this provision shall be deemed a material breach of this Lease.

16. LEAD-BASED PAINT WARNING AND COVENANT:

a. The Leased Premises do not contain residential dwellings and are not being leased for residential purposes. The Lessee is notified that the Leased Premises contain buildings built prior to 1978 that contain lead-based paint. Lead from paint, paint chips, and dust can pose health hazards if not managed properly. Such property may present exposure to lead from lead-based paint that may place young children at risk of developing lead poisoning. Lead poisoning in young children may produce permanent neurological damage, including learning disabilities, reduced intelligence quotient, behavioral problems and impaired memory. A risk assessment or inspection for possible lead-based paint hazards is recommended prior to lease.

b. Available information concerning known lead-based paint and/or lead-based paint hazards, the location of lead-based paint and/or lead-based paint hazards, and the condition of painted surfaces is contained in the Environmental Baseline Survey that has been provided to the Lessee. Additionally, the following report pertaining to lead-based paint and/or lead-based paint hazards has been provided to the Lessee: Lead Based Paint Risk Assessment for DDMT (Barge, Waggoner, Sumner, and Cannon, December 1995, revised April 1996). Additionally, the Lessee has been provided with a copy of the Federally approved pamphlet on lead poisoning prevention. The Lessee hereby acknowledges receipt of all of the information described in this subparagraph.

c. The Lessee acknowledges that it has received the opportunity to conduct a risk assessment or inspection for the presence of lead-based paint and/or lead-based paint hazards prior to execution of this Lease.

d. The Lessee shall not permit use of any buildings or structures on the Leased Premises for residential habitation without first obtaining the written consent of the Government. As

a condition of its consent, the Government may require the Lessee to (i) inspect for the presence of lead-based paint and/or lead-based paint hazards in and around buildings and structures on the Leased Premises; (ii) abate and eliminate lead-based paint hazards in accordance with all applicable laws and regulations; and (3) comply with the notice and disclosure requirements under applicable Federal, state, and local laws or regulations. The Lessee agrees to be responsible for any future remediation of lead-based paint found to be necessary on the Leased Premises.

e. The Government assumes no liability for remediation or damages for personal injury, illness, disability, or death, to the Lessee, its successors or assigns, sublessees or to any other person, including members of the general public, arising from or incident to possession and/or use of any portion of the Leased Premises containing lead-based paint as residential housing. The Lessee further agrees to indemnify and hold harmless the Government, its officers, agents and employees, from and against all suits, claims, demands or actions, liabilities, judgments, costs and attorneys' fees arising out of, or in any manner predicated upon, personal injury, death or property damage resulting from, related to, caused by or arising out of the possession and/or use of any portion of the Leased Premises containing lead-based paint as residential housing. This section and the obligations of the Lessee hereunder shall survive the expiration or termination of this Lease and any conveyance of the Leased Premises to the Lessee. The Lessee's obligation hereunder shall apply whenever the United States of America incurs costs or liabilities for actions giving rise to liability under this section.

17. NOTICE OF THE PRESENCE OF ASBESTOS AND COVENANT.

a. The Lessee is hereby informed and does acknowledge that non-friable asbestos or asbestos-containing materials ("ACM") has been found on the Leased Premises, as described in the final base-wide EBS. The ACM on the Leased Premises does not currently pose a threat to human health or the environment.

b. The Lessee covenants and agrees that its use and occupancy of the Leased Premises will be in compliance with all applicable laws relating to asbestos, and that the Grantor assumes no liability for future remediation of asbestos or damages for personal injury, illness, disability, or death, to the Lessee, its successors or assigns, sublessees, or to any other person, including members of the general public, arising from or incident to the purchase, transportation, removal, handling, use, disposition, or other activity causing or leading to contact of any kind whatsoever with asbestos on the Leased Premises described in this Lease, whether the Lessee, its successors or assigns have properly warned or failed to properly warn the individual(s) injured. The Lessee agrees to be responsible for any future remediation of asbestos found to be necessary on the Leased Premises

18. NOTICE OF POLYCHLORINATED BIPHENYL (PCBs) EQUIPMENT AND COVENANT:

- a. The Lessee is hereby informed and does acknowledge that equipment containing polychlorinated biphenyls (PCBs) did exist on the Property as described in the final base wide Environmental Baseline Survey (EBS). All PCB containing equipment has been properly removed in accordance with applicable laws and regulations.
- b. The Lessee covenants and agrees that any possession, use and management of any PCB containing equipment will be in compliance with all applicable laws relating to PCBs and PCB containing equipment, and that the Government assumes no liability for the remediation of PCB contamination or damages for personal injury, illness, disability, or death to the Lessee, its successors or assigns, sublessees or to any other person, including members of the general public, arising from or incident to use, handling, management, disposition, or other activity causing or leading to contact of any kind whatsoever with PCBs or PCB containing equipment, whether the Lessee, its successors or assigns have properly warned or failed to properly warn the individual(s) insured. The GRANTEE agrees to be responsible for any remediation of PCBs or PCB containing equipment found to be necessary from its use or possession during the term of the Lease. This section and the obligations of the Lessee hereunder shall survive the expiration or termination of this lease and any conveyance of the Leased Premises to the Lessee.
19. The Lessee shall not use the Leased Premises for the storage or disposal of non-Department of Defense owned hazardous or toxic materials, as defined in 10 U.S.C. 2692, unless authorized under 10 U.S.C. 2692 and properly approved by the Government.
20. The Government may impose any additional environmental protection conditions and restrictions during the terms of this lease that it deems necessary by providing written notice of such conditions or restrictions to the Lessee.

REFERENCE MATERIALS

I. The statutory and regulatory requirements relating to FOST/FOSLs are as follows

CERCLA §120(h), 42 U.S.C. §9620(h) - Property Transferred by Federal Agencies

10 U.S.C. § 2667(f) as amended by section 2906 of the FY 94 Defense Authorization Act requiring DOD and EPA to consult on FOSL procedures

40 CFR PART 373 - Reporting Hazardous Substance Activity when Selling or Transferring Federal Real Property.

II. The DOD Guidance relating to FOST/FOSL's is as follows:

DOD Guidance on the Environmental Review Process to Reach a Finding of Suitability to Transfer (FOST) for Property Where Release or Disposal has Occurred, dated 1 June 1994.

DOD Guidance on the Environmental Review Process to Reach a Finding of Suitability to Transfer (FOST) for Property Where No Release or Disposal has Occurred, dated 1 June 1994.

DOD Policy on the Environmental Review Process to Reach a Finding of Suitability to Lease (FOSL), dated 18 May 1996

DOD Fast Track to FOST - A Guide to Determining if Property is Environmentally Suitable to Transfer , July 1997

DOD Fact Sheet – A Field Guide to FOSL, Fall 1996

DOD Memorandum, Subject: Clarification of "Uncontaminated" Environmental Condition of Property at Base Realignment and Closure (BRAC) Installations, dated 21 October 1996

DOD Memorandum, Subject: Asbestos, Lead paint and Radon Policies at BRAC Properties, dated 31 October 1994

III. U.S. Environmental Protection Agency (EPA) Guidance

Guidance for Evaluation of Federal Agency Demonstrations that Remedial Actions are Operating Properly and Successfully Under CERCLA Section 120(h)(3), (Interim), dated August 1996

EPA Memorandum, Subject: Military Base Closures. Guidance on EPA concurrence in the Identification of Uncontaminated Parcels under CERCLA Section 120(h)(4),

re-issued March 27, 1997

IV Department of the Army Guidance

AR 200-1, Environmental Protection and Enhancement, dated 21 February 1997

DAIM-BO Memorandum, Subject: Clarification of Meaning of Uncontaminated Property for Purposes of Transfer by the United States, dated 9 December 1996

V. WWW BRAC Sites

1. DOD Sites –

DOD Base Closure and Transition Office –
<http://emissary.acq.osd.mil/bctoweb/bctohome.nsf>

DOD Environmental Base Realignment and Base Closure (BRAC) Program
<http://www.dtic.mil/envirodod/envbrac.html>

DOD Base Closure and Community Reinvestment
<http://www.acq.osd.mil/iai/bccr.htm>
 DOD Office of Economic Adjustment
<http://www.acq.osd.mil/oea/index.html>

2. Environmental Protection Agency EPA OSWER Federal Facilities Base Realignment and Closure

<http://www.epa.gov/swerffrr/brac.htm>

3. Department of the Army Base Realignment and Closure Office

<http://www.hqda.army.mil/acsimweb/brac/brac3.htm>

CERL BRAC/NEPA "How To" Manual
<http://www.cecer.army.mil/facts/sheets/PL19.html>

Corps of Engineers Base Realignment and Closure (Camp Bonneville)
 - Good Slide Presentation

<http://www.nps.usace.army.mil/geotech/bnvl/brac95/index.htm>

Presidio of San Francisco BRAC Environmental Restoration Program
 - General information as well as facts on Presidio Cleanup and Conversion
<http://www.presidiosanfran.com>

4. Department of the Air Force Air Force Base Conversion Agency

<http://www.afbca.hq.af.mil>

5. Department of the Navy

NAVY `NAVFAC Base Closure Site

<http://164.224.238.53.81/csohome.nsf>

Navy Facilities Engineering Command - information on Navy BRAC sites

http://www.ncts.navy.mil/homepages/navfac_es/bcp.htm

Navy Environmental BRAC News

<http://www.navy.mil/homepages/navfac/env/newslet.html>

FINDING OF SUITABILITY TO LEASE

(FOSL)

Parcel 4.12 and Parcel 27.2

Defense Distribution Depot Memphis, Tennessee

(FOSL Number 3)

May 20, 1998



376 334

DEPARTMENT OF THE ARMY
HEADQUARTERS, U.S. ARMY MATERIEL COMMAND
5001 EISENHOWER AVENUE, ALEXANDRIA, VA 22333-0001

REPLY TO
ATTENTION OF

AMCEN-R

29 MAY 1998

MEMORANDUM THRU Commander, U.S. Army Engineer Division, South Atlantic, ATTN: CESAD-RE, 77 Forsyth Street, Room 313, 77 Forsyth Street, S.W., Atlanta, GA 30335-6801

FOR Commander, U.S. Army Corps of Engineer District, Mobile, ATTN: CESAM-RE-M, P.O. Box 2288, Mobile, AL 36628-0001

SUBJECT: Finding of Suitability to Lease (FOSL-3) for Defense Distribution Depot, Memphis (DDMT)

1. References:

a. Memorandum, AMCEN-R, 3 Apr 97, subject: Report of Availability for a Master Lease with the Memphis Depot Redevelopment Agency.

b. Memorandum, DLSC-BBB, 25 Feb 98, SAB (Encl 1).

2. Enclosed for your action is the approved FOSL-3 (Encl 2) with supporting documentation for adding Buildings 251 and 972 at DDMT to the master lease with Memphis Depot Redevelopment Agency.

3. The approved Report of Availability for the entire installation, including Buildings 251 and 972, was forwarded with reference a.

4. The Final Environmental Assessment for Master Lease, Defense Distribution Depot Memphis, Tennessee, dated Sep 96, is the National Environmental Policy Act Document for this action.

5. Request a modification to the master lease adding Buildings 251 and 972 be executed in accordance with the Report of Availability and FOSL-3.

Fi

AMCEN-R

29 May 1998

SUBJECT: Finding of Suitability to Lease (FOSL-3) for Defense
Distribution Depot, Memphis (DDMT)

6. Point of contact for this action is Mr. Joe Goetz, AMCEN-R,
commercial (703) 617-8904 or DSN 767-8904.

7. AMC -- America's Arsenal for the Brave.

FOR THE COMMANDER:

2 Encls



EARLE C. RICHARDSON

Colonel, GS

Deputy Chief of Staff

for Engineering, Housing,

Environment, and Installation

Logistics

CF: (wo/encls)

Assistant Chief of Staff for Installation Management, ATTN:

DAIM-BO, 600 Army Pentagon, Washington, D.C. 20310-0600

Headquarters, U.S. Army Corps of Engineers, ATTN: CERE-C,

Pulaski Bldg #4133, 20 Massachusetts Avenue, Washington, D.C.
20314-1000

Director, Defense Logistics Agency, ATTN: DLSC-BBB, 8725 John J.
Kingman Road, Suite 2533, Fort Belvoir, VA 22060-6221

Commander, Defense Distribution Depot Memphis, ATTN: DDMT-D,
2163 Airways Boulevard, Memphis, TN 38114-5210

cc: CAAEC (Bill Randall)

BRAC Office

GC(L&I) (S. Philo)

4 June 1998
VAC

05/27/98

16:22

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CEASAM-RE

003/027

376 336



DEFENSE LOGISTICS AGENCY
DEFENSE LOGISTICS SUPPORT COMMAND
8725 JOHN J. KINGMAN ROAD, SUITE 2533
FORT BELVOIR, VIRGINIA 22060-6221

IN REPLY
REFER TO


DLSC-BBB

FEB 25 1998

MEMORANDUM FOR ARMY MATERIEL COMMAND
ATTN: AMCS0

SUBJECT: Memphis Finding of Suitability to Lease (Bldgs 251 and 972)

Attached for your approval and signature is the FOSL for buildings 251 (thrift shop) and 972 (open shed warehouse) located at the former Defense Distribution Depot Memphis, Tennessee. Defense Logistics Agency Environmental, Legal, and Real Estate have coordinated.


LEONARD YANKOSKY
Chief, BRAC Program Management Team

Attachment



E

376 337

1. PURPOSE

The purpose of this Finding Of Suitability To Lease (FOSL) is to document the environmental suitability of certain parcels of property at Defense Distribution Depot Memphis, Tennessee (DDMT) for leasing to the Depot Redevelopment Corporation (DRC) consistent with the Department of Defense (DOD) and Army policy. The expected reuse of the properties are as follows: Building 251 - Portion of a Police Department Precinct; Building 972 - Wood Pallet Production. Expected reuse includes light industry, storage or general office use. In addition, this FOSL identifies use restrictions as specified in the text and attached Environmental Protection Provisions (Enclosure 5) necessary to protect human health or the environment and to prevent interference with any existing or planned environmental restoration activities.

2. PROPERTY DESCRIPTION

The proposed property to be leased consists of 6.52 acres that include two BRAC parcels. The two parcels are identified as 4.12 (Building 251) and 27.2 (Building 972). A site map of the property proposed to be leased can be found at Enclosure 1.

3. ENVIRONMENTAL CONDITION OF THE PROPERTY

A determination of the environmental condition of the facilities has been made based on the Community Environmental Response Facilitation Act (CERFA) Letter Report, dated December 5, 1996 and an Environmental Baseline Survey (EBS), dated November 6, 1996. The information provided is a result of a complete search of agency files during the development of the CERFA Letter Report and EBS. The following documents also provided information on environmental conditions of the property: Draft Final BRAC Cleanup Plan Version 2 (DDSP-FE, November 1997), Asbestos Reinspection (DDC-WP, October 1996), Final Environmental Assessment for Master Interim Lease (Tetra Tech, September 1996), Remedial Investigation Soil Sampling Letter Report (CH2M Hill, May 1997), OU - 2 and OU - 3 Field Sampling Plans (CH2M Hill, September 1995), Asbestos Identification Survey (Pickering, December 1993 and January 1994), RCRA Facilities Assessment (A.T. Kearney, Inc., January 1990), Final Remedial Investigation Report (Law Environmental, August 1990) and the Installation Assessment (USAEHA, March 1981).

3.1 Environmental Condition of Property Categories

The properties that are being considered for lease are classified as DOD Environmental Condition of Property (ECP) Category 4. The ECP category for the specific buildings and/or parcels are as follows:

ECP Category 4: Parcel 4.12 Building 251 only

ECP Category 4: Parcel 27.2 Building 972 only

A summary of the ECP Categories for the specific building is provided in Table 1 - Identification of Property and Environmental Conditions (Enclosure 2).

3.2 Storage, Release, Treatment or Disposal of Hazardous Substances

It was determined that there is no evidence that hazardous substances were stored or disposed in Building 251. However, a one square foot floor drain was sampled and found to contain sediment with levels of concern for Lead and Poly Aromatic Hydrocarbons. In accordance with direction from the BCT, the sediment was removed from the floor drain. The floor drain was then filled with concrete.

Building 972 stored flammables, solvents, and waste oils. Known releases in this building are addressed in paragraph 3.3.1, Storage, Release, or Disposal of Petroleum or Petroleum Products.

A summary of the buildings in which hazardous substances were stored, released, or disposed in excess of 40 CFR Part 373 reportable quantities is provided in Table 2 - Notification of Hazardous Substance Storage, Release, or Disposal (Enclosure 3).

3.3 Petroleum and Petroleum Products

3.3.1 Storage, Release, or Disposal of Petroleum or Petroleum Products

It was determined that petroleum products were used in Building 251. Building 251 housed a small engine/equipment shop area and a mechanic's work pit that contained a small sump. There is no evidence of any petroleum products being released or disposed in this area. The mechanic's work pit and sump were filled with concrete prior to 1976.

It was determined that petroleum products were stored in Building 972 and releases occurred. Operational spills were cleaned when they occurred. In addition, oil stained areas were observed during a visual inspection to facilitate the Screening Sites Field Sampling Plan (CH2M Hill 1995). Building 972 has been retrofitted with the floor being cleaned and sealed with new flooring material.

A summary of the buildings or areas in which petroleum or petroleum products were stored, released, or disposed is provided in Table 3 - Notification of Petroleum Products Storage, Release, or Disposal (Enclosure 4).

3.3.2 Underground and Above-Ground Storage Tanks (UST/AST)

There was no evidence that any petroleum or petroleum products were stored in USTs/ASTs on the properties listed in this FOSL.

3.4 Polychlorinated Biphenyls (PCB) Equipment

There are no PCB containing transformers or other PCB containing equipment, except hermetically sealed fluorescent light bulb ballasts that may contain PCBs, located on the property listed in this FOSL. There is no evidence these ballasts have leaked. There is no evidence of unremediated releases of PCB equipment. The lease will include the PCB notification provision included in the Environmental Protection Provisions (Enclosure 5).

3.5 Asbestos

The EBS and the Asbestos Identification Survey (Pickering, December 1993 and January 1994) indicate asbestos containing materials (ACM) are present in Buildings 251 and 972.

Asbestos findings in Building 251 were as follows:

Boiler/flue Insulation: Material contained 35% amosite and 10% to 20% chrysotile. Material was in good condition with minimal damage due to natural deterioration and maintenance activity. Boiler/flue insulation removed in 1995.

Thermal System Pipe Insulation: Contained 35% to 40% amosite and 8% to 25% chrysotile. Material was in good condition with minimal damage due to natural deterioration and maintenance activity. Insulation removed in 1995.

Boiler Door Insulation: Contained 35% to 55% chrysotile. Material was in good condition with minor natural deterioration. Insulation removed in 1995.

Exterior Window Putty: Contained 4% to 7% chrysotile. Material was in fair to poor condition due to physical damage and natural deterioration.

9 X 9 Floor Tile: Tile and mastic in the restrooms contained 20% to 25% chrysotile. Material was non-friable and in good condition.

Roof Flashing: Material used to seal the roof perimeter and all roof penetrations contained 5% chrysotile. Material was non-friable and in good condition.

Asbestos findings in Building 972 were as follows:

12 X 12/9 X 9 Floor Tile: Two layers of asbestos containing floor tile installed in the office and break room contained 10% to 25% chrysotile. Material was in good condition.

9 X 9 Beige Vinyl Floor Tile: Vinyl floor tile installed in the office area of Bay 5 contained 30% chrysotile. Material was non-friable and in good condition.

9 X 9 Floor Tile: Vinyl floor tile and mastic installed in the office area of Bay 5 contained 25% chrysotile. Material was non-friable and in good condition.

Cement Asbestos Products: Cement asbestos board installed on the ceiling and wall area of the shop in Bay 6 contained 25% chrysotile. Material was in fair condition with moderate damage due to maintenance activity. Boards removed in 1998.

The ACM does not currently pose a threat to human health or the environment because there is no friable asbestos. The lease will include the asbestos warning and covenant included in the Environmental Protection Provisions (Enclosure 5).

3.6 Lead-Based Paint (LBP)

Based on the age of Buildings 972 and 251 (constructed prior to 1978), they are presumed to contain lead-based paint. No residential use is to be permitted under the terms of the lease. The lease shall include the lead-based paint warning and covenant included in the Environmental Protection Provisions (Enclosure 5).

3.7 Radiological Sources or Contamination

There is no evidence that the Army or DDMT used or stored radioactive sources on the property listed in this FOSL.

3.8 Radon

In keeping with DOD policy to not perform radon assessment and mitigation prior to transfer of BRAC property, there were no radon surveys conducted in the buildings in this FOSL. Radon surveys were conducted in accordance with regulations in the following residential structures at DDMT: Buildings 176, 179, 181, and 184. Radon was not detected above the Environmental Protection Agency (EPA) residential action level of 4 picocuries per liter (pCi/L) in these buildings.

3.9 Unexploded Ordnance

Based on a review of existing records and available information, none of the buildings or surrounding land proposed for lease are known to contain unexploded ordnance.

3.10 Other Hazardous Conditions

There are no other known hazardous conditions that present a threat to human health or the environment.

4. REMEDIATION

In October 1992, the U.S. EPA placed DDMT on the National Priorities List (NPL) for environmental restoration. DDMT has since entered into a Federal Facilities Agreement (FFA) with the Tennessee Department of Environment and Conservation (TDEC) and the EPA. Environmental contamination on the property does not present a hazard to leasing the property. In addition, environmental conditions on adjacent property do not present a hazard to the leasing of the property. Regulators have concurred with DDMT that the property does not pose risks above levels deemed protective provided that the property is used for the proposed purpose. No remediation is currently underway or planned. The lease will include a provision reserving the Army's right to conduct remediation activities in the Environmental Protection Provisions (Enclosure 5).

5. REGULATORY COORDINATION

TDEC and EPA Region 4 were notified of the initiation of this FOSL. Regulatory comments received during the FOSL development and the BRAC Cleanup Team meetings were reviewed and incorporated as appropriate. The FOSL was discussed with public at the January 22, 1998 Restoration Advisory Board meeting. No verbal or written comments were received from the public.

6. NATIONAL ENVIRONMENTAL POLICY ACT (NEPA) COMPLIANCE AND CONSISTENCY WITH LOCAL REUSE PLAN

The environmental impacts associated with the proposed lease of the property have been adequately analyzed in accordance with the National Environmental Policy Act (NEPA). The results of this analysis have been documented in the Final Environmental Assessment for Master Interim Lease, Defense Distribution Depot Memphis, Tennessee dated September 1996. The environmental effects of the activities anticipated under the proposed lease were determined not to be significant.

The proposed lease addressed by this FOSL is consistent with the reuse alternatives stated in the above referenced NEPA document and with the intended reuse of the property set forth in the Memphis Depot Redevelopment Plan dated May 1997.

7. ENVIRONMENTAL PROTECTION PROVISIONS

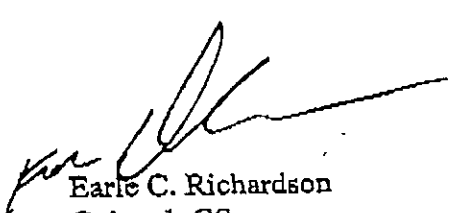
On the basis of the above results from the site-specific EBS, any subsequent or additional investigations, surveys, or studies identified in the FOSL, and in consideration of the intended use of the property, certain terms, conditions, reservations, and restrictions are required for the proposed lease. The Environmental Protection Provisions are at Enclosure 5 and will be included in the proposed lease and all subleases.

8. FINDING OF SUITABILITY TO LEASE

Based on the information detailed in the EBS, the references cited therein, and this FINDING OF SUITABILITY TO LEASE, I have concluded that all Department of Defense requirements to reach a FINDING OF SUITABILITY TO LEASE have been fully met for the subject properties. The subject property is suitable to lease by the Lessee for the intended purpose, subject to the terms, conditions, reservations, and restrictions set forth in the Environmental Protection Provision attached to this FOSL, without posing an unreasonable risk to human health or the environment and without interference with the environmental remediation process at Defense Distribution Depot Memphis, Tennessee, and the uses contemplated for the lease are consistent with protection of human health and the environment.

As required by CERCLA section 120(h)(3)(B), I have determined that the Environmental Protection Provisions of the lease and the terms of the lease provide adequate assurances that the United States will take any additional remedial action found to be necessary to protect human health and the environment with respect to any hazardous substances remaining on the property on the date of the lease which has not been taken on the date of the lease.

Notification of hazardous substance or petroleum product storage, release, treatment, or disposal on the property, Table 2 - Notification of Hazardous Substance Storage, Release, Treatment or Disposal (Enclosure 3) and Table 3 - Notification of Petroleum Products Storage, Release or Disposal (Enclosure 4) shall be provided in the lease documents, as required under the DOD FOSL Guidance.



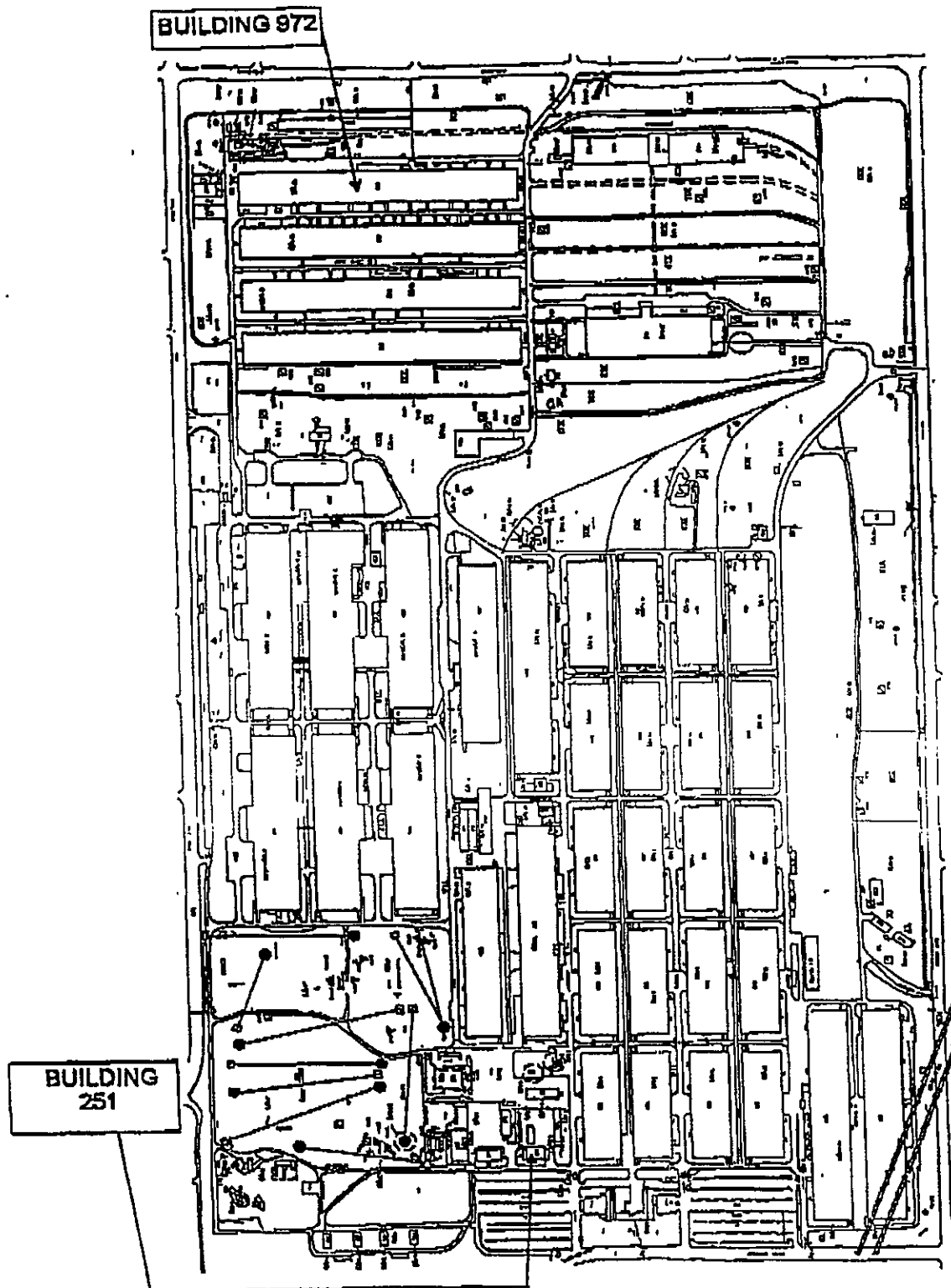
Earle C. Richardson
Colonel, GS

Deputy Chief of Staff for Engineering, Housing,
Environmental, and Installation Logistics

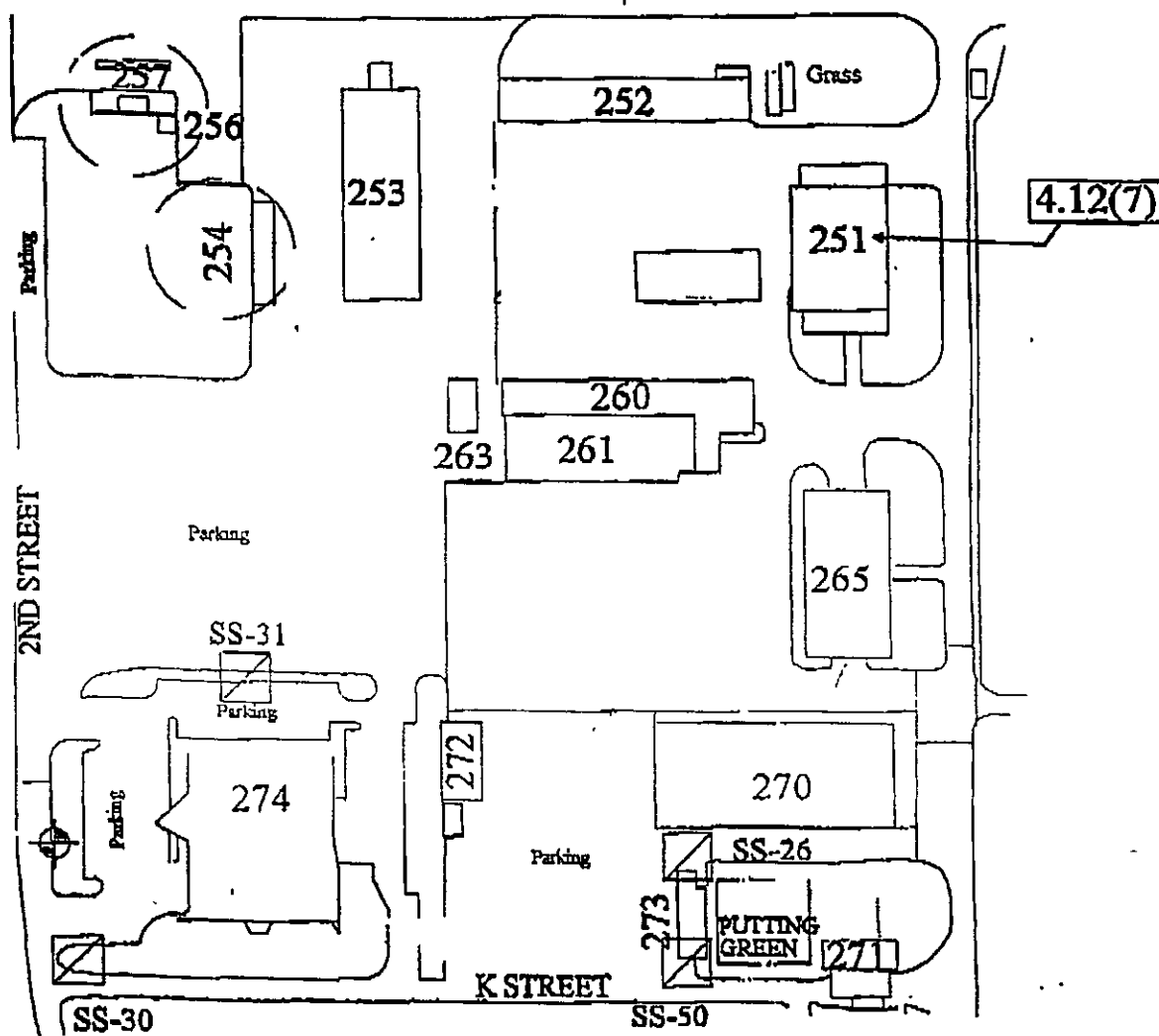
7 Enclosures

- Encl 1 Site Map of Proposed Lease Area
- Encl 2 Table 1 - Identification of Property and Environmental Condition
- Encl 3 Table 2 - Notification of Hazardous Substance Storage, Release, or Disposal
- Encl 4 Table 3 - Notification of Petroleum Product Storage, Release or Disposal
- Encl 5 Environmental Protection Provisions
- Encl 6 Regulatory/Public Comments and Responses
- Encl 7 References

Site Map of Proposed Lease Area



Site Map - Building 251



Site Map - Building 972

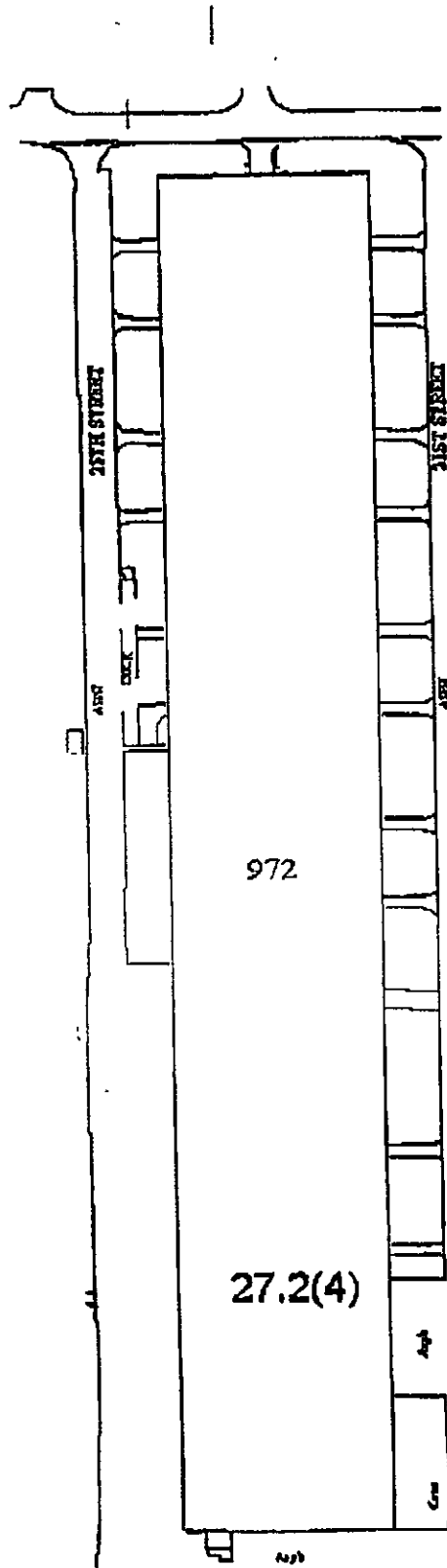


Table 1
Identification of Property and Environmental Conditions

Facility Identification and Description of Relevant Activities ^a	Corresponding EBS Identification	Environmental Condition Category Number	Environmental Condition of Property and Former, Ongoing, or Planned Remedial Action ^b
Building 251 is an 8,001 square foot building erected in 1942 and was used for storage and a small engine/equipment shop. Later use was as the post thrift shop.	Parcel 4.12	4	No documented or alleged hazardous substance or petroleum product release or disposal is known to have occurred. A one square foot floor drain was sampled and found to contain sediment with contaminants of concern for lead and PAHs. In accordance with BCT direction, the sediment was removed, and the floor drain was filled with concrete. No further action is required.
Building 972 is a 276,000 square foot building erected in 1942 as an open shed warehouse that was later enclosed. Storage/past use included flammables, solvents and waste oils. Current use is for the storage and construction of wooden packing materials.	Parcel 27.2	4	No documented or alleged hazardous substance or petroleum product release or disposal is known to have occurred. However, an unknown quantity of diesel fuel was spilled on 3/14/95. The location states the west side of building 972, and it is unknown if this spill occurred inside or outside of the building. Available records show that absorbent was applied and the product was sent to recoup for disposal. No further action is required.

Category 1: Areas where no release or disposal of hazardous substances or petroleum products has occurred (including no migration of these substances from adjacent areas)

Category 2: Areas where only release or disposal of petroleum products has occurred.

Category 3: Areas where release, disposal and/or migration of hazardous substances has occurred, but at concentrations that do not require a removal or remedial response.

Category 4: Areas where release, disposal and/or migration of hazardous substances has occurred, and all removal or remedial actions to protect human health and the environment have been taken.

Category 5: Areas where release, disposal and/or migration of hazardous substances has occurred, and removal or remedial actions are underway, but all required remedial actions have not yet been taken.

Category 6: Areas where release, disposal and/or migration of hazardous substances has occurred, but required actions have not yet been implemented.

Category 7: Areas that are not evaluated or require additional evaluation.

Table 2
Notification of Hazardous Substance Storage, Release, or Disposal*

Building Number	Name of Hazardous Substance(s)	Date of Storage, Release, or Disposal	Remedial Actions
Building 251	No record available of known storage items. Building is assumed to at one time contain products typically found in a small machine area.	It is unlikely that substances in excess of 1000 kg were stored in this building. No documented releases.	A one square foot floor drain was sampled and found to contain sediment with levels of concern for lead and PAHs. In accordance with BCT direction, the sediment was removed and the floor drain was filled with concrete. All removal actions to protect human health and the environment have been taken at this site.
Building 972	Flammables, solvents, waste oil	Known releases are of petroleum and are addressed in Table 3.	No remedial actions are required in this building.

* This table provides information on the storage of hazardous substances for one year or more in quantities greater than or equal to 1000 kilograms or the hazardous substance's CERCLA reportable quantity (whichever is greater). In addition, it provides information on the known release of hazardous substances in quantities greater than or equal to 1000 kilograms or the hazardous substance's CERCLA reportable quantity. See 40 CFR Part 373.

Table 3
Notification of Petroleum Product Storage, Release, or Disposal*

Building Number	Name of Petroleum Product(s)	Date of Storage, Release, Treatment, or Disposal Activities	Remedial Actions
Building 251	No record is available of known storage items. Building is assumed to at one time contain petroleum products typically found in a small machine area (lubricant grease, gasoline, motor oil, etc.).	No documented releases.	The BCT visually inspected this building and noted no floor stains. No remedial actions are required.
Building 972	Flammables and waste oil	Oil stains were observed on the floor of the building. A release of diesel fuel occurred on 3/14/95 on the west side of Building 972. However, it is unknown if this release was inside or outside of the building.	Operational spills were cleaned as they occurred. The release of diesel fuel was cleaned with absorbent and the resulting product disposed. Building 972 has been retrofitted from an open warehouse and the floor has been cleaned and sealed with new flooring material. No further action is required.

* AMC's unofficial policy for notification includes amounts of petroleum in excess of 55 gallons either stored for greater than one year or released.

Environmental Protection Provisions

The following conditions will be placed in the lease to ensure there will be no unacceptable risk to human health or the environment and no interference with Defense Distribution Depot Memphis, Tennessee (DDMT) missions or to the DDMT Installation Restoration Program (IRP), and to ensure regulatory requirements for the IRP and other compliance programs administered by DDMT are met.

1. The sole purpose for which the leased premises and any improvements thereon may be used, in the absence of prior written approval of the Government for any other use, is for uses similar or comparable to past or current activities of the Depot such as light industry, storage or general office use.
2. The Lessee shall neither transfer nor assign this Lease or any interest therein or any property on the leased premises, nor sublet the leased premises or any part thereof or any property thereon, nor grant any interest, privilege, or license whatsoever in connection with this Lease without the prior written consent of the Government. Such consent shall not be unreasonably withheld or delayed. Every sublease shall contain the Environmental Protection Provisions herein.
3. The Lessee and any sublessee shall comply with the applicable Federal, state, and local laws, regulations, and standards that are or may become applicable to the Lessee's or sublessee's activities on the Leased Premises. These include the DDMT NPDES and Industrial Wastewater Discharge Permits.
4. The Lessee and any sublessee shall be solely responsible for obtaining at its cost and expense any environmental permits required for its operations under the Lease, independent of any existing permits.
5. The 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 the Government is responsible for enforcing them. Such inspections are without prejudice to the right of duly constituted enforcement officials to make such inspections. The Government normally will give the Lessee or sublessee twenty-four (24) hours prior notice of its intention to enter the Leased Premises unless it determines the entry is required for safety, environmental, operations, or security purposes. The Lessee shall have no claim on account of any entries against the United States or any officer, agent, employee, or contractor thereof.

6. The Government acknowledges that Defense Distribution Depot Memphis, Tennessee has been identified as a National Priorities List (NPL) site under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) of 1980, as amended. The Lessee acknowledges that the Government has provided it with a copy of the Defense Distribution Depot Memphis, Tennessee Federal Facility Agreement (FFA) entered into by the United States Environmental Protection Agency (EPA) Region 4, the State of Tennessee, and DDMT that became effective March 1995, and will provide the Lessee with a copy of any amendments thereto. The Lessee agrees that should any conflict arise between the terms of such agreement as it presently exists or may be amended and the provisions of this Lease, the terms of the FFA will take precedence. The Lessee further agrees that notwithstanding any other provisions of the Lease, the Government assumes no liability to the Lessee or its sublessees or licensees should implementation of the FFA interfere with the Lessee's or any sublessee's or licensee's use of the Leased Premises. The Lessee shall have no claim on account of any such interference against the United States or any officer, agent, employee, or contractor thereof, other than for abatement of rent.

7. The Government, EPA, and the Defense Distribution Depot Memphis, Tennessee and their officers, agents, employees, contractors, subcontractors, have the right, upon reasonable notice to the Lessee and any sublessee, to enter upon the Leased Premises for the purposes enumerated in these subparagraphs and for such other purposes consistent with any provision of the FFA:

(a) to conduct investigations and surveys, including, where necessary, drilling, soil and water sampling, test-pitting, testing soil borings and other activities related to the Defense Distribution Depot Memphis, Tennessee Installation Restoration Program (IRP) or FFA;

(b) to inspect field activities of the Government and its contractors and subcontractors in implementing the Defense Distribution Depot Memphis, Tennessee IRP or FFA;

(c) to conduct any test or survey required by the EPA or TDEC relating to the implementation of the FFA or environmental conditions at the Leased Premises or to verify any data submitted to the EPA or TDEC by the Government relating to such conditions;

(d) to construct, operate, maintain or undertake any other response or remedial action, as required or necessary under the Defense Distribution Depot Memphis, Tennessee IRP or FFA, including but not limited to monitoring wells, pumping wells, and treatment facilities;

(e) to conduct Environmental Compliance Assessment System Surveys (ECAS).

8. The Lessee and any sublessee shall comply with the provisions of any health and safety plan in effect under the IRP or the PFA during the course of any of the above described response or remedial actions. Any inspection, survey, investigation, or other response or remedial action will, to the extent practicable, be coordinated with a representative or representatives designated by the Lessee and any sublessee. The Lessee and any sublessee shall have no claim on account of such entries against the United States or any office, agent, employee, contractor, or subcontractor thereof. In addition, the Lessee and any sublessee shall comply with all applicable Federal, state, and local occupational safety and health regulations.
9. The Lessee further agrees that in the event of any assignment or sublease of the Leased Premises, it shall provide to the EPA and TDEC by certified mail a copy of the agreement or sublease of the Leased Premises (as the case may be) within fourteen (14) days after the effective date of such transaction. The 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.
10. The Lessee shall strictly comply with the hazardous waste requirements under the Resource Conservation and Recovery Act (RCRA) or its Tennessee equivalent. Except as specifically authorized by the Government in writing, the Lessee must provide at its own expense hazardous waste management facilities, complying with all laws and regulations. Government hazardous waste management facilities will not be available to the Lessee. Any violation of the requirements of this condition shall be deemed a material breach of this Lease.
11. Defense Distribution Depot Memphis, Tennessee accumulation points for hazardous and other wastes will not be used by the Lessee or any sublessee. Neither the Lessee nor the sublessee will permit its hazardous wastes to be commingled with hazardous waste of DDMT.
12. The Lessee shall prepare and maintain a Government-approved plan for responding to hazardous waste, fuel, and other chemical spills prior to commencement of operations on the leased premises. Such a plan shall be independent of the Defense Distribution Depot Memphis, Tennessee and shall not rely on installation 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 any Government officer conducting timely cleanup actions, the Lessee agrees to reimburse the Government for its costs.

13. The Lessee shall not construct or make or permit its sublessees or assigns to construct or make any alterations, additions, or improvements to, or installations upon or otherwise modify or alter the leased premises in any way that may adversely affect the Defense Distribution Depot Memphis, Tennessee environmental program, environmental cleanup, human health, or the environment, without the 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 or alterations, additions, modifications, improvements, or installations (collectively "work") in the proximity of operable units that are a part of a National Priorities List (NPL) site, such consent may include a requirement for 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.

14. The Lessee shall not conduct or permit its sublessees to conduct any subsurface excavation, digging, drilling or other disturbance of the surface without the prior written approval of the Government.

15. The Lessee shall strictly comply with the hazardous waste permit requirements under the Resource Conservation and Recovery Act (RCRA), or its state equivalent and any other applicable laws, rules or regulations. The Lessee must provide at its own expense such hazardous waste storage facilities that comply with all laws and regulations as it may need for such storage. Any violation of the requirements of this provision shall be deemed a material breach of this Lease.

16. LEAD-BASED PAINT WARNING AND COVENANT:

a. The Leased Premises do not contain residential dwellings and are not being leased for residential or child care purposes. The Lessee is notified that the Leased Premises contain buildings built prior to 1978 that contain lead-based paint.

b. Available information concerning known lead-based paint and/or lead-based paint hazards, the location of lead-based paint and/or lead-based paint hazards, and the condition of painted surfaces is contained in the Environmental Baseline Survey that has been provided to the Lessee. Additionally, the following report pertaining to lead-based paint and/or lead-based paint hazards has been provided to the Lessee: Lead Based Paint Risk Assessment for DDMT (Barge, Waggoner, Sumner, and Cannon, December 1995, revised April 1996). Additionally, the Lessee has been provided with a copy of the federally-approved pamphlet on lead poisoning prevention. The Lessee hereby acknowledges receipt of all of the information described in this subparagraph.

c. The Lessee acknowledges that it has received the opportunity to conduct a risk assessment or inspection for the presence of lead-based paint and/or lead-based paint hazards prior to execution of this Lease.

d. The Lessee shall not permit use of any buildings or structures on the Leased Premises for residential habitation without first obtaining the written consent of the Government. As a condition of its consent, the Government may require the Lessee to: (i) inspect for the presence of lead-based paint and/or lead-based paint hazards in and around buildings and structures on the Leased Premises; (ii) abate and eliminate lead-based paint hazards in accordance with all applicable laws and regulations; and (iii) comply with the notice and disclosure requirements under applicable federal, state, and local laws or regulations. The Lessee agrees to be responsible for any future remediation of lead-based paint found to be necessary on the Leased Premises.

e. The Government assumes no liability for remediation or damages for personal injury, illness, disability, or death, to the Lessee, its successors or assigns, sublessees or to any other person, including members of the general public, arising from or incident to possession and/or use of any portion of the Leased Premises containing lead-based paint as residential housing. The Lessee further agrees to indemnify and hold harmless the Government, its officers, agents and employees, from and against all suits, claims, demands or actions, liabilities, judgments, costs and attorneys' fees arising out of, or in any manner predicated upon, personal injury, death or property damage resulting from, related to, caused by or arising out of the possession and/or use of any portion of the Leased Premises containing lead-based paint as residential housing. This section and the obligations of the Lessee hereunder shall survive the expiration or termination of this Lease and any conveyance of the Leased Premises to the Lessee. The Lessee's obligation hereunder shall apply whenever the United States of America incurs costs or liabilities for actions giving rise to liability under this section.

17. NOTICE OF THE PRESENCE OF ASBESTOS AND COVENANT:

a. The Lessee is hereby informed and does acknowledge that friable and non-friable asbestos or asbestos-containing materials ("ACM") has been found on the Leased Premises, as described in the final base-wide EBS. The ACM on the Leased Premises does not currently pose a threat to human health or the environment.

b. The Lessee covenants and agrees that its use and occupancy of the Leased Premises will be in compliance with all applicable laws relating to asbestos; and that the Government assumes no liability for future remediation of asbestos or damages for personal injury, illness, disability, or death, to the Lessee, its successors or assigns, sublessees, or to any other person, including members of the general public, arising from or incident to the purchase, transportation, removal, handling, use, disposition, or other activity causing or leading to contact of any kind whatsoever with asbestos on the Leased Premises described in this Lease, whether the Lessee, its successors or assigns have properly warned or failed to properly warn the individual(s) injured. The Lessee agrees to be responsible for any future remediation of asbestos found to be necessary on the Leased Premises.

18. NOTICE OF POLYCHLORINATED BIPHENYL (PCBs) EQUIPMENT AND COVENANT:

a. The Lessee is hereby informed and does acknowledge that equipment containing polychlorinated biphenyls (PCBs) did exist on the Property as described in the final base wide Environmental Baseline Survey (EBS). All PCB containing equipment, except fluorescent light bulb ballasts that possibly contain PCBs, has been properly removed in accordance with applicable laws and regulations.

b. The Lessee covenants and agrees that any possession, use and management of any PCB containing equipment will be in compliance with all applicable laws relating to PCBs and PCB containing equipment, and that the Government assumes no liability for the remediation of PCB contamination or damages for personal injury, illness, disability, or death to the Lessee, its successors or assigns, sublessees or to any other person, including members of the general public, arising from or incident to use, handling, management, disposition, or other activity causing or leading to contact of any kind whatsoever with PCBs or PCB containing equipment, whether the Lessee, its successors or assigns have properly warned or failed to properly warn the individual(s) insured. The Lessee agrees to be responsible for any remediation of PCBs or PCB containing equipment found to be necessary from its use or possession during the term of the Lease. This section and the obligations of the Lessee hereunder shall survive the expiration or termination of this lease and any conveyance of the Leased Premises to the Lessee.

19. The Lessee shall not use the Leased Premises for the storage or disposal of non-Department of Defense owned hazardous or toxic materials, as defined in 10 U.S.C. 2692, unless authorized under 10 U.S.C. 2692 and properly approved by the Government.

20. The Government may impose any additional environmental protection conditions and restrictions during the terms of this lease that it deems necessary by providing written notice of such conditions or restrictions to the Lessee.

Regulatory/Public Comments and Responses

Please find the Environmental Protection Agency (EPA), Tennessee Department of Environment and Conservation (TDEC), Army Materiel Command (AMC), and Defense Logistics Agency (DLA) comments and Memphis Depot Caretaker (MDC) responses for FOSL # 3.

EPA comments to FOSL # 3.

1. Please note that regulatory agencies should be notified at the initiation of the FOSL. The process of development of the FOSL will be designed to assure that regulators are provided adequate opportunity to express their views. Regulators will be provided with workable draft documents as they become available. Regulatory comments received during the development of the FOSL will be reviewed and incorporated as appropriate. Any unresolved regulatory comments will be included as enclosures to the FOSL.

2. As required by CERCLA Section 120(h) (5), DoD shall notify the state prior to entering into any lease that will encumber the property beyond the date of termination of DOD's operations. The notification shall include the length of lease, the name of lessee, and a description of the uses that will be allowed under the lease of the property. At National Priority List sites, DoD shall provide this notification to the United States Environmental protection Agency as well.

COMMENTS NOTED: The MDC will provide EPA and TDEC workable drafts of FOSLs as soon as they are available.

3. Section 1. Purpose. The section should identify the leased properties as Parcel 4.12 (Bldg. 251) and Parcel 27.2 (Bldg. 972). Please note that the term "expected reuse" is too vague and ambiguous. The section should define clearly the intended use of the leased property.

COMMENT INCORPORATED.

3. Section 2. Property Description. Is Building 972 an open shed or a closed shed? Please note that Table 1 describes Building 972 as a closed shed.

COMMENT INCORPORATED. Building 972 was constructed as an open shed warehouse then later enclosed. Tables 1 & 2 will be changed to refer to Building 972 as an open and then enclosed shed.

4. Section 3. Environmental Condition of the Property. The section should identify the updated BRAC Cleanup Plan (1997) as a reference used for this document.

COMMENT INCORPORATED. The Draft Final BRAC Cleanup Plan Version 2 dated November 1997 will be added to this section.

5. Section 3.1 Environmental Condition of Properties Categories. The section should define Category 4 as 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. Please change the title of Table 1 to Identification of Property and Environmental Conditions.

COMMENT INCORPORATED. The title of Table 1 will be changed to "Identification of Property and Environmental Conditions." Also, Army guidance does not call for a description of specific ECP categories in this section. However, ECP categories shall be listed at the bottom of Table 1.

6. Section 3.3.2 Underground Above-Ground Storage Tanks (UST/AST). The last sentence should be deleted.

CONCUR. Section 3.3.2 will be changed to read "There was no evidence that any petroleum or petroleum products were stored in USTs/ASTs on the properties listed in this FOSL.

7. Section 3.6 Lead-Based Paint (LBP). The current condition of the buildings should be described in this section.

NON CONCUR. Conditions can change from the time a FOSL is written and signed until a lease is prepared and signed. It is incumbent on the government to provide all available lead-based paint information regarding properties, but it is incumbent on the potential lessee to verify the condition at the time of lease. Guidance does not call for a description of the property but rather dictates that the government provide the lessee notification of possible presence of lead-based paint. The Master Interim Lease as well as Environmental Protection Provisions (Enclosure 5) provide the lessee an opportunity to inspect the properties.

8. Section 3.9 Radon. The section should only refer to the leased buildings. The radon survey conducted at residential buildings is irrelevant information.

NON CONCUR. Higher headquarters decided to include the housing information to let the reader know the Army was aware of radon requirements and had not inadvertently failed to address this issue.

9. Section 4. Remediation. The section should include any remedial action(s) conducted at the leased buildings. The section contains information that is irrelevant and therefore should be deleted.

References

I. The statutory and regulatory requirements relating to FOST/FOSLs are as follows:

CERCLA §120(h), 42 U.S.C. §9620(h) - Property Transferred by Federal Agencies

10 U.S.C. § 2667(f) as amended by section 2906 of the FY 94 Defense Authorization Act requiring DOD and EPA to consult on FOSL procedures

40 CFR PART 373 - Reporting Hazardous Substance Activity when Selling or Transferring Federal Real Property.

II. The DOD Guidance relating to FOST/FOSLs is as follows:

DOD Guidance on the Environmental Review Process to Reach a Finding of Suitability to Transfer (FOST) for Property Where Release or Disposal has Occurred, dated 1 June 1994.

DOD Guidance on the Environmental Review Process to Reach a Finding of Suitability to Transfer (FOST) for Property Where No Release or Disposal has Occurred, dated 1 June 1994.

DOD Policy on the Environmental Review Process to Reach a Finding of Suitability to Lease (FOSL), dated 18 May 1996.

DOD Fast Track to FOST - A Guide to Determining if Property is Environmentally Suitable to Transfer, July 1997

DOD Fact Sheet - A Field Guide to FOSL, Fall 1996

DOD Memorandum, Subject: Clarification of "Uncontaminated" Environmental Condition of Property at Base Realignment and Closure (BRAC) Installations, dated 21 October 1996

DOD Memorandum, Subject: Asbestos, Lead paint and Radon Policies at BRAC Properties, dated 31 October 1994

III. U.S. Environmental Protection Agency (EPA) Guidance

Guidance for Evaluation of Federal Agency Demonstrations that Remedial Actions are Operating Properly and Successfully Under CERCLA Section 120(h)(3), (Interim), dated August 1996

EPA Memorandum, Subject: Military Base Closures: Guidance on EPA concurrence in the Identification of Uncontaminated Parcels under CERCLA Section 120(h)(4),

re-issued March 27, 1997

IV. Department of the Army Guidance

AR 200-1, Environmental Protection and Enhancement, dated 21 February 1997

DAIM-BO Memorandum, Subject: Clarification of Meaning of Uncontaminated Property for Purposes of Transfer by the United States, dated 9 December 1996

V. WWW BRAC Sites

1. DOD Sites -

DOD Base Closure and Transition Office -
<http://emissary.acq.osd.mil/bctoweb/bctohome.nsf>

DOD Environmental Base Realignment and Base Closure (BRAC) Program
<http://www.dtic.mil/envirodod/envbrac.html>

DOD Base Closure and Community Reinvestment
<http://www.acq.osd.mil/iai/bccr.htm> DOD Office of Economic Adjustment
<http://www.acq.osd.mil/oca/index.html>

2. Environmental Protection Agency EPA OSWER Federal Facilities Base Realignment and Closure

<http://www.epa.gov/swerffrr/brac.htm>

3. Department of the Army Base Realignment and Closure Office

<http://www.hqda.army.mil/acsimweb/brac/brac3.htm>

CERL BRAC/NEPA "How To" Manual
<http://www.cecer.army.mil/facts/sheets/PL19.html>

Corps of Engineers Base Realignment and Closure (Camp Bonneville)
- Good Slide Presentation

<http://www.nps.usace.army.mil/geotech/bnvl/brac95/index.htm>

0040505.doc

||
Presidio of San Francisco BRAC Environmental Restoration Program
- General information as well as facts on Presidio Cleanup and Conversion

<http://www.presidiosanfran.com>

4. Department of the Air Force Air Force Base Conversion Agency

<http://www.afbca.hq.af.mil>

5. Department of the Navy

NAVY NAVFAC Base Closure Site

<http://164.224.238.53:81/csohome.nsf>

Navy Facilities Engineering Command - information on Navy BRAC sites

http://www.ncts.navy.mil/homepages/navfac_cs/bcp.htm

Navy Environmental BRAC News

<http://www.navy.mil/homepages/navfac/env/newslet.html>

FINDING OF SUITABILITY TO LEASE

(FOSL)

*Parcel 4.4, Parcel 4.5, Parcel 4.6, Parcel 4.7,
Parcel 4.8, Parcel 4.9, Parcel 4.10, Parcel 4.11, Parcel 4.13*

Defense Distribution Depot Memphis, Tennessee

(FOSL number 4)

July 8, 1998

JAN-83-1900 04:33

P.02



DEPARTMENT OF THE ARMY
HEADQUARTERS, U.S. ARMY MATERIEL COMMAND
5001 EISENHOWER AVENUE, ALEXANDRIA, VA 22333-0001

REPLY TO
ATTENTION OF

AMCEN-R

15 JUL 1998

MEMORANDUM THRU Commander, U.S. Army Engineer Division, South Atlantic, ATTN: CESAD-RE, 77 Forsyth Street, Room 313, 77 Forsyth Street, S.W., Atlanta, GA 30335-6801

FOR Commander, U.S. Army Corps of Engineer District, Mobile, ATTN: CESAM-RE-M, P.O. Box 2288, Mobile, AL 36628-0001

SUBJECT: Finding of Suitability to Lease (FOSL-4) for Defense Distribution Depot, Memphis (DDMT)

1. References:

a. Memorandum, AMCEN-R, 3 Apr 97, subject: Report of Availability for a Master Lease with the Memphis Depot Redevelopment Agency.

b. Memorandum, DLSC-BBB, 12 Jun 98, SAB (Encl 1).

2. Enclosed for your action is the approved FOSL-4 (Encl 2) with supporting documentation for adding Buildings 253, 254, 256, 257, 260, 261, 263, 265, 273, pad 267 and various parcels at DDMT to the master lease with Memphis Depot Redevelopment Agency.

3. The approved Report of Availability for the entire installation, including the property addressed in this FOSL, was forwarded with reference a.

4. The Final Environmental Assessment for Master Lease, Defense Distribution Depot Memphis, Tennessee, dated Sep 96, is the National Environmental Policy Act Document for this action.

5. Request a modification to the master lease adding Buildings 251 and 972 be executed in accordance with the Report of Availability and FOSL-3.

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P.03

AMCEN-R

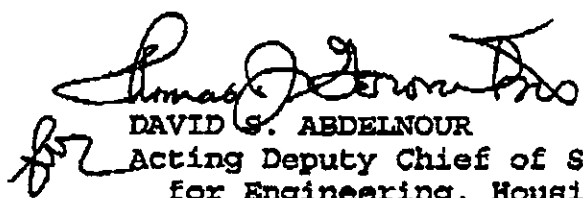
SUBJECT: Finding of Suitability to Lease (FOSL-4) for Defense Distribution Depot, Memphis (DDMT)

6. Point of contact for this action is Mr. Joe Goetz, AMCEN-R, commercial (703) 617-8904 or DSN 767-8904.

7. AMC -- America's Arsenal for the Brave.

FOR THE COMMANDER:

2 Encls


DAVID S. ABDELNOUR
for Acting Deputy Chief of Staff
for Engineering, Housing,
Environment, and Installation
Logistics

CF: (wo/encls)

Assistant Chief of Staff for Installation Management, ATTN:

DAIM-BO, 600 Army Pentagon, Washington, D.C. 20310-0600

Headquarters, U.S. Army Corps of Engineers, ATTN: CERE-C,

Pulaski Bldg #4133, 20 Massachusetts Avenue, Washington, D.C.
20314-1000

Director, Defense Logistics Agency, ATTN: DLSC-BBB, 8725 John J.
Kingman Road, Suite 2533, Fort Belvoir, VA 22060-6221

Commander, Defense Distribution Depot Memphis, ATTN: DDMT-D,
2163 Airways Boulevard, Memphis, TN 38114-5210

1. PURPOSE

The purpose of this Finding Of Suitability To Lease (FOSL) is to document the environmental suitability of Parcels 4.4, 4.5, 4.6, 4.7, 4.8, 4.9, 4.10, 4.1 and 4.13 at the Defense Distribution Depot Memphis, Tennessee (DDMT) for leasing to the Depot Redevelopment Corporation (DRC) for light industry, storage or general office use consistent with Department of Defense (DOD) and Army policy. This FOSL has been developed in accordance with the DRC's Reuse Plan. In addition, the FOSL identifies use restrictions as specified in the attached Environmental Protection Provisions (Enclosure 5) necessary to protect human health or the environment and to prevent interference with any existing or planned environmental restoration activities.

2. PROPERTY DESCRIPTION

The proposed property to be leased consists of 5.93 acres that includes nine (9) parcels (4.4, 4.5, 4.6, 4.7, 4.8, 4.9, 4.10, 4.11 and 4.13). Included in these parcels are nine (9) buildings (Buildings 253, 254, T256, 257, 260, T261, 263, 265 and 273), one pad (Pad 267) and one open area. The open land area contains Buildings T256 and T261. Site maps of the property proposed to be leased can be found at Enclosure 1.

3. ENVIRONMENTAL CONDITION OF THE PROPERTY

A determination of the environmental condition of the facilities has been made based on the Community Environmental Response Facilitation Act (CERFA) Letter Report dated December 5, 1996 and an Environmental Baseline Survey (EBS) dated November 6, 1996. The information provided is a result of a complete search of agency files during the development of these environmental surveys. The following documents also provided information on environmental conditions of the property: Draft Final BRAC Cleanup Plan Version 2 (DDSP-FE, November 1997), Asbestos Reinspection (DDC-WP, October 1996), Final Environmental Assessment for Master Interim Lease (Tetra Tech, September 1996), Remedial Investigation Soil Sampling Letter Report (CH2M Hill, May 1997), OU - 2 and OU - 3 Field Sampling Plans (CH2M Hill, September 1995), Asbestos Identification Survey (Pickering, December 1993 and January 1994), RCRA Facilities Assessment (A.T. Kearney, Inc., January 1990), Final Remedial Investigation Report (Law Environmental, August 1990) and the Installation Assessment (USAEHA, March 1981).

3.1 Environmental Condition of Property Categories

The Department of Defense (DOD) Environmental Condition of Property (ECP) Categories for the properties are as follows:

ECP Category 1: Parcel 4.11 - Building 253 only

ECP Category 3:	Parcel 4.8 - Building 263 only Parcel 4.4 - Building 260 only
ECP Category 4:	Parcel 4.13 - Building 265 only
ECP Category 6:	Parcel 4.6 - Building 254 and surrounding area Parcel 4.7 - Building 257 and surrounding area
ECP Category 7:	Parcel 4.10 - Building 273 and surrounding area Parcel 4.9 - Pad 267 and surrounding area Parcel 4.5 - consisting of Buildings T256 and T261 plus all land areas in Parcel 4 except those within Parcels 4.6, 4.7, 4.9 and 4.10

A summary of the ECP Categories for specific buildings or parcels is provided in Table 1 – Description of Property (Enclosure 2).

3.2 Storage, Release or Disposal of Hazardous Substances

Hazardous substances were stored in Buildings 253, 254, 257, 260, 263, 265, 273, Pad 267 and the open areas of Parcel 4.5. It is assumed this storage was in excess of the 40 CFR Part 373 reportable quantities. Hazardous substances were released in Buildings 254, 257, 260, 273, Pad 267 and other areas in Parcel 4.5 surrounding Buildings 253, 263 and T256. It is assumed, unless otherwise noted, releases were in excess of the 40 CFR Part 373 reportable quantities. The release of hazardous substances was either remediated at the time of the release or is currently under evaluation as part of the installation restoration program. There is no risk to human health and the environment so long as the tenant adheres to the Environmental Protection Provisions (Enclosure 5) with particular reference to Provision 14 regarding ground disturbing activities. These activities shall not be allowed without prior written approval from the Government. A summary of the buildings or areas in which hazardous substances activities occurred is provided in Table 2 – Notification of Hazardous Substance Storage, Release or Disposal (Enclosure 3).

3.3 Petroleum and Petroleum Products

3.3.1 Storage, Release or Disposal of Petroleum Products

Petroleum products were stored in Buildings 253, 254, T256, 257 and the open grassy area in Parcel 4.5 directly south of Building 257. It is assumed this storage was in excess of 55 gallons. Petroleum products were released in Building 257 and the surrounding area as well as the open grassy area in Parcel 4.5 directly south of Building 257. It is assumed, unless otherwise noted, these releases were in excess of 55 gallons. The release of petroleum products was either remediated at the time of the release or is currently under evaluation as part of the installation restoration program. There is no risk to human health and the environment so long as the tenant adheres to the Environmental

to human health and the environment so long as the tenant adheres to the Environmental Protection Provisions (Enclosure 5) with particular reference to Provision 14 regarding ground disturbing activities. These activities shall not be allowed without prior written approval from the Government. An underground storage tank removal project for Parcel 4.5 is scheduled for the summer of 1998 and will include all associated piping and any petroleum contaminated soil. A summary of the buildings or areas in which petroleum products were stored or released is provided in Table 3 – Notification of Petroleum Product Storage, Release or Disposal (Enclosure 4).

3.3.2 Underground and Above-Ground Storage Tanks (UST/AST)

There are two (2) underground storage tanks and two (2) aboveground storage tanks (UST/AST) on the property that were used for storage of petroleum products. There is no evidence of petroleum product releases at the following UST/AST sites: the 18,000-gallon UST gasoline tank (converted to diesel in 1995) and the 20,000-gallon UST gasoline tank installed in 1984 south of Building 257, the two (2) 1,000-gallon AST gasoline tanks (one was converted to diesel in 1995) located adjacent to Building 257. A summary of the buildings or areas in which petroleum product activities occurred is provided in Table 3 – Notification of Petroleum Products Storage, Release or Disposal (Enclosure 4).

3.4 Polychlorinated Biphenyls (PCB) Equipment

There are no PCB containing transformers or other PCB containing equipment, except hermetically sealed fluorescent light bulb ballasts that may contain PCBs, located on the property listed in this FOSL. There is no evidence of unremediated PCB releases from these ballasts.

3.5 Asbestos

The EBS and the Asbestos Identification Survey (Pickering, December 1993 and January 1994) indicate Asbestos Containing Materials (ACM) are present in the following buildings:

Building 260: Thermal System Pipe Insulation (to include joints)
Cement Ceiling Panels
Exterior Window Putty
12 x 12 Floor Tiles and Mastic

Building 254: Cement Asbestos Panels
Felt Paper Roofing Material

Building 257: 12 x 12 Vinyl Floor Tiles
Asphalt Built Up Roofing and Roof Flashing

Building 253: Exterior Window Frame Putty
 12 x 12 Vinyl Floor Tile
 Thermal System Pipe Insulation

Building 265: Boiler Flue Insulation
 Thermal System Pipe Insulation (to include joints)
 Interior Boiler Door Insulation
 9 x 9 Floor Tile
 12 x 12 Floor Tile
 Roof Flashing

Building 273: No Survey Completed - Structure is a tin and wood shed;
 assumed no ACM present

Building T256: No Survey Completed - Structure is a tin and wood shed;
 assumed no ACM present

Building T261: No Survey Completed - Structure erected in 1993;
 assumed no ACM present

The ACM does not currently pose a threat to human health or the environment because all friable asbestos that posed an unacceptable risk to human health has been removed or encapsulated. The lease will include the asbestos warning and covenant included in the Environmental Protection Provisions (Enclosure 5).

3.6 Lead-Based Paint (LBP)

Based on the age of the buildings (constructed prior to 1978), the following buildings are presumed to contain lead-based paint: Buildings 260, 254, 257, 253, 265, 273, T256, and 263. The lease will include the lead-based paint warning and covenant provided in the Environmental Protection Provisions (Enclosure 5).

3.7 Radiological Materials

There is no evidence that the Department of Defense used or stored radioactive materials on the property.

3.8 Radon

In keeping with DOD policy to not perform radon assessment and mitigation prior to transfer of BRAC property, there were no radon surveys conducted in the buildings in this FOSL.

3.9 Unexploded Ordnance

Based on a review of existing records and available information, none of the buildings or surrounding land proposed for lease are known to contain unexploded ordnance.

3.10 Other Hazardous Conditions

There are no other known hazardous conditions that present an unacceptable threat to human health or the environment on the property.

4. REMEDIATION

In October 1992, the U.S. Environmental Protection Agency (EPA) placed DDMT on the National Priorities List (NPL) for environmental restoration. DDMT has since entered into a Federal Facilities Agreement (FFA) with the Tennessee Department of Environment and Conservation (TDEC) and the EPA. Environmental contamination on the property described in this document does not present a hazard to leasing it. In addition, environmental conditions on adjacent property do not present a hazard to the leasing of the property. Table 2 - Notification of Hazardous Substance Storage, Release or Disposal (Enclosure 3) and Table 3 - Notification of Petroleum Product Storage, Release or Disposal (Enclosure 4) provide details regarding environmental conditions for each individual parcel or building contained within this FOSL. Regulators have concurred with DDMT that Buildings 253, 260, 263 and 265 do not pose risks above levels deemed protective provided that the property is used for the proposed purpose and the lessee strictly adheres to the Environmental Protection Provisions (Enclosure 5). Buildings 254 and 257 and the surrounding areas shall be remediated during the Parcel 4.5 underground storage tank removal project scheduled for the summer of 1998 and will not pose risks above levels deemed protective provided the property is used for the proposed purpose. The remaining property consisting of Building 273 and surrounding area, Building T261, Building T256, Pad 267 and surrounding area as well as the remaining open areas do not pose risks above levels deemed protective provided that the property is use for the proposed purpose and the lessee strictly adheres to the Environmental Protection Provisions (Enclosure 5). The lease will include a provision reserving the Army's right to conduct remediation activities in the Environmental Protection Provisions (Enclosure 5).

5. REGULATORY/PUBLIC COORDINATION

The U.S. EPA Region 4, TDEC and the public were notified of the initiation of the FOSL. Regulators have reviewed this FOSL and provided comments. These comments have been reviewed and incorporated as appropriate. Regulatory/public comments and responses are provided in Enclosure 6.

6. NATIONAL ENVIRONMENTAL POLICY ACT (NEPA) COMPLIANCE AND CONSISTENCY WITH LOCAL REUSE PLAN

The environmental impacts associated with proposed lease of the property have been analyzed in accordance with the National Environmental Policy Act (NEPA). The results of this analysis have been documented in the Final Environmental Assessment for Master Interim Lease, Defense Distribution Depot Memphis, Tennessee, dated September 1996. The environmental effects of the activities anticipated under the proposed lease were determined not to be significant. In addition, the proposed use of the property is consistent with the intended reuse of the property set forth in the Depot Redevelopment Corporation Reuse Plan.

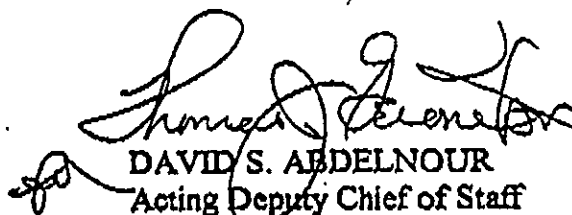
7. ENVIRONMENTAL PROTECTION PROVISIONS

On the basis of the above results from the site-specific EBS and other environmental studies and in consideration of the intended use of the property, certain terms and conditions are required for the proposed lease. These terms and conditions are set forth in the attached Environmental Protection Provisions (Enclosure 5) and will be included in the lease.

8. FINDING OF SUITABILITY TO LEASE

Based on the above information, I have concluded that all Department of Defense (DOD) requirements to reach a Finding of Suitability to Lease (FOSL) to the Depot Redevelopment Corporation for light industrial use have been fully met for the property subject to the terms and conditions in the attached Environmental Protection Provision (Enclosure 5). As required by CERCLA section 120(h)(3)(B), I have determined that the property is suitable for lease for the intended purpose, the uses contemplated for the lease are consistent with protection of human health and the environment, and there are adequate assurances that the United States will take any additional remedial action found to be necessary that has not been taken on the date of the lease.

As required under the DOD FOSL Guidance, notification of hazardous substance activities and petroleum product activities shall be provided in the lease documents. Refer to Table 2 - Notification of Hazardous Substance Storage, Release or Disposal (Enclosure 3) and Table 3 - Notification of Petroleum Product Storage, Release or Disposal (Enclosure 4).

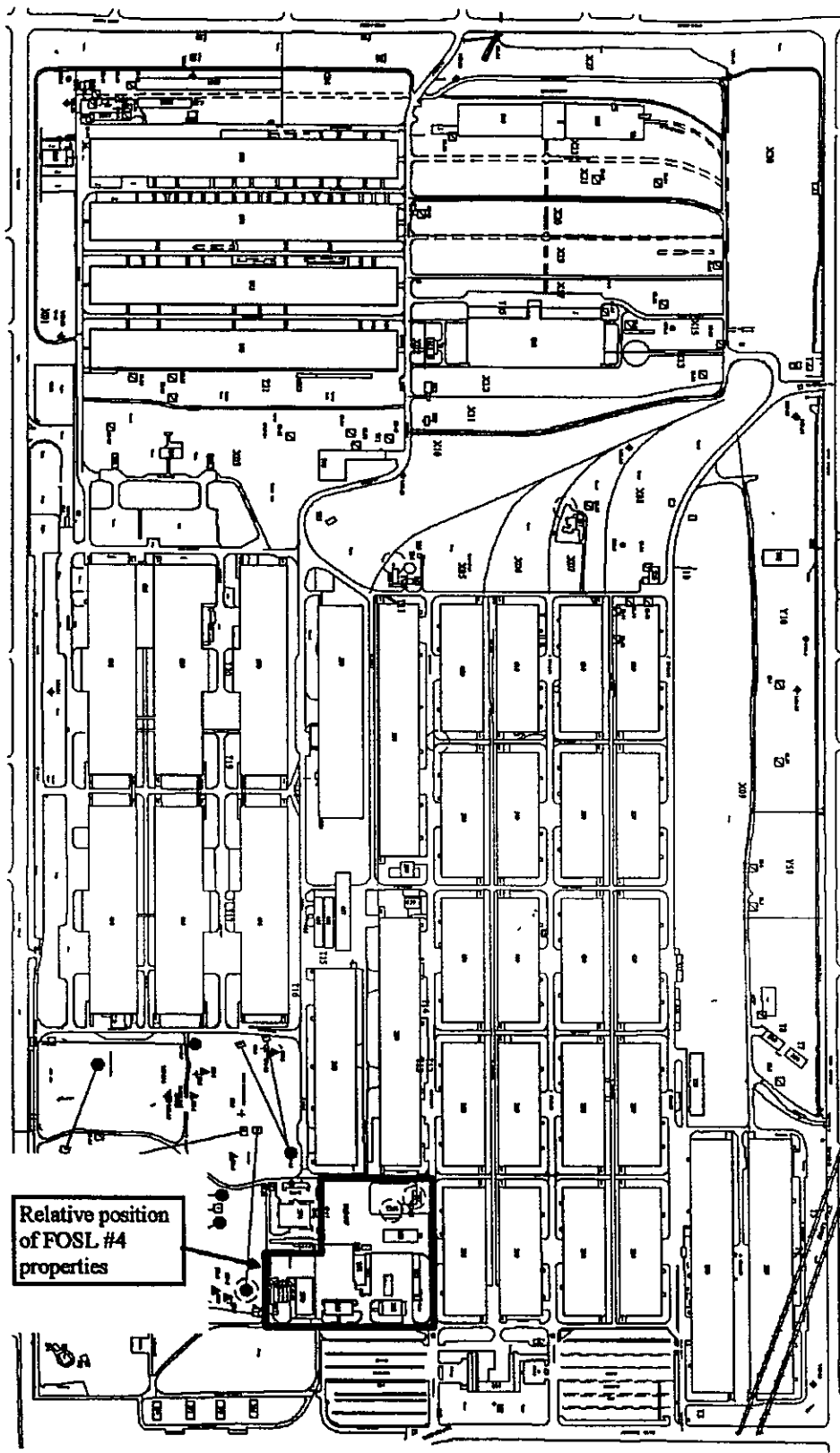

 DAVID S. ABDELNOUR
 Acting Deputy Chief of Staff

For Engineering, Housing, Environment, and
 Installation Logistics

7 Enclosures

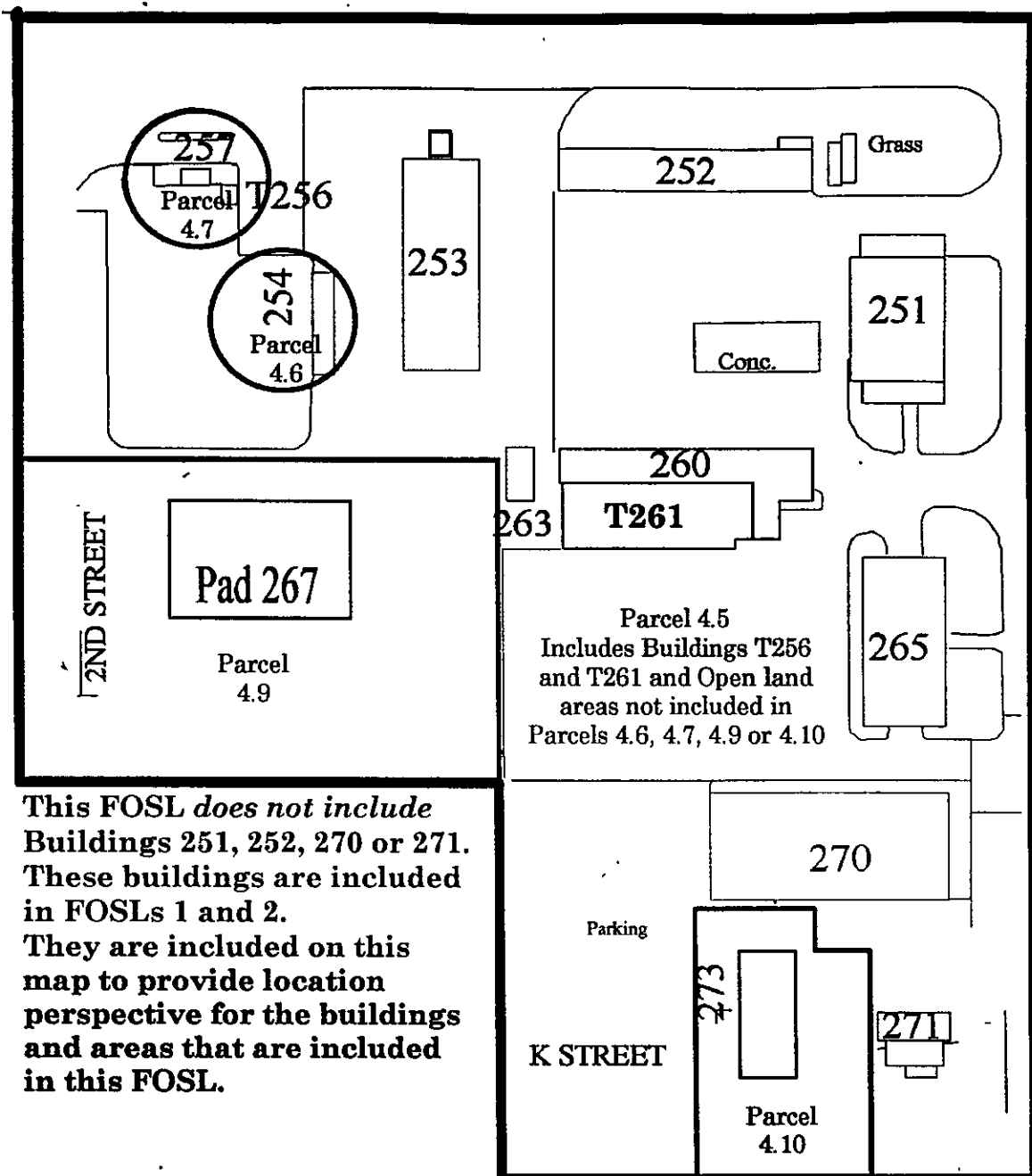
- Encl 1 Site Maps of Property
- Encl 2 Table 1 - Description of Property
- Encl 3 Table 2 - Notification of Hazardous Substances Storage, Release or Disposal
- Encl 4 Table 3 - Notification of Petroleum Products Storage, Release or Disposal
- Encl 5 Environmental Protection Provisions
- Encl 6 Regulatory/Public Comments and Responses
- Encl 7 Reference Materials

Enclosure 1
Site Map of Property in FOSL 4



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Enclosure 1
Site Map of Property in FOSL 4



Enclosure 2
Table 1 – Description of Property

Building Number and Property Description	EBS Parcel Designation	Condition Category	Remedial Actions
Building 260 is a 6,707 square foot building erected in 1952 that was used as a maintenance shop.	4.4(3)PS/PR/HS/IR	3	This building was a satellite drum accumulation area and housed a Safety Kleen unit. While the RCRA Facility Assessment (RFA) visual inspection noted staining on the floor in the sign shop of this building, the RFA recommended no further action. The BCT concurred in September 1997. Therefore, the performance of industrial and/or commercial operations at this site in accordance with the Lease Restrictions will not pose an unacceptable risk to human health or the environment. ¹
Parcel 4.5 - Open Area of Parcel 4. Includes Buildings T256 and T261 as well as all land areas in Parcel 4.5 except land areas included in Parcels 4.6, 4.7, 4.9 and 4.10.	4.5(7)	7	The general area of concern for Parcel 4.5 is the UST field adjacent to Buildings 254, T256 and 257. Screening Sites (SS) 66, 67 and 68 are located within Parcel 4.5, but may be associated to activities in nearby buildings. SS66 is addressed in Table 2, Parcel 4.5. SS67 is addressed in Table 3, Building 257. SS68 is addressed in Table 3, Building 263. The two USTs, all associated piping leading up to the pump house (Building 257) and any petroleum contaminated soils will be removed during the Parcel 4.5 underground storage tank removal project scheduled for the summer of 1998. Appropriate health and safety measures will be implemented during all remediation activities to ensure the protection of human health and the environment. Therefore, the performance of industrial and/or commercial operations at this site in accordance with the Lease Restrictions will not pose an unacceptable risk to human health or the environment. ¹
Building T256 is a 192 square foot building erected in 1943 that was used as a storage shed.	4.5(7)	7	Building T256 is a storage shed located adjacent to Building 257, and there are no records of any spills in this building. Because this building is included in Parcel 4.5, it is listed as ECP category 7. There are no remedial actions anticipated for this area. Therefore, the performance of industrial and/or commercial operations at this site in accordance with the Lease Restrictions will not pose an unacceptable risk to human health or the environment. ¹

Enclosure 2
Table 1 – Description of Property

Building Number and Property Description	EBS Parcel Designation	Condition Category	Remedial Actions
Building T261 is a 6,249 square foot building erected in 1993 (original 1942 building demolished) that was used for vehicle storage and maintenance.	4.5(7)	7	Building T261 is a covered parking area constructed in 1994 that was used for the storage of large tractors and equipment for grounds keeping and other functions. Because this building is included in Parcel 4.5, it is listed as ECP category 7. There are no remedial actions anticipated for this area. Therefore, the performance of industrial and/or commercial operations at this site in accordance with the Lease Restrictions will not pose an unacceptable risk to human health or the environment. ¹
Building 254 is a 1,004 square foot building erected in 1944 that was used for equipment storage as well as oil and antifreeze storage. This parcel also includes a portion of the underground storage tank field.	4.6(6)	6	Leaking drums and ground staining were observed during a visual inspection for the EBS. The visual inspection also noted petroleum, oil and lubricants (POLs) and antifreeze storage. This building is in ECP category 6 based on the USTs and associated piping located west of Building 254. An 1,110-gallon gasoline UST was removed from this area in 1989. Removal of any remaining piping will occur during the Parcel 4.5 UST removal project scheduled for the summer of 1998. The BCT will perform a visual inspection to determine the requirement for remediation inside Building 254. If remediation is required, appropriate health and safety measures will be implemented during all remediation activities to ensure the protection of human health and the environment. Therefore, the performance of industrial and/or commercial operations at this site in accordance with the Lease Restrictions will not pose an unacceptable risk to human health or the environment. ¹

Enclosure 2
Table 1 – Description of Property

Building Number and Property Description	EBS Parcel Designation	Condition Category	Remedial Actions
Building 257 is a 264 square foot building erected in 1942 that was used for vehicle fueling operations and a gas station. This parcel also includes a portion of the underground storage tank field.	4.7(6)	6	Screening Site 67 is associated with Building 257 because of the USTs and associated piping located south of the building. The piping, pumps and floor in this building will be cleaned in conjunction with the Parcel 4.5 UST removal project scheduled for the summer of 1998. Appropriate health and safety measures will be implemented during all remediation activities to ensure the protection of human health and the environment. In the past, Building 257 was fumigated. Air sampling for fumigants in other buildings similarly fumigated was performed in the winter of 1997. The BCT reviewed the air sample results and determined that no further action was required. The performance of industrial and/or commercial operations at this site in accordance with the Lease Restrictions will not pose an unacceptable risk to human health or the environment. ¹
Building 263 is an 800 square foot building erected in 1964 that was used for oil changing and as a vehicle grease rack	4.8(3)	3	The building has been used as an attendant's room for the dispensing of petroleum, oil and lubricants (POLs) to vehicles and was fumigated in the past. Screening Site 68 is associated with this building. Samples were taken. No contamination was detected, and the BCT determined that no further action was required. Air sampling for fumigants in other buildings similarly fumigated was performed in the winter of 1997. The BCT reviewed the air sample results and determined that no further action was required. Therefore, the performance of industrial and/or commercial operations at this site in accordance with the Lease Restrictions will not pose an unacceptable risk to human health or the environment. ¹

Enclosure 2
Table 1 – Description of Property

Building Number and Property Description	EBS Parcel Designation	Condition Category	Remedial Actions
<p>Pad 267 originally housed the facility engineer storehouse/pesticide shop. Square footage and date of erection is unknown. This building was demolished in 1987.</p>	4.9(7)	7	<p>The former pesticide shop, Building 267, was housed on this pad. Remedial Investigation Site 58 is associated with the pad. Due to the presence of pesticides found in soil samples, this parcel requires additional evaluation as part of the installation restoration program. Appropriate health and safety measures will be implemented during all remediation activities to ensure the protection of human health and the environment. Therefore, the performance of industrial and/or commercial operations at this site in accordance with the Lease Restrictions will not pose an unacceptable risk to human health or the environment.¹</p>
<p>Building 273 is a 1,500 square foot building with an unknown erection date that was used as a shed for storage of fertilizer and mixing of golf course pesticides and herbicides. This parcel also includes the land around Building 273 as well as a small putting green adjacent and to the east of Building 273</p>	4.10(7)	7	<p>Remedial Investigation Site 59 is associated with this building. Due to the presence of pesticides found in soil samples, this parcel requires additional evaluation as part of the installation restoration program. Appropriate health and safety measures will be implemented during all remediation activities to ensure the protection of human health and the environment. Therefore, the performance of industrial and/or commercial operations at this site in accordance with the Lease Restrictions will not pose an unacceptable risk to human health or the environment.¹</p>
<p>Building 253 is a 9,600 square foot building erected in 1952 that was used as a motor pool and vehicle maintenance shop.</p>	4 11(1)	1	<p>Screening Site 66 is associated with Parcel 4.5, which is the area surrounding Building 253 but not within the building. There is no remedial action required within Building 253.</p>

Enclosure 2
Table 1 – Description of Property

Building Number and Property Description	EBS Parcel Designation	Condition Category	Remedial Actions
Building 265 is an 8,001 square foot building erected in 1942 that was used as an engineering and facility engineer maintenance shop.	4.13(4)	4	This building had a floor drain connected to the sanitary sewer. Due to an EBS recommendation to sample the floor drain, sampling occurred in September 1996. Upon review of the sample results, the BCT determined that the floor drain should be cleaned and that no further action would then be required for this building. Therefore, the performance of industrial and/or commercial operations at this site in accordance with the Lease Restrictions will not pose an unacceptable risk to human health or the environment. ¹

¹ Provided the lessee strictly adheres to the Environmental Protection Provisions (Enclosure 5), including but not limited to Provision 14 - No subsurface disturbance, excavation, drilling or digging without prior written approval from the Government.

Category 1: Areas where no release or disposal of hazardous substances or petroleum products has occurred (including no migration of these substances from adjacent areas).

Category 2: Areas where only release or disposal of petroleum products has occurred.

Category 3: Areas where release, disposal, and/or migration of hazardous substances has occurred, but at concentrations that do not require a removal or remedial response.

Category 4: Areas where release, disposal, and/or migration of hazardous substances has occurred, and all removal or remedial actions to protect human health and the environment have been taken

Category 5: Areas where release, disposal, and/or migration of hazardous substances has occurred, and removal or remedial actions are underway, but all required remedial actions have not yet been taken

Category 6: Areas where release, disposal, and/or migration of hazardous substances has occurred, but required actions have not yet been implemented

Category 7: Areas that are not evaluated or require additional evaluation

Enclosure 3

**Table 2 - Notification of Hazardous Substance Storage, Release
or Disposal**

Building Number	Name of Hazardous Substance	Date of Storage, Release or Disposal	Remedial Actions
Building 260	Waste Paint, Paint Thinner, Solvent Rags	Exact start date unknown assumed 1952 (building construction)-September 1997	This building was a satellite drum accumulation area and housed a Safety Kleen unit. While the RCRA Facility Assessment (RFA) visual inspection noted staining on the floor in the sign shop of this building, the RFA recommended no further action and the BCT concurred in September 1997. Therefore, the performance of industrial and/or commercial operations at this site in accordance with the Lease Restrictions will not pose an unacceptable risk to human health or the environment. ¹
Building 254	Oil Antifreeze	Exact start date unknown assumed 1944 (building construction)-September 1997	Leaking drums and ground staining were observed during a visual inspection for the EBS. The BCT will perform a visual inspection to determine the requirement for remediation inside Building 254. If remediation is required, appropriate health and safety measures will be implemented during all remediation activities to ensure the protection of human health and the environment. Therefore, the performance of industrial and/or commercial operations at this site in accordance with the Lease Restrictions will not pose an unacceptable risk to human health or the environment. ¹
Building 257	Pesticide (fumigation)	Exact start date unknown assumed 1942 (building construction)-September 1997	In the past, Building 257 was fumigated. Air sampling for fumigants in other buildings similarly fumigated was performed in the winter of 1997. The BCT reviewed the air sample results and determined that no further action was required. Therefore, the performance of industrial and/or commercial operations at this site in accordance with the Lease Restrictions will not pose an unacceptable risk to human health or the environment. ¹
Building 263	Pesticide (fumigation)	Exact start date unknown assumed 1964 (building construction)-September 1997	The building has been used as an attendant's room for the dispensing of petroleum, oil and lubricants (POLs) to vehicles and was fumigated in the past. Air sampling for fumigants in other buildings similarly fumigated was performed in the winter of 1997. The BCT reviewed the air sample results and determined that no further action was required. Therefore, the performance of industrial and/or commercial operations at this site in accordance with the Lease Restrictions will not pose an unacceptable risk to human health or the environment. ¹

Enclosure 3
Table 2 - Notification of Hazardous Substance Storage, Release
or Disposal

Building Number	Name of Hazardous Substance	Date of Storage, Release, or Disposal	Remedial Actions
Pad 267	Pesticides	Exact start date unknown Building demolished in 1987	The former pesticide shop, Building 267, was located on this pad. Remedial Investigation Site 58 is associated with the pad. Due to the presence of pesticides found in soil samples, this parcel requires additional evaluation as part of the installation restoration program. Appropriate health and safety measures will be implemented during all remediation activities to ensure the protection of human health and the environment. Therefore, the performance of industrial and/or commercial operations at this site in accordance with the Lease Restrictions will not pose an unacceptable risk to human health or the environment. ¹
Building 273	Pesticides Herbicides Fertilizer	Exact start date unknown assumed 1942 (building construction)- September 1997	This building and area was reportedly used for the mixing of pesticides and herbicides for the golf course. Remedial Investigation Site 59 is associated with this building. Due to the presence of pesticides found in soil samples, this parcel requires additional evaluation as part of the installation restoration program. Appropriate health and safety measures will be implemented during all remediation activities to ensure the protection of human health and the environment. Therefore, the performance of industrial and/or commercial operations at this site in accordance with the Lease Restrictions will not pose an unacceptable risk to human health or the environment. ¹
Building 253	Antifreeze Safety Kleen unit	Exact start date unknown assumed 1952 (building construction)- September 1997	While there was small quantity storage within this building, there is no record of any releases. There is no remedial action required within Building 253. Therefore, the performance of industrial and/or commercial operations at this site in accordance with the Lease Restrictions will not pose an unacceptable risk to human health or the environment. ¹

Enclosure 3

**Table 2 - Notification of Hazardous Substance Storage, Release
or Disposal**

Building Number	Name of Hazardous Substance	Date of Storage, Release, or Disposal	Remedial Actions
Building 265	Unknown	Exact start date unknown assumed 1952 (building construction)- September 1997	No evidence of storage, release or disposal. However, this building had a floor drain connected to the sanitary sewer. Due to an EBS recommendation to sample the floor drain, sampling occurred in September 1996. Upon review of the sample results, the BCT determined that the floor drain sump should be cleaned and that no further action would then be required for this building. Therefore, the performance of industrial and/or commercial operations at this site in accordance with the Lease Restrictions will not pose an unacceptable risk to human health or the environment. ¹
Parcel 4.5 - Open Area of Parcel 4. Includes all land in Parcel 4 except land included in Parcels 4.6, 4.7, 4.9 and 4.10.	PAHs	Exact start date unknown assumed 1942 - September 1997	The concern at Screening Site 66 is Poly Aromatic Hydrocarbons (PAHs) outside of Building 253. Due to the presence of PAHs found under the asphalt, this site requires additional evaluation as part of the installation restoration program. Appropriate health and safety measures will be implemented during all remediation activities to ensure the protection of human health and the environment. Therefore, the performance of industrial and/or commercial operations at this site in accordance with the Lease Restrictions will not pose an unacceptable risk to human health or the environment. ¹

¹ Provided the lessee strictly adheres to the Environmental Protection Provisions (Enclosure 5), including but not limited to Provision 14 - No subsurface disturbance, excavation, drilling or digging without prior written approval from the Government.

Enclosure 4
Table 3 - Notification of Petroleum Product Storage, Release
or Disposal

Building Number	Name of Petroleum Product(s)	Date of Storage, Release, or Disposal	Remedial Actions
Building 254	Oil	Exact start date unknown assumed 1944 (building construction)- September 1997	Leaking drums and ground staining were observed during a visual inspection for the EBS. The visual inspection also noted petroleum, oil and lubricants (POLs) and antifreeze storage. This building is in ECP category 6 based on the USTs and associated piping located to the west of the building. An 1,110-gallon gasoline UST was removed from this area in 1989. Removal of any remaining piping will occur during the Parcel 4.5 UST removal project scheduled for the summer of 1998. The BCT will perform a visual inspection to determine the requirement for remediation inside Building 254. If remediation is required, appropriate health and safety measures will be implemented during all remediation activities to ensure the protection of human health and the environment. Therefore, the performance of industrial and/or commercial operations at this site in accordance with the Lease Restrictions will not pose an unacceptable risk to human health or the environment. ¹
Building 263	Motor Oil	Exact start date unknown assumed 1964 (building construction)- September 1997	The building has been used as an attendant's room for the dispensing of petroleum, oil and lubricants (POLs) (oil changing) to vehicles. Screening Site 68 is associated with this building. Samples were taken. No contamination was detected, and the BCT determined that no further action was required. Therefore, the performance of industrial and/or commercial operations at this site in accordance with the Lease Restrictions will not pose an acceptable risk to human health or the environment. ¹
Building 257	Leaded and Unleaded Gasoline, Diesel	Exact start date unknown assumed 1942 (building construction)- September 1997	SS67 is associated with Building 257 because of the USTs and associated piping located south of the building. The piping, pumps and floor in this building will be cleaned in conjunction with the Parcel 4.5 UST removal project scheduled for the summer of 1998. Appropriate health and safety measures will be implemented during all remediation activities to ensure the protection of human health and the environment. Therefore, the performance of industrial and/or commercial operations at this site in accordance with the Lease Restrictions will not pose an unacceptable risk to human health or the environment. ¹

Enclosure 4

**Table 3 - Notification of Petroleum Product Storage, Release
or Disposal**

Building Number	Name of Petroleum Product(s)	Date of Storage, Release, or Disposal	Remedial Actions
Building 253	Motor Oil and Lubricant Grease Products for Automobiles	Exact start date unknown assumed 1952 (building construction)- September 1997	While there was small quantity (exact quantity unknown) storage within this building, there is no record of any releases. There is no remedial action required within Building 253. Therefore, the performance of industrial and/or commercial operations at this site in accordance with the Lease Restrictions will not pose an unacceptable risk to human health or the environment. ¹
Parcel 4.5 - Open Area of Parcel 4. Includes Buildings T256 and T261 as well as all land areas within Parcel 4 except land areas included in Parcels 4.6, 4.7, 4.9 and 4.10.	Leaded and Unleaded Gasoline, Diesel	Exact start date unknown assumed 1942 - Summer 1998 for two USTs and two ASTs within Parcel 4.5	The concern at SS 68 is petroleum, oil and lubricants (POLs) located outside of Building 263. Samples were taken. Because no contamination was found, the BCT determined no further action was required. The general area of concern for Parcel 4.5 is the UST field adjacent to Buildings 254, T256 and 257. There have been five previous USTs, and there are currently two USTs in this parcel. Three USTs were removed in 1984 and two more were removed in 1989. The last two removed were replaced with the current 18,000-gallon and 20,000-gallon USTs. The two current USTs, all associated piping leading up to the pump house (Building 257) and any petroleum contaminated soils will be removed during the Parcel 4.5 UST removal project scheduled for the summer of 1998. Appropriate health and safety measures will be implemented during all remediation activities to ensure the protection of human health and the environment. Therefore, the performance of industrial and/or commercial operations at this site in accordance with the Lease Restrictions will not pose an unacceptable risk to human health or the environment. ¹

¹ Provided the lessee strictly adheres to the Environmental Protection Provisions (Enclosure 5), including but not limited to Provision 14 - No subsurface disturbance, excavation, drilling or digging without prior written approval from the Government.

Enclosure 5

Environmental Protection Provisions

The following conditions will be placed in the lease to ensure there will be no unacceptable risk to human health or the environment and no interference to the ongoing Memphis Depot Caretaker installation restoration program (IRP) and to ensure regulatory requirements for the IRP and other compliance programs administered by the Army are met.

1. The sole purpose(s) for which the leased premises and any improvements thereon may be used, in the absence of prior written approval of the Government for any other use, is for uses similar or comparable to past or current activities of the Depot. These include light industry, storage, sorting operations, receiving, packaging and shipping, support activities, mechanical shop to support material handling equipment, training, education, and general office.
2. The Lessee shall neither transfer nor assign this Lease or any interest therein or any property on the leased premises, nor sublet the leased premises or any part thereof or any property thereon, nor grant any interest, privilege, or license whatsoever in connection with this Lease without the prior written consent of the Government. Such consent shall not be unreasonably withheld or delayed. Every sublease shall contain the Environmental Protection Provisions herein.
3. The Lessee and any sublessee shall comply with the applicable Federal, state, and local laws, regulations, and standards that are or may become applicable to Lessee's or sublessee's activities on the Leased Premises.
4. The Lessee and any sublessee shall be solely responsible for obtaining at its cost and expense any environmental permits required for its operations under the Lease, independent of any existing permits.
5. The 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 the Government is responsible for enforcing them. Such inspections are without prejudice to the right of duly constituted enforcement officials to make such inspections. The Government normally will give the Lessee or sublessee twenty-four (24) hours prior notice of its intention to enter the Leased Premises unless it determines the entry is required for safety, environmental, operations, or security purposes. The Lessee shall have no claim on account of any entries against the United States or any officer, agent, employee, or contractor thereof.
6. The Government acknowledges that Defense Distribution Depot Memphis, Tennessee has been identified as a National Priorities List (NPL) Site under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) of 1980, as amended. The Lessee acknowledges that the Government has provided it with a copy of the Defense Distribution Depot Memphis, Tennessee Federal Facilities Agreement (FFA)

Enclosure 5

Environmental Protection Provisions

entered into by the United States Environmental Protection Agency (EPA) Region 4, the State of Tennessee, and the Defense Logistics Agency effective March 1995, and will provide the Lessee with a copy of any amendments thereto. The Lessee agrees that should any conflict arise between the terms of such agreement as it presently exists or may be amended and the provisions of this Lease, the terms of the FFA will take precedence. The Lessee further agrees that notwithstanding any other provisions of the Lease, the Government assumes no liability to the Lessee or its sublessees or licenses should implementation of the FFA interfere with the Lessee's or any sublessee's or licensee's use of the Leased Premises. The Lessee shall have no claim on account of any such interference against the United States or any officer, agent, employee or contractor thereof, other than for abatement of rent.

7. The Government, EPA, and TDEC 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 in these subparagraphs, and for such other purposes consistent with any provision of the FFA:

(a) to conduct investigations and surveys, including, where necessary, drilling, soil and water sampling, test-pitting, testing soil borings and other activities related to the Defense Distribution Depot Memphis, Tennessee installation restoration program (IRP) or FFA;

(b) to inspect field activities of the Government and its contractors and subcontractors in implementing the Defense Distribution Depot Memphis, Tennessee IRP or FFA,

(c) to conduct any test or survey required by the EPA or TDEC relating to the implementation of the FFA or environmental conditions at the Leased Premises or to verify any data submitted to the EPA or TDEC by the Government relating to such conditions;

(d) to construct, operate, maintain, or undertake any other response or remedial action, as required or necessary under the Defense Distribution Depot Memphis, Tennessee IRP or FFA, including, but not limited to, monitoring wells, pumping wells, and treatment facilities;

(e) to conduct Environmental Compliance Assessment System Surveys (ECAS).

8. The Lessee and any sublessee shall comply with the provisions of any health and safety plan in effect under the IRP or the FFA during the course of any of the above described response or remedial actions. Any inspection, survey, investigation, or other response or remedial action will, to the extent practicable, be coordinated with a representative designated by the Lessee and any sublessee. The Lessee and any sublessee shall have no claim on account of such entries against the United States or any office, agent, employee,

Enclosure 5

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contractor, or subcontractor thereof. In addition, the Lessee and any sublessee shall comply with all applicable Federal, state, and local occupational safety and health regulations.

9. The Lessee further agrees that in the event of any assignment or sublease of the Leased Premises, it shall provide to the EPA and TDEC by certified mail a copy of the agreement or sublease of the Leased Premises (as the case may be) within fourteen (14) days after the effective date of such transaction. The 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.

10. The Lessee shall strictly comply with the hazardous waste requirements under the Resource Conservation and Recovery Act (RCRA) or its Tennessee equivalent. Except as specifically authorized by the Government in writing, the Lessee must provide at its own expense hazardous waste management facilities, complying with all laws and regulations. Government hazardous waste management facilities will not be available to the Lessee. Any violation of the requirements of this condition shall be deemed a material breach of this Lease.

11. Defense Distribution Depot Memphis, Tennessee 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 the Department of the Army.

12. The Lessee shall prepare and maintain a Government-approved plan for responding to hazardous waste, fuel, and other chemical spills prior to commencement of operations on the leased premises. Such a plan shall be independent of the Memphis Depot Caretaker plan and, except for initial fire response and/or spill containment, shall not rely on installation 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 any Government officer conducting timely cleanup actions, the Lessee agrees to reimburse the Government for its costs.

13. The Lessee shall not construct or make or permit its sublessees or assigns to construct or make any alterations, additions, or improvements to, or installations upon or otherwise modify or alter the leased premises in any way which may adversely affect the Memphis Depot Caretaker environmental program, environmental cleanup, human health, or the environment, without the 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 or alterations, additions, modifications, improvements, or installations (collectively "work") in the proximity of operable units that are a part of a National Priorities List (NPL) site, such consent may include a requirement for written approval by the Government's Remedial Project Manager. Except as such

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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.

14. The Lessee shall not conduct or permit its sublessees to conduct any subsurface excavation, digging, drilling, or other disturbance of the surface without the prior written approval of the Government.

15. The Lessee shall strictly comply with the hazardous waste permit requirements under the Resource Conservation and Recovery Act (RCRA), or its state equivalent, and any other applicable laws, rules or regulations. The Lessee must provide at its own expense such hazardous waste storage facilities that comply with all laws and regulations as it may need for such storage. Any violation of the requirements of this provision shall be deemed a material breach of this Lease.

16. LEAD-BASED PAINT WARNING AND COVENANT:

a. The Leased Premises do not contain residential dwellings and are not being leased for residential or child care purposes. The Lessee is notified that the Leased Premises contain buildings built prior to 1978 that contain lead-based paint.

b. Available information concerning known lead-based paint and/or lead-based paint hazards, the location of lead-based paint and/or lead-based paint hazards, and the condition of painted surfaces is contained in the Environmental Baseline Survey that has been provided to the Lessee. Additionally, the following report pertaining to lead-based paint and/or lead-based paint hazards has been provided to the Lessee: Lead Based Paint Risk Assessment for DDMT (Barge, Waggoner, Sumner, and Cannon, December 1995, revised April 1996). Additionally, the Lessee has been provided with a copy of the federally-approved pamphlet on lead poisoning prevention. The Lessee hereby acknowledges receipt of all of the information described in this subparagraph.

c. The Lessee acknowledges that it has received the opportunity to conduct a risk assessment or inspection for the presence of lead-based paint and/or lead-based paint hazards prior to execution of this Lease.

d. The Lessee shall not permit use of any buildings or structures on the Leased Premises for residential habitation without first obtaining the written consent of the Government. As a condition of its consent, the Government may require the Lessee to: (i) inspect for the presence of lead-based paint and/or lead-based paint hazards in and around buildings and structures on the Leased Premises; (ii) abate and eliminate lead-based paint hazards in accordance with all applicable laws and regulations; and (iii) comply with the notice and disclosure requirements under applicable federal, state, and local laws or regulations. The Lessee agrees to be responsible for any future remediation of lead-based paint found to be necessary on the Leased Premises.

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e. The Government assumes no liability for remediation or damages for personal injury, illness, disability, or death, to the Lessee, its successors or assigns, sublessees or to any other person, including members of the general public, arising from or incident to possession and/or use of any portion of the Leased Premises containing lead-based paint as residential housing. The Lessee further agrees to indemnify and hold harmless the Government, its officers, agents and employees, from and against all suits, claims, demands or actions, liabilities, judgments, costs and attorneys' fees arising out of, or in any manner predicated upon, personal injury, death or property damage resulting from, related to, caused by or arising out of the possession and/or use of any portion of the Leased Premises containing lead-based paint as residential housing. This section and the obligations of the Lessee hereunder shall survive the expiration or termination of this Lease and any conveyance of the Leased Premises to the Lessee. The Lessee's obligation hereunder shall apply whenever the United States of America incurs costs or liabilities for actions giving rise to liability under this section.

17. NOTICE OF THE PRESENCE OF ASBESTOS AND COVENANT:

a. The Lessee is hereby informed and does acknowledge that friable and non-friable asbestos or asbestos-containing materials (ACM) has been found on the Leased Premises, as described in the final base-wide EBS. The ACM on the Leased Premises does not currently pose a threat to human health or the environment. All friable asbestos that posed a risk to human health was either removed or encapsulated.

b. The Lessee covenants and agrees that its use and occupancy of the Leased Premises will be in compliance with all applicable laws relating to asbestos; and that the Government assumes no liability for future remediation of asbestos or damages for personal injury, illness, disability, or death, to the Lessee, its successors or assigns, sublessees, or to any other person, including members of the general public, arising from or incident to the purchase, transportation, removal, handling, use, disposition, or other activity causing or leading to contact of any kind whatsoever with asbestos on the Leased Premises described in this Lease, whether the Lessee, its successors or assigns have properly warned or failed to properly warn the individual(s) injured. The Lessee agrees to be responsible for any future remediation of asbestos found to be necessary on the Leased Premises.

18. The Lessee shall not use the Leased Premises for the storage or disposal of non-Department of Defense owned hazardous or toxic materials, as defined in 10 U.S.C. 2692, unless authorized under 10 U.S.C. 2692 and properly approved by the Government.

19. The Army may impose any additional environmental protection conditions and restrictions during the terms of this lease that it deems necessary by providing written notice of such conditions or restrictions to the Lessee.

Enclosure 6 Regulatory/Public Comments on FOSL #4

Please find the Environmental Protection Agency (EPA), Tennessee Department of Environment and Conservation (TDEC), U.S. Department of Army (various offices), Army Materiel Command (AMC), Defense Logistics Agency (DLA) comments and Memphis Depot Caretaker responses for FOSL #4.

EPA Comments to FOSL #4

1. As required by CERCLA (Section 120(h)(5), DoD shall notify the state prior to entering into any lease that will encumber the property beyond the date of termination of DOD's operations. The notification shall include the length of lease, the name of lessee, and a description of the uses that will be allowed under the lease of the property. At National Priority List sites, DoD shall provide this notification to the United States Environmental Protection Agency as well.

COMMENT NOTED. The MDC will provide EPA and TDEC workable drafts of FOSLs as soon as they are available.

2. Section I - Purpose. The section should identify the leased properties as Parcels 4.4 to 4.11 and Parcel 4.13.

COMMENT INCORPORATED.

3 Section 2. Property Description. This section should read as follow
"The proposed property to be leased consists of 5.93 acres that includes seven (7) buildings (parcels 4.4, 4.6-4.8, 4.10, 4.11 and 4.13), one (1) Pad (parcel 4.9) and open land areas (parcel 4.5). The buildings and Pad are identified as follows; Buildings 260, 254, 257, 263, 273, 253, 265 and Pad 267. The open land areas contain Buildings T256 and T261. A site map of the property is enclosed. (Enclosures and 1a)."

COMMENT INCORPORATED. The text has been changed with slight variations from the text provided.

4. Section 3.1 Environmental Condition of Property Categories The section should identify the parcel number associated with each property.

COMMENT INCORPORATED.

5. Section 3.2 Storage, Release, or Disposal of Hazardous Substances. Please delete *"Products"* after *"Substance"* (on line 10).

COMMENT INCORPORATED.

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Regulatory/Public Comments on FOSL #4

6. Section 3.4 Polychlorinated Biphenyl's (PCB) Equipment. Please change "*unremediated*" to - - PCB- - and "*PCB equipment*" to - - the light ballasts- -.

COMMENT INCORPORATED. The second sentence will be changed to read, "There has been no evidence of unremediated PCB releases from the light ballasts."

7. Section 3.5 Asbestos. Please change "*asbestos containing material*" to - - *Asbestos Containing Material (ACM)*- -.

COMMENT INCORPORATED.

8. Section 4. Remediation. Please insert - - described in this document - - after "*property*" and change "*the property*" (after "*leasing*") to -- it- - (on line 4). The statement on lines 7-8 is inaccurate for properties categorized as 7. Please provide clarification.

COMMENT INCORPORATED. The sentence will be changed as follows, "Regulators have concurred with DDMT that Buildings 253, 260, 263 and 265 do not pose risks above levels deemed protective provided that the property is used for the proposed purpose and the lessee strictly adheres to the Environmental Protection Provisions (Enclosure 5). Buildings 254 and 257 shall be remediated during the summer of 1998 (see para. 3.3.1 Storage, Release or Disposal of Petroleum Products) and will not pose risks above levels deemed protective provided the property is used for the proposed purpose. The remaining property consisting of Building 273 and surrounding area, Building T261, Building T256, Pad 267 and the remaining open areas do not pose risks above levels deemed protective provided that the property is use for the proposed purpose and the lessee strictly adheres to the Environmental Protection Provisions (Enclosure 5)."

9. Section 5. Regulatory Coordination. Please add the following sentence at the end of the paragraph; "*Regulatory/public comments and responses are provided in Enclosure 6 and 7 respectively.*"

COMMENT INCORPORATED. Regulatory/public comments and responses will be provided in Enclosure 6.

10. Section 6. National Environmental Policy Act (NEPA) Compliance and Consistency with Local Reuse Plan. Please change "*Local Reuse Authority*" to - - *Depot Redevelopment Corporation*- - (on line 7).

COMMENT INCORPORATED.

11. Section 7. Environmental Protection Provisions. Please insert - - (Enclosure 5) - after "*Provisions*" (on line 4) and delete "*(Enclosure 5)*" (on line 5).

COMMENT INCORPORATED.

Enclosure 6
Regulatory/Public Comments on FOSL #4

12. Section 8. Finding of Suitability to Lease. Please insert - - (DOD)- - *after "Defense,"* also please change "*finding of suitability to lease*" to - - Finding of Suitability to Lease (FOSL)- -. In the second paragraph, line 2 please change "See " to - - Refer to ---

COMMENT INCORPORATED.

13. Enclosure 1. Please identify each parcel on both maps. There are two different maps labeled Enclosure 1, please re-label the second map as Enclosure 1a.

COMMENT NOTED. The large site map provides the relative position of the parcels within the entire facility. The text shall be change to reflect that site maps (plural) are included at Enclosure 1.

14. Enclosure 2. Parcel 4.5 should be described only one time. Please define Parcel 4.5 as the open land areas including Buildings T256 and T261. In other words combine rows 2 and 3 (page 10).

COMMENT NOTED. See the response to Army Office of Legal Counsel (John Farrar) comment number 5. While these buildings are included in the open area, which is a category 7 area, the buildings should not be a category 7. There is no information relating these two buildings to any storage, release or disposal of hazardous substances or petroleum products. Therefore, the buildings will be listed separately from the overall land area.

15 Page 10, row 1, column 4, on line 12 insert - - *or the environment-* - after "*human health.*"

COMMENT INCORPORATED. This change shall be made through out the document.

16. Page 10, row 2, column 4, on lines 7 to 15 delete "*Due to --- human health.*"

COMMENT NOTED. The Army requires a definitive statement concerning why there is no risk.

Enclosure 6

Regulatory/Public Comments on FOSL #4

17. Page 10, row 3, column 4, on lines 2-5 delete ".SS 67... *Parcel 4.5.* " Page 10, row 3, column 4, on lines 12-13 delete "*health and safety*", on line 15 insert - - *and the environment*- - after "*human health* ", on lines 15-20 delete "*Also, the... human health.* "

COMMENT NOTED. The phrase of "covered in" will be changed to "is addressed in." The "Also" in the last sentence will be deleted. The sentence that begins "Also, the..." will begin with "Therefore, the performance...." A footnote shall be added to the sentence that reads "Therefore, the performance of industrial and/or commercial.... risk to human health or the environment," will be footnoted. The footnote will read "Provided the lessee adheres to the Environmental Protection Provisions (Enclosure 5), including but not limited to provision 14 (no subsurface disturbance, excavation, drilling, or digging without prior written approval from the Government)." This footnote will be added to the end of Tables 1, 2 and 3.

18. Page 11, row 1, column 1, this parcel also includes a land buffer of 50 feet and the Building was used as antifreeze storage (refer to BCT Minutes Sept. 1997). Page 11, row 1, column 4, on lines 10-11 delete "*health and safety* ", on lines 13-18 insert - - *and the environment*- - after "*human health* ", on lines 13-18 delete "*The performance... human health,*"

COMMENT NOTED. As described in the EBS, small point sources of contamination or storage, such as USTs, were delineated by circular 0.25-acre parcels centered on the source, as stipulated in DOD guidance. The text describing the parcel has been changed to include a description of the surrounding land. No deletions have been made as the language fulfills Army requirements and provide perspective tenants the information that remediation was conducted so in a safe and protective manner.

19 Page 11, row 2, column 1, parcel 4 7 also includes land surrounding the building as per the ECP map. Page 11, row 2, column 4, on lines 7-8 delete "*health and safety*", on line 10 insert - - *and the environment*- - after "*human health* ", on lines 17-21 delete "*The performance... human health.*"

COMMENT NOTED. See response to Comment 17.

20. Page 12, row 1, column 4, on lines 5-7 delete "*Samples were... is required*", on line 18 please insert - - *or the environment*- - after "*human health*".

COMMENT NOTED. The information provided documents the BCT decision of no further action and should be relayed to potential tenants. See Comment 18 response.

21. Page 12, row 2, column 4, on line 8 delete "*health and safety* ", on line 11 insert - - *and the environment*- - after "*human health* ", on lines 15-20 delete "*The performance .. human health.*"

COMMENT NOTED. See Comment 17 response.

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22. Page 13, row 1, column 1, please indicate that parcel 4.10 includes the land surrounding the building. Column 4, line 3 add - - and PAHs- - after "*pesticides*", on lines 6-7 delete "*health and safety*", on line 9 insert - - *and the environment*- - after- "*human health*", on lines 9-14 delete "*The performance... human health,*".

COMMENT NOTED. Subsurface sample results from the 1990 Law Environmental study indicated elevated levels of PAHs. However, surface soil samples taken during the latest round of sampling did not indicate elevated levels of PAHs. Dieldrin was the only contaminate in surface soil that exceeded screening levels (residential risk based concentrations). No text change.

23. Page 13, row 3, column 3, why is this Building a category 4 if NFA was recommended by the BCT. The category should be 3. Column 4, on line 12 insert - - *or the environment* - - after "*human health*."

COMMENT NOTED. PAHs and metals in sediments from the boiler room floor drain in Building 265 prompted the BCT to require action - encapsulation by filling in the drain with concrete. Once complete, no further action would be required for Building 265; therefore, the building fulfills the category 4 definition.

24. Enclosure 3. The title should be - - Notification of Hazardous Substance Storage, Release, or Disposal- -.

COMMENT INCORPORATED.

25. Page 14, row 1, column 4 on the last line insert - - *or the environment*- - after "*human health*" -

COMMENT INCORPORATED.

26. Page 14, row 3, column 4, on lines 6-7 delete "*health and safety*", on line 9 insert - - *and the environment* - - after "*human health*", on lines 9-12 delete "*The performance . . . human health.*"

COMMENT NOTED. See Comment 17 response.

27. Page 14, row 4, column 4, on the last line insert - - *or the environment*- - after "*human health*"

COMMENT INCORPORATED.

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Regulatory/Public Comments on FOSL #4

28. Page 14, row 5, column 4. on the last line insert - - *or the environment-* - after *"human health."*

COMMENT INCORPORATED.

29. Page 15, row 1. column 4, on line 7 delete *"health and safety "*, on line 9 please insert - - *and the environment-* - after *"human health"*, on lines 9-12 delete *"The performance... human health."*

COMMENT NOTED. See Comment 17 response.

30. Page 15. row 2. column 4, on line 8 delete *"health and safety "*, on line 10 insert - - *and the environment-*after *"human health "*, on lines 10-13 delete *"The performance... human health"*

COMMENT NOTED. See Comment 17 response.

31. Page 15, row 3, column 4, on the last line insert - - *or the environment-* - after *"human health."*

COMMENT INCORPORATED.

32. Page 15, row 5, column 1 replace existing text for - -Parcel 4 5-- -. Column 4, on line 6 delete *"health and safety"* on line 8 insert - - *and the environment-* - after *"human health "*, on lines 8-12 delete *"The performance . human health."*

COMMENT NOTED. See Comment 17 response

33 Enclosure 4. The title should be - - Notification of Petroleum Product Storage, Release, or Disposal- -.

COMMENT INCORPORATED.

34. Page 16, row 1, column 4, on line 9 delete *"health and-safety."* On line 12 insert - - *and the environment-* - after *"human health "*, on lines 12-15 delete *"The performance. . human health."*

COMMENT NOTED. See Comment 17 response.

35. Page 16, row 2, column 4, on the last line insert - - *or the environment-* - after *"human health."*

COMMENT INCORPORATED.

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36. Page 16, row 3, column 4. on the last line insert - - *or the environment*- - after "*human Health*."

COMMENT INCORPORATED.

37. Page 17, row 1, column 4, on the last line insert - - *or the environment*- - after "*human health*."

COMMENT INCORPORATED.

38. Page 17, row 5, column 1 replace existing text for - -Parcel 4.5- -. Column 4, on line 18 delete "*health and safety*", on line 20 insert - - *and the environment*- - after "*human health* ", on lines 20-24 delete "*The performance... human health*."

COMMENT NOTED. See Comment 17 response. Text for Parcel 4.5 will include the buildings located within the parcel.

39. Enclosure 5. Please note that in Provision #17(b) "Grantor" should be- - *the Department of Defense*- -.

COMMENT INCORPORATED.

40. Enclosure 5. Please note that "GRANTEE" in Provision #18(b) should be -*Lessee*-.

COMMENT INCORPORATED.

41. Enclosure 5. Provision #19 implies that there are DoD hazardous or toxic materials stored at the Depot.

COMMENT NOTED. It is an important covenant in that it tells the Lessee that hazardous substances shall not be brought onto the property unless specifically allowed by the Government.

TDEC Comments on FOSL #4

1. Section 3.1. Include parcel numbers for ECP category.

COMMENT INCORPORATED.

2. Section 3.5. Clarify if ACM is assumed to be present or if a survey will be completed for Buildings 273, T256 and T261, which indicate no survey completed.

COMMENT INCORPORATED.

Enclosure 6
Regulatory/Public Comments on FOSL #4

3. Site maps. Better delineate or note the buildings not included in this FOSL.

COMMENT INCORPORATED.

U.S. Department of Army Comments on FOSL #4

Office of Legal Council (John Farrar)

1. Para 3.2--Bldg. 265 is listed as a Condition Category 4 in Table 1 (description of Property). Should it be listed in paragraph 3.2?

COMMENT INCORPORATED. Table 2 will also reflect this change.

2. Para 3.6--Table 1 (Description of Property) shows Bldg. 265 as being construction in 1942. It should be added to the list of buildings built prior to 1978.

COMMENT INCORPORATED.

3. Encl. 1--The large scale map and the smaller scale map do not match each other. The large scale map has a rectangle portion missing from the bottom right hand portion of the area. The smaller scale map does not have this missing portion.

COMMENT INCORPORATED.

4. Encl. 1--The small scale map does not reflect the buildings listed in the FOSL 4. The map reflects Bldg. 251, 252 and 270, which are not in the FOSL 4. Bldg. 273 and 267 (pad) are not shown on the map.

COMMENT NOTED. Buildings 251, 252 and 270 are not included in this FOSL; however, the buildings must still be shown for accuracy. The proposed tenant for these three buildings as well as the property included in FOSL #4 is the Memphis Police Department. Buildings 251, 252 and 270 were included in previous FOSLs. The map has been changed to show Building 273 and Pad 267.

5. Table 1 (Description of Property)--On the first page, Building T256 and T261 are listed in the same paragraph. It would be easier to follow if these two buildings were listed separately.

COMMENT INCORPORATED. Because these two small buildings were never listed with their own BRAC Parcel number, there will be three EBS Parcel Designations of 4.5(7) in this table. The ECP category listing in paragraph 3.1 describes Parcel 4.5 as including the open area and two buildings.

Enclosure 6
Regulatory/Public Comments on FOSL #4

6. Table 1 (Description of Property)--Building 257 and 263 have had air monitoring undertaken. The statement needs to be rewritten to make the statement clearer. It appears to me that the current statement leads one to believe that the results of air monitoring in other buildings on the base was used for the results in this report. (This comment applies to Table 2 as well.)

COMMENT NOTED. The reader's interpretation is correct. The BCT agreed to sample a few representative buildings that were historically fumigated to address all of the fumigated buildings on the property. The BCT determined that no risk was associated with historical fumigation since air sampling results were well below OSHA standard for fumigants in worker areas.

Army OGC (Craig Teller)

No legal objection

Army TJAG (MAJ Allison Polchek)

No legal objection

Army BRACO (Ms. Robin Mills)

1. HQDA/BTT should not be in a position of reviewing FOSLs that have not been staffed with the regulators first. I can see that there will be exceptions, but HQDA/BTT needs to know (for political reasons if nothing else) whether or not the regulators concur/non-concur with the FOSL

COMMENT NOTED.

2. Page 3. Please clarify whether or not the regulators have signed off on the Cat 1 property (CERFA Clean??).

COMMENT NOTED. Regulators have approved the category 1 properties at BRAC Cleanup Team meetings following discussions of sampling data.

3. Page 5. Please clarify/state that the sites that caused the NPL listing are/or are not part of this lease (or does contaminated groundwater underlie the buildings????).

COMMENT NOTED. Sites that caused the NPL listing are not included in this lease; however, sites recognized by the regulators as CERCLA sites, which are included in the CERCLA remedial investigation and considered part of the NPL site, are in this lease (i.e. all grassy areas and all rail road tracks).

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Regulatory/Public Comments on FOSL #4

4. Page 11, the "Open Area of Parcel". It is unclear from the FOSL on whether or not this parcel is "suitable for lease for the intended use". An explanation as to WHY it is suitable needs to be given based on the on-going status of cleanup on the parcel. It may also be wise to point out in the protection provisions any restrictions/access that will be needed based on the on-going work. A statement concerning the "suitableness" of this parcel needs to be in the body of the FOSL as well as in the protection provisions.

COMMENT NOTED. A footnote shall be added to this sentence that will read, "Provided the lessee adheres to the Environmental Protection Provisions (Enclosure 5), including but not limited to provision 14 (no subsurface disturbance, excavation, drilling, or digging without prior written approval from the Government)." This footnote will be added to the end of Tables 1, 2 and 3.

5. Did the installation really have incidents of release up to Sep 97!!! as Table 2 implies??

COMMENT NOTED. Table 2 also refers to storage. These buildings may have stored hazardous substances until September 1997.

AMC Legal (MAJ Michael Stump)

1. The FOSL Number 4 has been reviewed and it is not legally sufficient for the two following reasons.

COMMENT NOTED.

2 Para. 3.3.1. Petroleum Products You need to explain why there is no unacceptable risk to human health and the environment from the unremediated petroleum products and why the proposed lease will not interfere with necessary remediation

COMMENT NOTED. Table 2 - Notification of Hazardous Substance Storage, Release or Disposal and Table 3 - Notification of Petroleum Product Storage, Release or Disposal provide specific details for the individual parcels or buildings included in this FOSL, including why there is no unacceptable risk.

3. Para. 4 Remediation. You need to explain why there is no unacceptable risk to human health and the environment from in place remediation activities or unremediated sites, and why the proposed lease will not interfere with ongoing or planned remediation.

COMMENT NOTED. Table 2 - Notification of Hazardous Substance Storage, Release or Disposal and Table 3 - Notification of Petroleum Product Storage, Release or Disposal provide specific details for the individual parcels or buildings included in this FOSL, including why there is no unacceptable risk.

Defense Logistics Agency Comments on FOSL #4

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Regulatory/Public Comments on FOSL #4

HQ-DLA (Jeanne Masters)

1. DLSC-BBB comment, which I believe Karen addressed, is the map on page 10 does not show buildings 273 and 267.

COMMENT INCORPORATED.

HQ-DLA (Legal Real Estate)

1. I have read the Army Materiel Command Guidance for FOST/FOSL. The above-noted Finding of Suitability to Lease (FOSL) were reviewed in light of that guidance. Inasmuch as the provisions to be included in the leases for Environmental Protection during the lease term are basically boilerplate, I will defer to the Army on the inclusion of those provisions. The language is repeated in the three documents and notes that the property is listed on the National Priorities List. Covenants for asbestos contamination, PCBs, lead-based paints, etc. are contained in the documents. Although we acknowledge the existence of the contaminants we ask the lessees to hold us harmless. Whether or not we would be sustained in these indemnifications and hold harmless provisions may be a legal issue not resolved now. The documents also outline contaminants stored on the property or utilized on the property. We do not know whether DLA is or was a contributory party to the use of the hazardous substances but it is noted that in certain instances remediation has taken place or a process for remediation has commenced. As a note in review, one wonders whether a policy of spraying dieldrin for pesticide purposes was considered a necessary property maintenance activity whether it was warranted or not. Was there any evidence of pest infestation to merit such use?

To be consistent with the FOSL guidance models, we need to make express statements that the proposed leases are consistent with the redevelopment plans proposed by the Memphis LRA.

Secondly I note in review that our documents are still in review by local environmental authorities and EPA. The Section 5 analysis is therefore incomplete because of the concurrent review. Otherwise I find no legal insufficiency in the documents meriting redrafting or significant change in format."

COMMENT NOTED. Paragraph 1. PURPOSE will include this sentence, "This FOSL has been developed in accordance with the Depot Redevelopment Corporation's Reuse Plan."

Enclosure 6
Regulatory/Public Comments on FOSL #4

HQ-DLA (Karen Moran)

1. Page 3, description of cat 7 is confusing, Bldg. 273 is not on the map, nor is pad 267, and T256 and T261 are shown on the map without the "T." The last two lines should be clarified if possible.

COMMENT INCORPORATED.

2. Page 5, para 3.7, should we say "the Army or DLA"?

COMMENT NOTED. Changed to read Department of Defense.

3. Page 7, para 8, line 7, correct word use/type, "and there adequate..."

COMMENT INCORPORATED. The word "are" will be inserted between "there...adequate..."

4. Page 10, Property map seems to be missing several things -- see comment for page 3 above -- including building 273.

COMMENT INCORPORATED.

5 Page 12, top of right column, correct printing error at title block.

COMMENT NOTED. Upon review, the printing error was not located.

6 Page 12, bldg 257, right column, the sentence "Building 257 was fumigated." could be clarified by adding words like "in the past" since it follows description of contemporary cleanup measures. Same comment when the same sentence or similar wording is used in other locations in the tables.

COMMENT INCORPORATED.

7. Page 5, para 5. Did we really do anything yet to get comments from the public? Seems like the answer is no, as there are no "public" comments in Encl 6. Also, IAW AMC FOSL/FOST guidance, p. 14, has the official regulatory/public comment period commenced yet?

COMMENT NOTED. The Restoration Advisory Board was informed about the development of FOSL 4 and the properties included in FOSL 4.

Enclosure 6

Regulatory/Public Comments on FOSL #4

8. Enclosure 1. The confusion about the maps continues -- understanding the parcel designations would be much easier if the map on Page 2 showed the parcel designations, since the parcels are referred to so frequently in the document. Page 2 wording is double printed. Suggest an addition to the wording on Page 2, explaining why the four buildings are not included in this FOSL (e.g., "This FOSL does not include XXX as they are included in earlier FOSLs 1 and 2").

COMMENT INCORPORATED.

9. Enclosure 3, Page 1. Let's provide a (footnote?) explanation of what the EBS parcel designations stand for, if we need to include the level of detail shown for building 260. For bldgs T256 and T261, the second and third sentences under remedial action may not convey the message intended. Suggest relocating the section on the open area of parcel 4 (parcel 4.5?) so readers see that before reading the references to parcel 4.5 in sections on bldgs. T256 and T261.

COMMENT NOTED. This response assumes the commentor was referring to Enclosure 2. The EBS CERFA categories are defined in footnote fashion at the end of Table 1. The information regarding T256 and T261 under remedial action was intended to convey that no remedial actions are planned or foreseeable for these structures, but these structures are considered category 7 because of their inclusion in parcel 4.5.

10. Enclosure 2, Page 2. Bottom of page mislabeled Encl 2 as Encl 3. For the Open Area entry under Remedial Action, the reference to SS66 could not be found in Table 3, parcel 4.5 as described, in fact nothing was listed at parcel 4.5 in table 3. Also this section would be clearer if it started with the current third sentence ("The general area of concern for . . .") Suggest rewording.

COMMENT INCORPORATED. The page label for Encl 2 appeared correctly in the FOSL preparer's computer. The "Parcel 4.5" designation has been added to the Table 3 entry for the "Open Area in Parcel 4." This entry does contain the information for SS66.

11. Enclosure 3, Page 2. In both the entries for pad 267 and bldg. 273, the 4th and 5th sentences do not really seem to address the issue of whether the area is safe now or not, aside from the issue of whether or not it will be safe during remediation.

COMMENT NOTED. Per EPA comment 17 and MDC response, a footnote was added to this table that reads, "Provided the lessee adheres to the Environmental Protection Provisions (Enclosure 5), including but not limited to provision 14 (no subsurface disturbance, excavation, drilling, or digging without prior written approval from the Government)." This footnote was added to Tables 1, 2 and 3 and addresses the question of "Is it safe." Yes, provided the lessee adheres to the provisions.

12. Enclosure 4, page 2, Entry for Open Area. Isn't this really parcel 4.5? If so, let's say so.

Enclosure 6
Regulatory/Public Comments on FOSL #4

COMMENT INCORPORATED. All table entries for the Open Area now include Parcel 4.5 designation.

13. Enclosure 6, page 1, comment 3 response. The EPA wording helps to understand which parcels are which, particularly parcel 4.5. Consider using more of it.

COMMENT NOTED.

14. Enclosure 6, page 1, comment 14 response. Sentence states "the buildings should not be category 7." What should they be? Currently they are shown in para 3.1 and Table 1 as cat 7. Reword to reexplain this statement so it will be understood better by other readers and seem less contradictory.

COMMENT NOTED. The wording has been removed.

15. Enclosure 6, page 3, comment 18 and response. It is not clear what this was about. Was something left out?

COMMENT NOTED. Nothing was left out of the comment or response.

16 Enclosure 6, page 9, comments 1 and 2 Need a better response.

COMMENT NOTED. The BRAC Environmental Coordinator (BEC) requested clarification of these comments during preparation of comment responses. On June 8, 1998, he received clarification of the comments in question and has prepared appropriate responses.

17 Enclosure 6, page 9, comment 1 from Legal Real Estate. Comments in first paragraph, including a question regarding pesticide use, were not addressed.

COMMENT NOTED. No action was specified in the first paragraph other than the pesticide question. We have no information available regarding Army pesticide application methods or DLA applications dating to the use of dieldrin.

18. General Comment. If the comments are response portions of the FOSL are to be public documents, they should be written in a way that is not confusing or misleading to the public.

COMMENT NOTED.

Enclosure 6
Regulatory/Public Comments on FOSL #4

DLA - Memphis Depot Caretaker Environmental Division

1. The third sentence in Paragraph 3.2 needs to read, "The release or disposal of these hazardous substances was either remediated at the time of release or is currently under evaluation as part of the installation restoration program."

COMMENT INCORPORATED.

Enclosure 7 References

I. The statutory and regulatory requirements relating to FOST/FOSLs are as follows:

CERCLA §120(h), 42 U.S.C. §9620(h) - Property Transferred by Federal Agencies

10 U.S.C. § 2667(f) as amended by section 2906 of the FY 94 Defense Authorization Act requiring DOD and EPA to consult on FOSL procedures

40 CFR PART 373 - Reporting Hazardous Substance Activity when Selling or Transferring Federal Real Property.

II. The DOD Guidance relating to FOST/FOSLs is as follows:

DOD Guidance on the Environmental Review Process to Reach a Finding of Suitability to Transfer (FOST) for Property Where Release or Disposal has Occurred, dated 1 June 1994.

DOD Guidance on the Environmental Review Process to Reach a Finding of Suitability to Transfer (FOST) for Property Where No Release or Disposal has Occurred, dated 1 June 1994.

DOD Policy on the Environmental Review Process to Reach a Finding of Suitability to Lease (FOSL), dated 18 May 1996

DOD Fast Track to FOST - A Guide to Determining if Property is Environmentally Suitable to Transfer , July 1997

DOD Fact Sheet – A Field Guide to FOSL, Fall 1996

DOD Memorandum, Subject: Clarification of "Uncontaminated" Environmental Condition of Property at Base Realignment and Closure (BRAC) Installations, dated 21 October 1996

DOD Memorandum, Subject: Asbestos, Lead paint and Radon Policies at BRAC Properties, dated 31 October 1994

III. U.S. Environmental Protection Agency (EPA) Guidance

Guidance for Evaluation of Federal Agency Demonstrations that Remedial Actions are Operating Properly and Successfully Under CERCLA Section 120(h)(3), (Interim), dated August 1996

Enclosure 7 References

EPA Memorandum, Subject: Military Base Closures: Guidance on EPA concurrence in the Identification of Uncontaminated Parcels under CERCLA Section 120(h)(4), re-issued March 27, 1997

IV. Department of the Army Guidance

AR 200-1, Environmental Protection and Enhancement, dated 21 February 1997

DAIM-BO Memorandum, Subject: Clarification of Meaning of Uncontaminated Property for Purposes of Transfer by the United States, dated 9 December 1996

V. WWW BRAC Sites

1. DOD Sites –

DOD Base Closure and Transition Office –
<http://emissary.acq.osd.mil/bctoweb/bctohome.nsf>

DOD Environmental Base Realignment and Base Closure (BRAC) Program
<http://www.dtic.mil/envirodod/envbrac.html>

DOD Base Closure and Community Reinvestment
<http://www.acq.osd.mil/iai/bccr.htm> DOD Office of Economic Adjustment
<http://www.acq.osd.mil/oea/index.html>

2. Environmental Protection Agency EPA OSWER Federal Facilities Base Realignment and Closure

<http://www.epa.gov/swerffrr/brac.htm>

3. Department of the Army Base Realignment and Closure Office

<http://www.hqda.army.mil/acsimweb/brac/brac3.htm>

CERL BRAC/NEPA "How To" Manual
<http://www.cecer.army.mil/facts/sheets/PL19.html>

Corps of Engineers Base Realignment and Closure (Camp Bonneville)
- Good Slide Presentation
<http://www.nps.usace.army.mil/geotech/bnvl/brac95/index.htm>

Presidio of San Francisco BRAC Environmental Restoration Program
- General information as well as facts on Presidio Cleanup and Conversion
<http://www.presidiosanfran.com>

Enclosure 7

References

4. Department of the Air Force Air Force Base Conversion Agency

<http://www.afbca.hq.af.mil>

5. Department of the Navy

NAVY `NAVFAC Base Closure Site

<http://164.224.238.53:81/csohome.nsf>

Navy Facilities Engineering Command - information on Navy BRAC sites

http://www.ncts.navy.mil/homepages/navfac_es/bcp.htm

Navy Environmental BRAC News

<http://www.navy.mil/homepages/navfac/env/newslet.html>

FINDING OF SUITABILITY TO LEASE

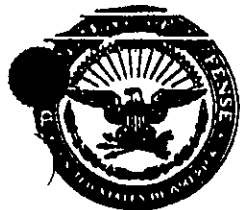
(FOSL)

Parcel 8.1, Parcel 8.2, Parcel 8.3
Parcel 8.4, Parcel 8.5

Defense Distribution Depot Memphis, Tennessee

(FOSL Number 5)

July 8, 1998



DEPARTMENT OF THE ARMY
HEADQUARTERS, U.S. ARMY MATERIEL COMMAND
5001 EISENHOWER AVENUE, ALEXANDRIA, VA 22333-0001

REPLY TO
ATTENTION OF

AMCEN-R

14 AUG 1998

MEMORANDUM THRU Commander, U.S. Army Engineers Division, South
Atlantic, ATTN: CESAD-RE, Room 313, 77 Forsyth
Street, S.W., Atlanta, GA 30335-6801

FOR Commander, U.S. Army Corps of Engineer, Mobile District,
ATTN: CESAM-RE-MM, P.O. Box 2288, Mobile, AL 36628-0001

SUBJECT: Finding of Suitability to Lease (FOSL-5) for Defense
Distribution Depot Memphis, Tennessee (DDMT)

1. References:

a. Memorandum, AMCEN-R, 3 Apr 97, subject: Report of
Availability for a Master Lease with the Memphis Depot
Redevelopment Agency.

b. Memorandum, DLSC-BBB, 15 Jun 98, SAB (Encl 1).

2. Enclosed for your action is the approved FOSL-5 (Encl 2) with
supporting documentation for adding Buildings 229, 230, 329, 330
and the open land area surrounding these buildings at DDMT to the
master lease with Memphis Depot Redevelopment Agency.

3. The approved Report of Availability (ROA) for the entire
installation, including the property addressed in this FOSL, was
forwarded with reference 1a.

4. The Final Environmental Assessment for Master Lease, Defense
Distribution Depot Memphis, Tennessee, dated Sep 96, is the
National Environmental Policy Act Document for this action.

5. Request a modification to the master lease adding Buildings
229, 230, 329, 330 and the open land area surrounding these
buildings be executed in accordance with the ROA and FOSL-5.

AMCEN-R

SUBJECT: Finding of Suitability to Lease (FOSL-5) for Defense Distribution Depot Memphis, Tennessee (DDMT)

6. Points of contact for this action are Mr. John Farrar, AMCEN-R, DSN 767-0726; commercial (703) 617-0726 and Mr. Joe Goetz, AMCEN-R, DSN 767-8904; commercial (703) 617-8904.

7. AMC -- America's Arsenal for the Brave.

FOR THE COMMANDER: .



2 Encls

P. S. MORRIS
Colonel, GS
Deputy Chief of Staff
for Engineering, Housing,
Environment, and Installation
Logistics

CF: (wo/encls)

Assistant Chief of Staff for Installation Management, ATTN:
DAIM-BO, 600 Army Pentagon, Washington, D.C. 20310-0600
Headquarters, U.S. Army Corps of Engineers, ATTN: CERE-C,
Pulaski Bldg #4133, 20 Massachusetts Avenue, Washington, D.C.
20314-1000

Director, Defense Logistics Agency, ATTN: DLSC-BBB, Suite 2533,
8725 John J. Kingman Road, Fort Belvoir, VA 22060-6221

Commander, Defense Distribution Depot Memphis, ATTN: DDMT-D,
2163 Airways Boulevard, Memphis, TN 38114-5210

1. PURPOSE

The purpose of this Finding Of Suitability To Lease (FOSL) is to document the environmental suitability of Parcels 8.1, 8.2, 8.3, 8.4 and 8.5 at the Defense Distribution Depot Memphis, Tennessee (DDMT) for leasing to the Depot Redevelopment Corporation (DRC) for light industry, storage or general office use consistent with Department of Defense (DOD) and Army policy. This FOSL has been developed in accordance with the DRC's Reuse Plan. In addition, the FOSL identifies use restrictions as specified in the attached Environmental Protection Provisions (Enclosure 5) necessary to protect human health and the environment and to prevent interference with any existing or planned environmental restoration activities.

2. PROPERTY DESCRIPTION

The proposed property to be leased consists of 17.6 acres that includes five (5) parcels. Included in these parcels are four (4) buildings (Buildings 229, 230, 329 and 330) and the open land area surrounding these buildings. Site maps of the property proposed to be leased can be found at Enclosure 1.

3. ENVIRONMENTAL CONDITION OF THE PROPERTY

A determination of the environmental condition of the facilities has been made based on the Community Environmental Response Facilitation Act (CERFA) Letter Report dated December 5, 1996 and an Environmental Baseline Survey (EBS) dated November 6, 1996. The information provided is a result of a complete search of agency files during the development of these environmental surveys. The following documents also provided information on environmental conditions of the property: Draft Final BRAC Cleanup Plan Version 2 (DDSP-FE, November 1997), Asbestos Reinspection (DDC-WP, October 1996), Final Environmental Assessment for Master Interim Lease (Tetra Tech, September 1996), Ordnance and Explosive Waste/Chemical Warfare Materials Archives Search Report (U.S. Army Corps of Engineers, January 1995), Remedial Investigation Soil Sampling Letter Report (CH2M Hill, May 1997), OU - 2 and OU - 3 Field Sampling Plans (CH2M Hill, September 1995), Asbestos Identification Survey (Pickering, December 1993 and January 1994), RCRA Facilities Assessment (A.T. Kearney, Inc., January 1990), Final Remedial Investigation Report (Law Environmental, August 1990) and the Installation Assessment (USAEHA, March 1981).

3.1 Environmental Condition of Property Categories

The Department of Defense (DOD) Environmental Condition of Property (ECP) Categories for the property are as follows:

ECP Category 1:	Parcel 8.2 - Building 229 only
	Parcel 8.3 - Building 230 only
	Parcel 8.4 - Building 329 only
	Parcel 8.5 - Building 330 only

ECP Category 7: Parcel 8.1 - Open land areas surrounding the buildings in Parcel 8

A summary of the ECP Categories for specific buildings or parcels is provided in Table 1 – Description of Property (Enclosure 2).

3.2 Storage, Release or Disposal of Hazardous Substances

Hazardous substances were stored in Buildings 229, 230, 329 and 330. It is assumed this storage was in excess of the 40 CFR Part 373 reportable quantities. Hazardous substances were released in the open area surrounding the four (4) buildings in Parcel 8. It is assumed, unless otherwise noted, these releases were in excess of the 40 CFR Part 373 reportable quantities. The release of hazardous substances was either remediated at the time of the release or is currently under evaluation as part of the installation restoration program. There is no risk to human health and the environment so long as the tenant adheres to the Environmental Protection Provisions (Enclosure 5) with particular reference to Provision 14 regarding ground disturbing activities. These activities shall not be allowed without prior written approval from the Government. A summary of the buildings or areas in which hazardous substance activities occurred is provided in Table 2 – Notification of Hazardous Substance Storage, Release or Disposal (Enclosure 3).

3.3 Petroleum and Petroleum Products

3.3.1 Storage, Release, or Disposal of Petroleum Products

Petroleum products were stored in Buildings 229, 230, 329 and 330. It is assumed this storage was in excess of 55 gallons. There is no evidence that petroleum products were released in these buildings; therefore there is no risk to human health or the environment. A summary of the buildings or areas in which petroleum products were stored, released or disposed is provided in Table 3 – Notification of Petroleum Product Storage, Release or Disposal (Enclosure 4).

3.3.2 Underground and Above-Ground Storage Tanks (UST/AST)

There is no evidence that petroleum products were stored in underground or aboveground storage tanks on the property.

3.4 Polychlorinated Biphenyls (PCB) Equipment

There are no PCB containing transformers or other PCB containing equipment, except hermetically sealed fluorescent light bulb ballasts that may contain PCBs, located on the property listed in this FOSL. There is no evidence of unremediated PCB releases from these ballasts.

3.5 Asbestos

The EBS and the Asbestos Identification Survey (Pickering, December 1993 and January 1994) indicate Asbestos Containing Materials (ACM) are present in the following buildings:

Building 229:	Thermal System Pipe Insulation (to include joints) Cement Asbestos Wall Board Cement Asbestos Transite Pipe Raised Roof Panel Putty 12 x 12 Floor Tiles and Mastic
Building 230:	Cement Asbestos Wall Board 12 x 12 Floor Tile Raised Roof Panel Putty Roof Flashing
Building 329:	Cement Asbestos Wall Board Floor Tile Mastic Raised Roof Panel Putty Roof Flashing
Building 330:	Cement Asbestos Wall Board Floor Tile Mastic Raised Roof Panel Putty Roof Flashing

The ACM does not currently pose a threat to human health or the environment because all friable asbestos that posed an unacceptable risk to human health has been removed or encapsulated. The lease will include the asbestos warning and covenant included in the Environmental Protection Provisions (Enclosure 5)

3.6 Lead-Based Paint (LBP)

Based on the age of the buildings (constructed prior to 1978), the following buildings are presumed to contain lead-based paint: 229, 230, 329 and 330. The lease will include the lead-based paint warning and covenant provided in the Environmental Protection Provisions (Enclosure 5).

3.7 Radiological Materials

There is no evidence that the Department of Defense used or stored radioactive materials on the property addressed in this FOSL.

3.8 Radon

In keeping with DOD policy to not perform radon assessment and mitigation prior to transfer of BRAC property, there were no radon surveys conducted in the buildings in this FOSL.

3.9 Unexploded Ordnance

Based on a review of existing records and available information, none of the buildings or surrounding land proposed for lease are known to contain unexploded ordnance.

3.10 Other Hazardous Conditions

There are no other known hazardous conditions that present an unacceptable threat to human health or the environment on the property.

4. REMEDIATION

In October 1992, the U.S. Environmental Protection Agency (EPA) placed DDMT on the National Priorities List (NPL) for environmental restoration. DDMT has since entered into a Federal Facilities Agreement (FFA) with the Tennessee Department of Environment and Conservation (TDEC) and the EPA. Environmental contamination on the property described in this document does not present a hazard to leasing it. In addition, environmental conditions on adjacent property do not present a hazard to the leasing of the property. Table 2 - Notification of Hazardous Substance Storage, Release or Disposal (Enclosure 3) and Table 3 - Notification of Petroleum Product Storage, Release or Disposal (Enclosure 4) provide details regarding environmental conditions for each individual parcel or building contained within this FOSL. Regulators have concurred with DDMT that the open area surrounding buildings in Parcel 8 do not pose risks above levels deemed protective provided that the property is used for the proposed purpose and the lessee strictly adheres to the Environmental Protection Provisions (Enclosure 5)

5. REGULATORY/PUBLIC COORDINATION

The U S EPA Region 4, TDEC and the public were notified of the initiation of the FOSL. Regulators have reviewed this FOSL and provided comments. These comments have been incorporated as appropriate. Regulatory/public comments and responses are provided in Enclosure 6.

6. NATIONAL ENVIRONMENTAL POLICY ACT (NEPA) COMPLIANCE AND CONSISTENCY WITH LOCAL REUSE PLAN

The environmental impacts associated with proposed lease of the property have been analyzed in accordance with the National Environmental Policy Act (NEPA). The results of this analysis have been documented in the Final Environmental Assessment for Master Interim Lease, Defense Distribution Depot Memphis, Tennessee, dated September 1996. The environmental effects of the activities anticipated under the proposed lease were determined not to be significant. In addition, the proposed use of the property is consistent with the intended reuse of the property set forth in the Depot Redevelopment Corporation Reuse Plan.

7. ENVIRONMENTAL PROTECTION PROVISIONS

On the basis of the above results from the site-specific EBS and other environmental studies and in consideration of the intended use of the property, certain terms and conditions are required for the proposed lease. These terms and conditions are set forth in the attached Environmental Protection Provisions (Enclosure 5) and will be included in the lease.

8. FINDING OF SUITABILITY TO LEASE

Based on the above information, I have concluded that all Department of Defense (DOD) requirements to reach a Finding of Suitability to Lease (FOSL) to the Depot Redevelopment Corporation for light industrial use have been fully met for the property subject to the terms and conditions in the attached Environmental Protection Provision (Enclosure 5). As required by CERCLA section 120(h)(3)(B), I have determined that the property is suitable for lease for the intended purpose, the uses contemplated for the lease are consistent with protection of human health and the environment, and there are adequate assurances that the United States will take any additional remedial action found to be necessary that has not been taken on the date of the lease.

As required under the DOD FOSL Guidance, notification of hazardous substance activities and petroleum product activities shall be provided in the lease documents. Refer to Table 2 - Notification of Hazardous Substance Storage, Release or Disposal (Enclosure 3) and Table 3 - Notification of Petroleum Product Storage, Release or Disposal (Enclosure 4).

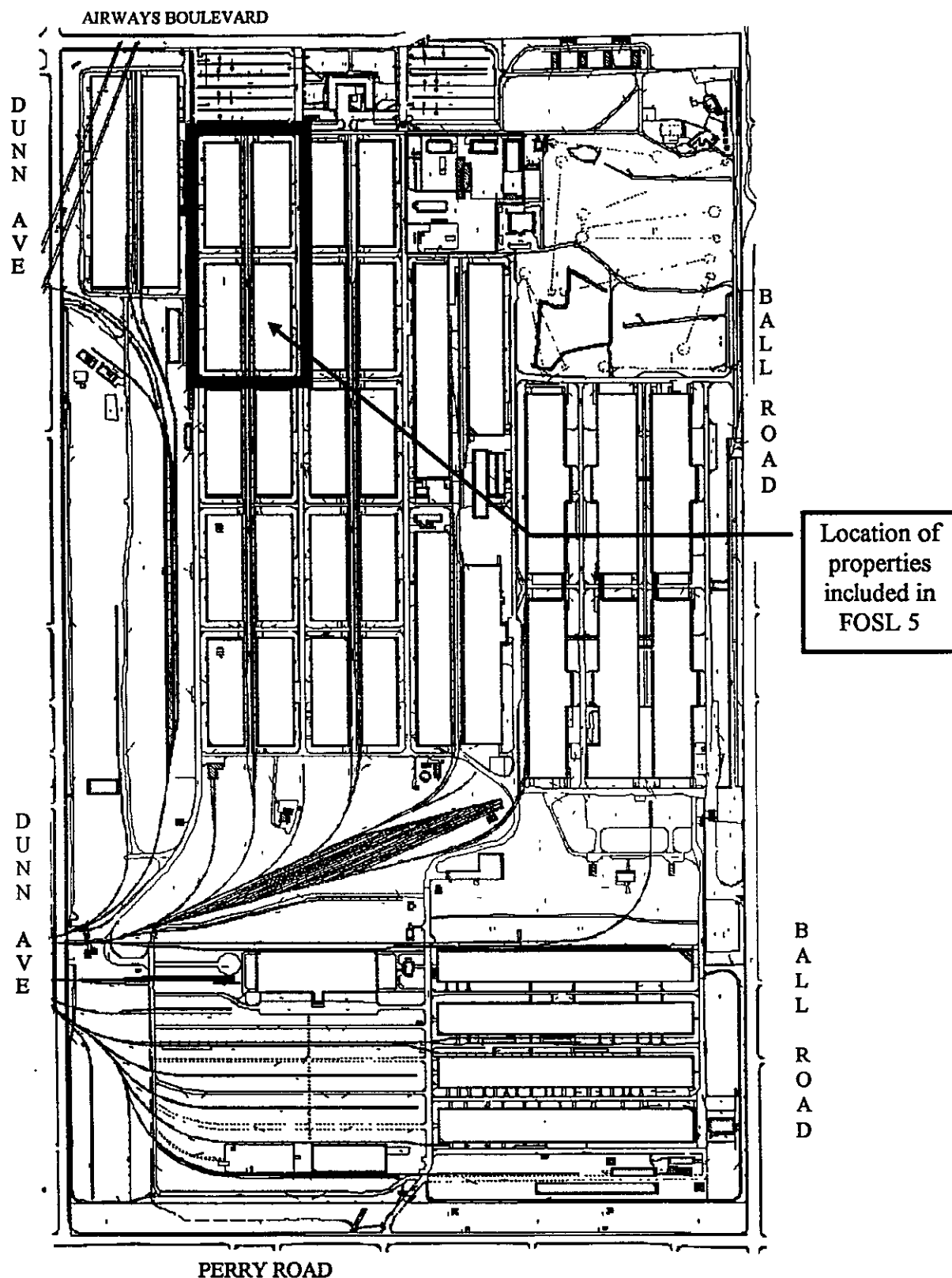


P. S. MORRIS
Colonel, GS
Deputy Chief of Staff for Engineering, Housing,
Environment and Installation Logistics

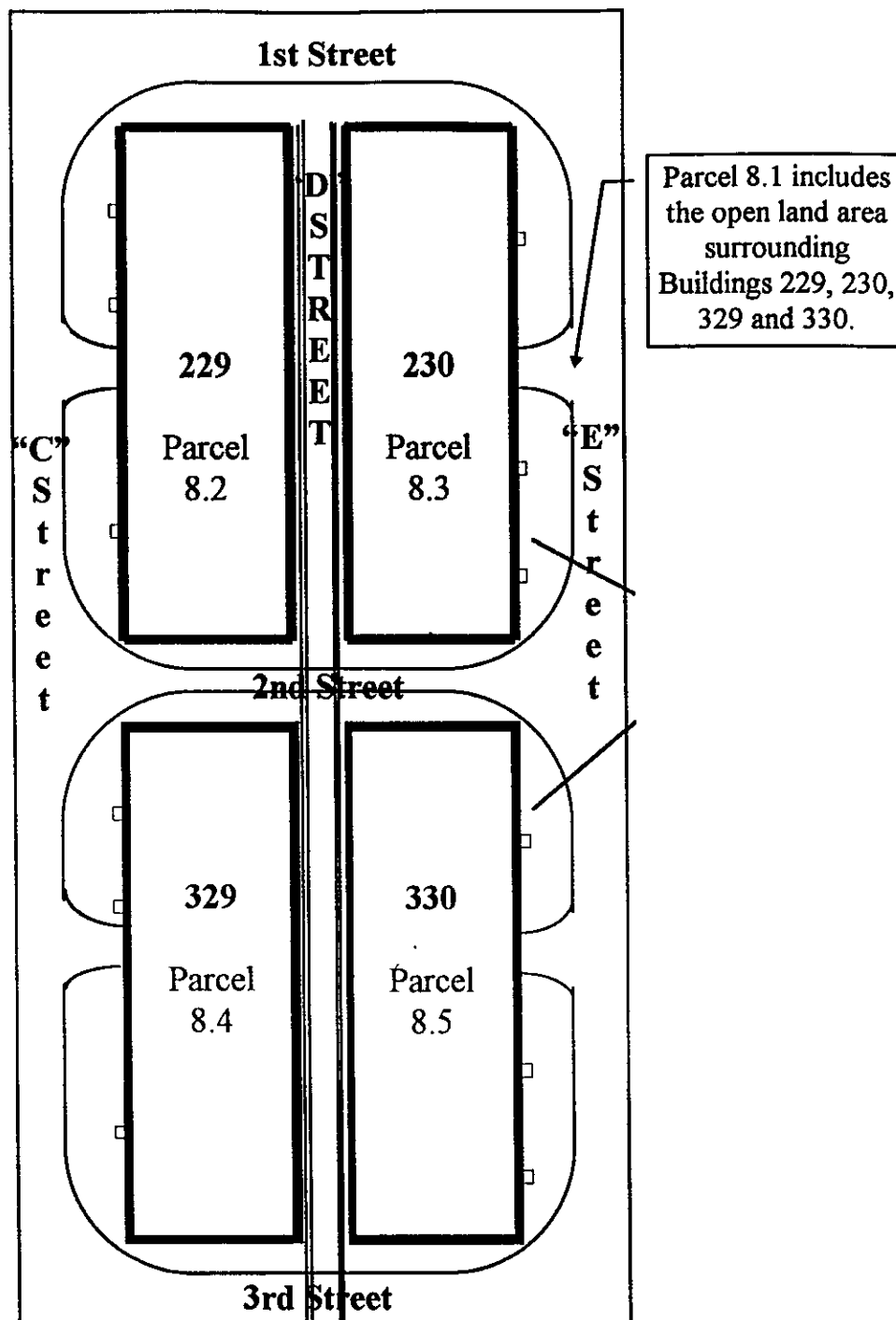
7 Enclosures

- Encl 1 Site Maps of Property
- Encl 2 Table 1 - Description of Property
- Encl 3 Table 2 - Notification of Hazardous Substance Storage, Release or Disposal
- Encl 4 Table 3 - Notification of Petroleum Product Storage, Release or Disposal
- Encl 5 Environmental Protection Provisions
- Encl 6 Regulatory/Public Comments and Responses
- Encl 7 Reference Materials

Enclosure 1
Site Map of FOSL 5 Property



Enclosure 1
Site Map of FOSL 5 Property



Enclosure 2
Table 1 - Description of Property

Building Number and Property Description	EBS Parcel Designation	Condition Category	Remedial Actions
Parcel 8.2 includes Building 229, a 120,000 square foot building erected in 1942 that was used during World War II as a storage warehouse for the Chemical Warfare Service until March 31, 1961. In subsequent years, it was used as a general purpose warehouse (food/textile storage).	8.2(1)	1	Building 229 was used by the U.S. Army Chemical Warfare Service for storage of a variety of materials including gas masks, respirators, nitro-starch and primacord bursters, blasting caps, tear gas solution and flame thrower fuel. The U.S. Army Corps of Engineer - St. Louis District found no evidence of release or disposal at this building of chemical warfare material during research for preparation of the "Ordnance and Explosive Waste/Chemical Warfare Materials Archive Search Report for Memphis Defense Depot." The building may also have been fumigated in the past. Air sampling for fumigants in other buildings similarly fumigated was performed in the winter of 1997. The BCT reviewed the air sample results and determined that no further action was required. Therefore, the performance of industrial and/or commercial operations at this site in accordance with the Lease Restrictions will not pose an unacceptable risk to human health or the environment. ¹
Parcel 8.3 includes Building 230, a 120,000 square foot building erected in 1942 that was used during World War II as a storage warehouse for the Chemical Warfare Service until March 31, 1961. In subsequent years, it was used as a general purpose warehouse (food/textile storage).	8.3(1)	1	Building 230 was used by the U.S. Army Chemical Warfare Service for storage of a variety of materials including gas masks, respirators, nitro-starch and primacord bursters, blasting caps, tear gas solution and flame thrower fuel. The U.S. Army Corps of Engineer-St. Louis District found no evidence of release or disposal at this building of chemical warfare material during research for preparation of the "Ordnance and Explosive Waste/Chemical Warfare Materials Archive Search Report for Memphis Defense Depot." The building may also have been fumigated in the past. Air sampling for fumigants in other buildings similarly fumigated was performed in the winter of 1997. The BCT reviewed the air sample results and determined that no further action was required. Therefore, the performance of industrial and/or commercial operations at this site in accordance with the Lease Restrictions will not pose an unacceptable risk to human health or the environment. ¹

Enclosure 2
Table 1 - Description of Property

Building Number and Property Description	EBS Parcel Designation	Condition Category	Remedial Actions
Parcel 8.4 includes Building 329, a 120,000 square foot building erected in 1942 that was used during World War II as a storage warehouse for the Chemical Warfare Service until March 31, 1961. In subsequent years, it was used as a general purpose warehouse (food/textile storage).	8.4(1)	1	Building 329 was used by the U.S. Army Chemical Warfare Service for storage of a variety of materials including gas masks, respirators, nitro-starch and primacord bursters, blasting caps, tear gas solution and flame thrower fuel. The U.S. Army Corps of Engineer - St. Louis District found no evidence of release or disposal at this building of chemical warfare material during research for preparation of the "Ordnance and Explosive Waste/Chemical Warfare Materials Archive Search Report for Memphis Defense Depot." The building may also have been fumigated in the past. Air sampling for fumigants in other buildings similarly fumigated was performed in the winter of 1997. The BCT reviewed the air sample results and determined that no further action was required. Therefore, the performance of industrial and/or commercial operations at this site in accordance with the Lease Restrictions will not pose an unacceptable risk to human health or the environment. ¹
Parcel 8.5 includes Building 330, a 120,000 square foot building erected in 1942 that was used during World War II as a storage warehouse for the Chemical Warfare Service until March 31, 1961. In subsequent years, it was used as a general purpose warehouse (food/textile storage).	8.5(1)	1	Building 330 was used by the U.S. Army Chemical Warfare Service for storage of a variety of materials including gas masks, respirators, nitro-starch and primacord bursters, blasting caps, tear gas solution and flame thrower fuel. The U.S. Army Corps of Engineer - St. Louis District found no evidence of release or disposal at this building of chemical warfare material during research for preparation of the "Ordnance and Explosive Waste/Chemical Warfare Materials Archive Search Report for Memphis Defense Depot." The building may also have been fumigated in the past. Air sampling for fumigants in other buildings similarly fumigated was performed in the winter of 1997. The BCT reviewed the air sample results and determined that no further action was required. Therefore, the performance of industrial and/or commercial operations at this site in accordance with the Lease Restrictions will not pose an unacceptable risk to human health or the environment. ¹

Enclosure 2
Table 1 - Description of Property

Building Number and Property Description	EBS Parcel Designation	Condition Category	Remedial Actions
Parcel 8.1 includes the open land area of Parcel 8 surrounding Buildings 229, 230, 329 and 330.	8.1(7)	7	This parcel contains railroad tracks that were historically sprayed with pesticides, herbicides and waste oil containing PCP and grassy areas that were historically sprayed with herbicides and pesticides. Sampling of the railroad tracks and grassy areas was conducted as part of Screening Sites 70/71 (facility-wide tracks). This parcel was sampled and found to contain dieldrin at levels that exceeded screening criteria. Due to the presence of pesticides, this parcel is currently under evaluation by the BCT as part of the installation restoration program. Appropriate health and safety measures will be implemented during all remediation activities to ensure the protection of human health and the environment. Therefore, the performance of industrial and/or commercial operations at this site in accordance with the Lease Restrictions will not pose an unacceptable risk to human health or the environment. ¹

¹ Provided the lessee strictly adheres to the Environmental Protection Provisions (Enclosure 5), including but not limited to Provision 14 - No subsurface disturbance, excavation, drilling or digging without prior written approval from the Government.

Category 1 Areas where no release or disposal of hazardous substances or petroleum products has occurred (including no migration of these substances from adjacent areas)

Category 2 Areas where only release or disposal of petroleum products has occurred

Category 3 Areas where release, disposal, and/or migration of hazardous substances has occurred, but at concentrations that do not require a removal or remedial response

Category 4. Areas where release, disposal, and/or migration of hazardous substances has occurred, and all removal or remedial actions to protect human health and the environment have been taken.

Category 5: Areas where release, disposal, and/or migration of hazardous substances has occurred, and removal or remedial actions are underway, but all required remedial actions have not yet been taken.

Category 6: Areas where release, disposal, and/or migration of hazardous substances has occurred, but required actions have not yet been implemented.

Category 7: Areas that are not evaluated or require additional evaluation

Enclosure 3

Table 2 - Notification of Hazardous Substance Storage, Release or Disposal

Building Number	Name of Hazardous Substance	Date of Storage, Release, or Disposal	Remedial Actions
Parcel 8.2 - Building 229	Chloracetophenone tear gas; Sulfur Trioxide/ Chlorsulfonic acid mixture; Titanium Tetrachloride smoke; XXCC3 Impregnite (includes small amounts of chlorine and chloroform); Pesticides (fumigants)	Chemical Warfare Service use for material storage from April 30, 1942 until March 31, 1961 Pesticide fumigation probably began in April 1961 and continued until September 1997	No remedial action required. The U.S. Army Corps of Engineer - St. Louis District found no evidence of release or disposal at this building of chemical warfare material during research for preparation of the "Ordnance and Explosive Waste/Chemical Warfare Materials Archive Search Report for Memphis Defense Depot." The building may also have been fumigated in the past. Air sampling for fumigants in other buildings similarly fumigated was performed in the winter of 1997. The BCT reviewed the air sample results and determined that no further action was required. Therefore, the performance of industrial and/or commercial operations at this site in accordance with the Lease Restrictions will not pose an unacceptable risk to human health or the environment. ¹
Parcel 8.3 - Building 230	Chloracetophenone tear gas; Sulfur Trioxide/ Chlorsulfonic acid mixture; Titanium Tetrachloride smoke; XXCC3 Impregnite (includes small amounts of chlorine and chloroform), Pesticides (fumigants)	Chemical Warfare Service use for material storage from April 30, 1942 until March 31, 1961 Pesticide fumigation probably began in April 1961 and continued until September 1997	No remedial action required. The U.S. Army Corps of Engineer - St. Louis District found no evidence of release or disposal at this building of chemical warfare material during research for preparation of the "Ordnance and Explosive Waste/Chemical Warfare Materials Archive Search Report for Memphis Defense Depot." The building may also have been fumigated in the past. Air sampling for fumigants in other buildings similarly fumigated was performed in the winter of 1997. The BCT reviewed the air sample results and determined that no further action was required. Therefore, the performance of industrial and/or commercial operations at this site in accordance with the Lease Restrictions will not pose an unacceptable risk to human health or the environment. ¹

Enclosure 3

Table 2 - Notification of Hazardous Substance Storage, Release or Disposal

Building Number	Name of Hazardous Substance	Date of Storage, Release, or Disposal	Remedial Actions
Parcel 8.4 - Building 329	Chloracetophenone tear gas; Sulfur Trioxide/ Chlorsulfonic acid mixture; Titanium Tetrachloride smoke; XXCC3 Impregnite (includes small amounts of chlorine and chloroform); Pesticides (fumigants)	Chemical Warfare Service use for material storage from April 30, 1942 until March 31, 1961 Pesticide fumigation probably began in April 1961 and continued until September 1997	No remedial action required. The U.S. Army Corps of Engineer - St. Louis District found no evidence of release or disposal at this building of chemical warfare material during research for preparation of the "Ordnance and Explosive Waste/Chemical Warfare Materials Archive Search Report for Memphis Defense Depot." The building may also have been fumigated in the past. Air sampling for fumigants in other buildings similarly fumigated was performed in the winter of 1997. The BCT reviewed the air sample results and determined that no further action was required. Therefore, the performance of industrial and/or commercial operations at this site in accordance with the Lease Restrictions will not pose an unacceptable risk to human health or the environment. ¹
Parcel 8.5 - Building 330	Chloracetophenone tear gas; Sulfur Trioxide/ Chlorsulfonic acid mixture; Titanium Tetrachloride smoke; XXCC3 Impregnite (includes small amounts of chlorine and chloroform); Pesticides (fumigants)	Chemical Warfare Service use for material storage from April 30, 1942 until March 31, 1961 Pesticide fumigation probably began in April 1961 and continued until September 1997	No remedial action required. The U.S. Army Corps of Engineer - St. Louis District found no evidence of release or disposal at this building of chemical warfare material during research for preparation of the "Ordnance and Explosive Waste/Chemical Warfare Materials Archive Search Report for Memphis Defense Depot." The building may also have been fumigated in the past. Air sampling for fumigants in other buildings similarly fumigated was performed in the winter of 1997. The BCT reviewed the air sample results and determined that no further action was required. Therefore, the performance of industrial and/or commercial operations at this site in accordance with the Lease Restrictions will not pose an unacceptable risk to human health or the environment. ¹

Enclosure 3

Table 2 - Notification of Hazardous Substance Storage, Release or Disposal

Building Number	Name of Hazardous Substance	Date of Storage, Release, or Disposal	Remedial Actions
Parcel 8.1 - Open land area in Parcel 8	Pesticides Herbicides	Exact start date unknown assume 1942 (date of activation) - September 1997	This parcel contains railroad tracks that were historically sprayed with pesticides, herbicides and waste oil containing PCP and grassy areas that were historically sprayed with herbicides and pesticides. Sampling of the railroad tracks and grassy areas was conducted as part of Screening Sites 70/71 (facility-wide tracks). This parcel was sampled and found to contain dieldrin at levels that exceeded screening criteria. Due to the presence of pesticides, this parcel is currently under evaluation by the BCT as part of the installation restoration program. Appropriate health and safety measures will be implemented during all remediation activities to ensure the protection of human health and the environment. Therefore, the performance of industrial and/or commercial operations at this site in accordance with the Lease Restrictions will not pose an unacceptable risk to human health or the environment. ¹

¹ Provided the lessee strictly adheres to the Environmental Protection Provisions (Enclosure 5), including but not limited to Provision 14 - No subsurface disturbance, excavation, drilling or digging without prior written approval from the Government

Enclosure 4

Table 3 - Notification of Petroleum Product Storage, Release or Disposal

Building Number	Name of Petroleum Product(s)	Date of Storage, Release, or Disposal	Remedial Actions
Parcel 8.2 - Building 230, Parcel 8.3 - Building 230, Parcel 8.4 - Building 329, Parcel 8.5 - Building 330	Flame Thrower Fuel (gel diesel)	April 1, 1942 until March 31, 1961	These buildings were used by the U.S. Army Chemical Warfare Service for storage of flame thrower fuel. The U.S. Army Corps of Engineer - St. Louis District found no evidence of release or disposal at these buildings during research for preparation of the "Ordnance and Explosive Waste/Chemical Warfare Materials Archive Search Report for Memphis Defense Depot." Therefore, the performance of industrial and/or commercial operations at this site in accordance with the Lease Restrictions will not pose an unacceptable risk to human health or the environment. ¹

¹ Provided the lessee strictly adheres to the Environmental Protection Provisions (Enclosure 5), including but not limited to Provision 14 - No subsurface disturbance, excavation, drilling or digging without prior written approval from the Government.

Enclosure 5

Environmental Protection Provisions

The following conditions will be placed in the lease to ensure there will be no unacceptable risk to human health or the environment and no interference to the ongoing Memphis Depot Caretaker installation restoration program (IRP) and to ensure regulatory requirements for the IRP and other compliance programs administered by the Army are met.

1. The sole purpose(s) for which the leased premises and any improvements thereon may be used, in the absence of prior written approval of the Government for any other use, is for uses similar or comparable to past or current activities of the Depot. These include light industry, storage, sorting operations, receiving, packaging and shipping, support activities, mechanical shop to support material handling equipment, training, education, and general office.
2. The Lessee shall neither transfer nor assign this Lease or any interest therein or any property on the leased premises, nor sublet the leased premises or any part thereof or any property thereon, nor grant any interest, privilege, or license whatsoever in connection with this Lease without the prior written consent of the Government. Such consent shall not be unreasonably withheld or delayed. Every sublease shall contain the Environmental Protection Provisions herein.
3. The Lessee and any sublessee shall comply with the applicable Federal, state, and local laws, regulations, and standards that are or may become applicable to Lessee's or sublessee's activities on the Leased Premises.
4. The Lessee and any sublessee shall be solely responsible for obtaining at its cost and expense any environmental permits required for its operations under the Lease, independent of any existing permits.
5. The 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 the Government is responsible for enforcing them. Such inspections are without prejudice to the right of duly constituted enforcement officials to make such inspections. The Government normally will give the Lessee or sublessee twenty-four (24) hours prior notice of its intention to enter the Leased Premises unless it determines the entry is required for safety, environmental, operations, or security purposes. The Lessee shall have no claim on account of any entries against the United States or any officer, agent, employee, or contractor thereof.
6. The Government acknowledges that Defense Distribution Depot Memphis, Tennessee has been identified as a National Priorities List (NPL) Site under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) of 1980, as amended. The Lessee acknowledges that the Government has provided it with a copy of the Defense Distribution Depot Memphis, Tennessee Federal Facilities Agreement (FFA) entered into by the United States Environmental Protection Agency (EPA) Region 4, the State of Tennessee, and the Defense Logistics Agency effective March 1995, and will provide the Lessee with a copy of any amendments thereto. The Lessee agrees that should any conflict arise between the terms of such agreement as it presently exists or may be amended and the provisions of this Lease, the terms of the FFA will take precedence. The Lessee further agrees that notwithstanding any other

Enclosure 5

Environmental Protection Provisions

provisions of the Lease, the Government assumes no liability to the Lessee or its sublessee's or licenses should implementation of the FFA interfere with the Lessee's or any sublessee's or licensee's use of the Leased Premises. The Lessee shall have no claim on account of any such interference against the United States or any officer, agent, employee or contractor thereof, other than for abatement of rent.

7. The Government, EPA, and TDEC 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 in these subparagraphs, and for such other purposes consistent with any provision of the FFA:

(a) to conduct investigations and surveys, including, where necessary, drilling, soil and water sampling, test-pitting, testing soil borings and other activities related to the Defense Distribution Depot Memphis, Tennessee installation restoration program (IRP) or FFA;

(b) to inspect field activities of the Government and its contractors and subcontractors in implementing the Defense Distribution Depot Memphis, Tennessee IRP or FFA;

(c) to conduct any test or survey required by the EPA or TDEC relating to the implementation of the FFA or environmental conditions at the Leased Premises or to verify any data submitted to the EPA or TDEC by the Government relating to such conditions;

(d) to construct, operate, maintain, or undertake any other response or remedial action, as required or necessary under the Defense Distribution Depot Memphis, Tennessee IRP or FFA, including, but not limited to, monitoring wells, pumping wells, and treatment facilities;

(e) to conduct Environmental Compliance Assessment System Surveys (ECAS).

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

9. The Lessee further agrees that in the event of any assignment or sublease of the Leased Premises, it shall provide to the EPA and TDEC by certified mail a copy of the agreement or sublease of the Leased Premises (as the case may be) within fourteen (14) days after the effective date of such transaction. The 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.

Enclosure 5
Environmental Protection Provisions

10. The Lessee shall strictly comply with the hazardous waste requirements under the Resource Conservation and Recovery Act (RCRA) or its Tennessee equivalent. Except as specifically authorized by the Government in writing, the Lessee must provide at its own expense hazardous waste management facilities, complying with all laws and regulations. Government hazardous waste management facilities will not be available to the Lessee. Any violation of the requirements of this condition shall be deemed a material breach of this Lease.

11. Defense Distribution Depot Memphis, Tennessee 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 the Department of the Army.

12. The Lessee shall prepare and maintain a Government-approved plan for responding to hazardous waste, fuel, and other chemical spills prior to commencement of operations on the leased premises. Such a plan shall be independent of the Memphis Depot Caretaker plan and, except for initial fire response and/or spill containment, shall not rely on installation 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 any Government officer conducting timely cleanup actions, the Lessee agrees to reimburse the Government for its costs.

13. The Lessee shall not construct or make or permit its sublessee's or assigns to construct or make any alterations, additions, or improvements to, or installations upon or otherwise modify or alter the leased premises in any way which may adversely affect the Memphis Depot Caretaker environmental program, environmental cleanup, human health, or the environment, without the 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 or alterations, additions, modifications, improvements, or installations (collectively "work") in the proximity of operable units that are a part of a National Priorities List (NPL) site, such consent may include a requirement for 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.

14. The Lessee shall not conduct or permit its sublessee's to conduct any subsurface excavation, digging, drilling, or other disturbance of the surface without the prior written approval of the Government.

15. The Lessee shall strictly comply with the hazardous waste permit requirements under the Resource Conservation and Recovery Act (RCRA), or its state equivalent, and any other applicable laws, rules or regulations. The Lessee must provide at its own expense such hazardous waste storage facilities that comply with all laws and regulations as it may need for such storage. Any violation of the requirements of this provision shall be deemed a material breach of this Lease.

Enclosure 5
Environmental Protection Provisions

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16. LEAD-BASED PAINT WARNING AND COVENANT:

(a) The Leased Premises do not contain residential dwellings and are not being leased for residential or child care purposes. The Lessee is notified that the Leased Premises contain buildings built prior to 1978 that contain lead-based paint.

(b) Available information concerning known lead-based paint and/or lead-based paint hazards, the location of lead-based paint and/or lead-based paint hazards, and the condition of painted surfaces is contained in the Environmental Baseline Survey that has been provided to the Lessee. Additionally, the following report pertaining to lead-based paint and/or lead-based paint hazards has been provided to the Lessee: Lead Based Paint Risk Assessment for DDMT (Barge, Waggoner, Sumner, and Cannon, December 1995, revised April 1996). Additionally, the Lessee has been provided with a copy of the federally-approved pamphlet on lead poisoning prevention. The Lessee hereby acknowledges receipt of all of the information described in this subparagraph.

(c) The Lessee acknowledges that it has received the opportunity to conduct a risk assessment or inspection for the presence of lead-based paint and/or lead-based paint hazards prior to execution of this Lease.

(d) The Lessee shall not permit use of any buildings or structures on the Leased Premises for residential habitation without first obtaining the written consent of the Government. As a condition of its consent, the Government may require the Lessee to: (i) inspect for the presence of lead-based paint and/or lead-based paint hazards in and around buildings and structures on the Leased Premises; (ii) abate and eliminate lead-based paint hazards in accordance with all applicable laws and regulations; and (iii) comply with the notice and disclosure requirements under applicable federal, state, and local laws or regulations. The Lessee agrees to be responsible for any future remediation of lead-based paint found to be necessary on the Leased Premises.

(e) The Government assumes no liability for remediation or damages for personal injury, illness, disability, or death, to the Lessee, its successors or assigns, sublessee's or to any other person, including members of the general public, arising from or incident to possession and/or use of any portion of the Leased Premises containing lead-based paint as residential housing. The Lessee further agrees to indemnify and hold harmless the Government, its officers, agents and employees, from and against all suits, claims, demands or actions, liabilities, judgments, costs and attorneys' fees arising out of, or in any manner predicated upon, personal injury, death or property damage resulting from, related to, caused by or arising out of the possession and/or use of any portion of the Leased Premises containing lead-based paint as residential housing. This section and the obligations of the Lessee hereunder shall survive the expiration or termination of this Lease and any conveyance of the Leased Premises to the Lessee. The Lessee's obligation hereunder shall apply whenever the United States of America incurs costs or liabilities for actions giving rise to liability under this section.

Enclosure 5
Environmental Protection Provisions

17. NOTICE OF THE PRESENCE OF ASBESTOS AND COVENANT:

(a) The Lessee is hereby informed and does acknowledge that friable and non-friable asbestos or asbestos-containing materials (ACM) has been found on the Leased Premises, as described in the final base-wide EBS. The ACM on the Leased Premises does not currently pose a threat to human health or the environment. All friable asbestos that posed a risk to human health was either removed or encapsulated.

(b) The Lessee covenants and agrees that its use and occupancy of the Leased Premises will be in compliance with all applicable laws relating to asbestos; and that the Government assumes no liability for future remediation of asbestos or damages for personal injury, illness, disability, or death, to the Lessee, its successors or assigns, sublessee's, or to any other person, including members of the general public, arising from or incident to the purchase, transportation, removal, handling, use, disposition, or other activity causing or leading to contact of any kind whatsoever with asbestos on the Leased Premises described in this Lease, whether the Lessee, its successors or assigns have properly warned or failed to properly warn the individual(s) injured. The Lessee agrees to be responsible for any future remediation of asbestos found to be necessary on the Leased Premises.

18. The Lessee shall not use the Leased Premises for the storage or disposal of non-Department of Defense owned hazardous or toxic materials, as defined in 10 U.S.C. 2692, unless authorized under 10 U.S.C. 2692 and properly approved by the Government.

19. The Army may impose any additional environmental protection conditions and restrictions during the terms of this lease that it deems necessary by providing written notice of such conditions or restrictions to the Lessee.

20. The leased premises contain buildings (Buildings 229, 230, 329, and 330) that are eligible for listing in the National Register of Historic Places. Such properties will be maintained by the Lessee in accordance with the recommended approaches in the *Secretary of the Interior's Standards for Rehabilitation and Illustrated Guidelines for Rehabilitating Historic Buildings* (U.S. Department of the Interior, National Park Service 1992)(Secretary's Standards). The Lessee will notify the Department of the Army and the State Historic Preservation Officer (SHPO) of any proposed rehabilitation and structural or landscape alterations to these buildings or properties prior to undertaking said rehabilitation or alteration. Any approved rehabilitation or structural or landscape alteration to these buildings or properties must adhere to the Secretary's Standards. If the Lessee does not receive a written objection from the Department of the Army or the SHPO within 30 days, the Lessee may proceed with the proposed rehabilitation or alterations.

Enclosure 6 Regulatory/Public Comments and Responses

Please find the Environmental Protection Agency (EPA), U. S. Department of Army (various offices), Army Materiel Command (AMC), Defense Logistics Agency (DLA) comments and Memphis Depot Caretaker (MDC) responses for FOSL #5.

EPA Comments to FOSL #5

1. As required by CERCLA Section 120(h)(5), DoD shall notify the state prior to entering into any lease that will encumber the property beyond the date of termination of DoD's operations. The notification shall include the length of lease, the name of lessee, and a description of the uses that will be allowed under the lease of the property. At National Priority List sites, DoD shall provide this notification to the United States Environmental Protection Agency as well.

COMMENT NOTED. The MDC will provide EPA and TDEC workable drafts of FOSLs as soon as they are available.

2. Section 1. Purpose. The section should identify the leased properties as Parcel 8.

COMMENT INCORPORATED.

3. Section 2. Property Description. Please insert -- and the open land area surrounding the buildings -- after "*four (4) buildings*". There are two maps labeled as Enclosure 1, please refer to the second map as Enclosure 1a.

COMMENT INCORPORATED. The paragraph shall read, "The proposed property to be leased consists of 17.6 acres that includes five (5) parcels. Included in these parcels are four (4) buildings (Buildings 229, 230, 329 and 330) and the open land area surrounding these buildings. Site maps of the property proposed to be leased can be found at Enclosure 1."

4 Section 3 1. Environmental Condition of Property Categories. The section should identify the parcel number associated with each property. Parcel 8.1 is missing in the list.

COMMENT INCORPORATED.

5. Section 3.2. Storage, Release or Disposal of Hazardous Substances. Please delete "*Products*" after "*Substance*" (on line 6).

COMMENT INCORPORATED.

6. Section 3.4. Polychlorinated Biphenyls (PCB) Equipment. Please change "*unremediated*" to -- PCB -- and "*PCB equipment*" to -- the light ballasts --.

COMMENT INCORPORATED. The second sentence will be changed to read, "There is no evidence of unremediated PCB releases from these ballasts."

Enclosure 6

Regulatory/Public Comments and Responses

7. Section 3.5. Asbestos. Please change "*asbestos containing material*" to --Asbestos Containing Material (ACM) --.

COMMENT INCORPORATED.

8. Section 4. Remediation. Please insert -- described in this document -- after "*property*" and change "*the property*" (after "*leasing*") to -- it -- (on line 4). The statement on lines 7-8 is inaccurate for properties categorized as 7. Please provide clarification.

COMMENT INCORPORATED. The sentence will be changed as follows, "Regulators have concurred with DDMT that the open area surrounding buildings in Parcel 8 do not pose risks above levels deemed protective provided that the property is used for the proposed purpose and the lessee strictly adheres to the Environmental Protection Provisions (Enclosure 5)."

9. Section 5. Regulatory Coordination. Please add the following sentence at the end of the paragraph:

"Regulatory/public comments and responses are provided in Enclosure 5 and 6 respectively."

COMMENT INCORPORATED. Regulatory/public comments and responses will be provided in Enclosure 6.

10. Section 6. National Environmental Policy Act (NEPA) Compliance and Consistency with Local Reuse Plan. Please change "*Local Reuse Authority*" to -- Depot Redevelopment Corporation -- (on line 7).

COMMENT INCORPORATED.

11. Section 7. Environmental Protection Provisions. Please insert -- (Enclosure 4) -- after "*Provisions*" (on line 4) and delete "*(Enclosure 4)*" (on line 5).

COMMENT INCORPORATED.

12. Section 8. Finding of Suitability to Lease. Please insert -- (DoD) -- after "*Defense*"; also please change "*finding of suitability to lease*" to -- Finding of Suitability to Lease (FOSL) --. Correct reference to Enclosure 5 as Enclosure 4. In the second paragraph, line 2, please change "*See*" to -- Refer to --.

COMMENT INCORPORATED.

13. Enclosure 1. Please identify each parcel on both maps. There are two different maps labeled Enclosure 1, please re-label the second map as Enclosure 1a.

COMMENT NOTED. The large site map provides the relative position of the parcels within the entire facility. The text shall be changed to reflect that site maps are included at Enclosure 1.

Enclosure 6

Regulatory/Public Comments and Responses

14. Enclosure 2. Page 10, row 1, column 4, on lines 7-8, delete "*due to past fumigation*"; on line 12, insert -- and the environment --.

COMMENT INCORPORATED.

15. Enclosure 2. Page 10, row 2, column 4, on lines 7-8, delete "*due to past fumigation*"; on line 12, insert -- and the environment --.

COMMENT INCORPORATED.

16. Enclosure 2. Page 10, row 3, column 4, on lines 7-8, delete "*due to past fumigation*"; on line 12, insert -- and the environment --.

COMMENT INCORPORATED.

17. Enclosure 2. Page 10, row 4, column 4, on lines 7-8, delete "*due to past fumigation*"; on line 12, insert -- and the environment --.

COMMENT INCORPORATED.

18. Enclosure 2. Page 11, row 1, column 4 should read as follows:
"This parcel contains railroad tracks that were historically sprayed with pesticides, herbicides, and waste oil containing PCP. Sampling was conducted as part of Screening Site 70/71 (Facility-wide railroad tracks). The parcel was sampled and found to contain dieldrin at levels that exceeded screening criteria. This parcel is under evaluation by the BCT as part of the installation restoration program. If remediation is necessary, appropriate measures will be implemented to ensure the protection of human health and the environment "

COMMENT INCORPORATED. Language varied slightly from that provided

19. Enclosure 3. The title should be -- Notification of Hazardous Substance Storage, Release or Disposal --.

COMMENT INCORPORATED.

20. Enclosure 3. Page 12, row 5, column 4, line 4, delete "*safety and health*"; on line 6, insert -- and the environment -- after "*human health*"; on lines 6-10, delete "*The performance ... human health*".

COMMENT NOTED. Incorporated "and the environment." The sentence beginning, "The performance . . ." shall be changed to read, "Therefore, the performance . . ." A footnote shall be added to this sentence that will read, "Provided the lessee adheres to the Environmental Protection Provisions (Enclosure 5), including but not limited to provision 14 (no subsurface disturbance, excavation, drilling, or digging without prior written approval from the Government)." This footnote will be added to the end of Tables 1 and 2. No deletions have been

Enclosure 6

Regulatory/Public Comments and Responses

made as the language fulfills Army requirements and provides perspective tenants the information that remediation will be conducted in a safe and protective manner.

21. Enclosure 3. Page 14, row 3, column 4 on lines 6-7, delete "*health and safety*"; on line 9, insert -- and the environment -- after "*human health*"; on lines 9-12, delete "*The performance ... human health*".

COMMENT NOTED. See response to Comment 20.

22. Please note that category 7 does not provide enough information about the risk associated with a particular site (implies no risk assessment conducted), so it is improper to say that the performance of industrial and/or commercial operations at the property (even with the provisions) will not pose an unacceptable risk to human health or the environment.

COMMENT NOTED. See response to Comment 20.

23. Enclosure 5. Please note that in Provision #17(b) "Grantor" should be -- *the Department of Defense* --.

COMMENT INCORPORATED. Changed to "the Government."

24. Enclosure 5. Please note that "GRANTEE" in Provision #18(b) should be -- Lessee.

COMMENT INCORPORATED.

25. Enclosure 5 Provision #19 implies that there are DoD hazardous or toxic materials stored at the Depot.

COMMENT NOTED. It is an important covenant in that it tells the Lessee that hazardous substances shall not be brought onto the property unless specifically allowed by the Government.

U.S. Department of Army Comments on FOSL #5

Army OGC (Craig Teller)

No legal objection.

Army TJAG (MAJ Allison Polchek)

No legal objection.

Enclosure 6 Regulatory/Public Comments and Responses

Army BRACQ (MS. Robin Mills)

1. HQDA/BTT should not be in a position of reviewing FOSLs that have not been staffed with the regulators first. I can see that there will be exceptions, but HQDA/BTT needs to know (for political reasons if nothing else) whether or not the regulators concur/non-concur with the FOSL.

COMMENT NOTED.

2. Page 3. Please clarify whether or not the regulators have signed off on the Cat 1 property (CERFA Clean??).

COMMENT NOTED. During BRAC Cleanup Team meetings, regulators have approved the category 1 properties following discussions of sampling data.

3. Page 5. Please clarify/state that the sites that caused the NPL listing are/or are not part of this lease (or does contaminated groundwater underlie the buildings????).

COMMENT NOTED. Sites that caused the NPL listing are not included in this lease. However, sites recognized by the regulators as CERCLA sites, which are included in the CERCLA remedial investigation and considered part of the NPL site, are in this lease (i.e. all grassy areas and all rail road tracks).

4 Page 11, the "Open Area of Parcel". It is unclear from the FOSL on whether or not this parcel is "suitable for lease for the intended use". An explanation as to WHY it is suitable needs to be given based on the on-going status of cleanup on the parcel. It may also be wise to point out in the protection provisions any restrictions/access that will be needed based on the on-going work. A statement concerning the "suitableness" of this parcel needs to be in the body of the FOSL as well as in the protection provisions

COMMENT NOTED. A footnote shall be added to this sentence that will read, "Provided the lessee adheres to the Environmental Protection Provisions (Enclosure 5), including but not limited to provision 14 (no subsurface disturbance, excavation, drilling, or digging without prior written approval from the Government)." This footnote will be added to the end of Tables 1, 2 and 3.

5. Page 19 says that there are buildings eligible for the national register. WHERE ARE THE PA COVENANTS?? If the PA is not complete, we need to at least state that we are negotiating a PA with the SHPO and that we reserve the right to further restrict the use of these buildings based on the outcome of those negotiations. In the past we have required a letter from the SHPO office approving our lease action. Has there been a change here?

COMMENT NOTED. The Historical Properties provision will be added to the Environmental Protection Provisions. We have received written approval from the Tennessee State Historic Preservation Officer for leasing actions under the Master Interim Lease.

Enclosure 6
Regulatory/Public Comments and Responses

Defense Logistics Agency Comments on FOSL #5

HQ-DLA Legal

1. I have read the Army Materiel Command Guidance for FOST/FOSL. The above-noted Finding of Suitability to Lease (FOSL) were reviewed in light of that guidance. Inasmuch as the provisions to be included in the leases for Environmental Protection during the lease term are basically boilerplate, I will defer to the Army on the inclusion of those provisions. The language is repeated in the three documents and notes that the property is listed on the National Priorities List. Covenants for asbestos contamination, PCBs, lead-based paints, etc. are contained in the documents. Although we acknowledge the existence of the contaminants we ask the lessees to hold us harmless. Whether or not we would be sustained in these indemnifications and hold harmless provisions may be a legal issue not resolved now. The documents also outline contaminants stored on the property or utilized on the property. We do not know whether DLA is or was a contributory party to the use of the hazardous substances but it is noted that in certain instances remediation has taken place or a process for remediation has commenced. As a note in review, one wonders whether a policy of spraying dieldrin for pesticide purposes was considered a necessary property maintenance activity whether it was warranted or not. Was there any evidence of pest infestation to merit such use?

To be consistent with the FOSL guidance models, we need to make express statements that the proposed leases are consistent with the redevelopment plans proposed by the Memphis LRA.

Secondly I note in review that our documents are still in review by local environmental authorities and EPA. The Section 5 analysis is therefore incomplete because of the concurrent review. Otherwise I find no legal insufficiency in the documents meriting redrafting or significant change in format

COMMENT NOTED. No records are available regarding Army's pest management program during the 1940s - 1960s. No records have been located regarding the Depot's pest management program during the 1960s until the 1970s when dieldrin was prohibited by the EPA for use. Paragraph 1. PURPOSE will include this sentence, "This FOSL has been developed in accordance with the Depot Redevelopment Corporation's Reuse Plan."

HQ-DLA (Karen Moran)

1. Page 4, para 3.7. Reword to read "...that the Army or DLA used..."

COMMENT NOTED. Changed to read Department of Defense.

2. Page 9, encl 1. The map does not show the (3rd St) boundary of the 17.6 acres to be leased.

COMMENT INCORPORATED.

Enclosure 6
Regulatory/Public Comments and Responses

3. Page 11, encl 2, Open area, Remedial Action column. Modify 3rd sentence to read ". Sampling results at the railroad tracks indicated.." or similar, to clarify. Modify 6th sentence to read "the grassy area sub-parcel was sampled..." or similar, to clarify.

COMMENT INCORPORATED.

4. Page 3, para 3.7. Replace "the property" with "the parcels addressed in this FOSL" so readers do not assume this is an installation-wide statement.

COMMENT INCORPORATED.

5. Enclosure 1, page 2. Again, consider including parcel designations on the site map of the FOSL property.

COMMENT INCORPORATED.

6. Enclosure 2, page 1. Sections on Bldgs. 229 and 230, in the fifth sentence, replace "air sample results" with "air monitoring results" to be consistent with wording used in FOSL #4 to describe the same process.

COMMENT NOTED. The language in FOSL #4 was changed to correspond to FOSL #5 as this language is more appropriate.

7. Enclosure 6, page 4, comment 22. The response does not seem to answer the question raised or even relate to it

COMMENT INCORPORATED. The response now refers the reader to comment 20.

Enclosure 7 References

I. The statutory and regulatory requirements relating to FOST/FOSLs are as follows:

CERCLA §120(h), 42 U.S.C. §9620(h) - Property Transferred by Federal Agencies

10 U.S.C. § 2667(f) as amended by section 2906 of the FY 94 Defense Authorization Act requiring DOD and EPA to consult on FOSL procedures

40 CFR PART 373 - Reporting Hazardous Substance Activity when Selling or Transferring Federal Real Property.

II. The DOD Guidance relating to FOST/FOSLs is as follows:

DOD Guidance on the Environmental Review Process to Reach a Finding of Suitability to Transfer (FOST) for Property Where Release or Disposal has Occurred, dated 1 June 1994.

DOD Guidance on the Environmental Review Process to Reach a Finding of Suitability to Transfer (FOST) for Property Where No Release or Disposal has Occurred, dated 1 June 1994.

DOD Policy on the Environmental Review Process to Reach a Finding of Suitability to Lease (FOSL), dated 18 May 1996.

DOD Fast Track to FOST - A Guide to Determining if Property is Environmentally Suitable to Transfer , July 1997

DOD Fact Sheet – A Field Guide to FOSL, Fall 1996

DOD Memorandum, Subject: Clarification of “Uncontaminated” Environmental Condition of Property at Base Realignment and Closure (BRAC) Installations, dated 21 October 1996

DOD Memorandum, Subject: Asbestos, Lead paint and Radon Policies at BRAC Properties, dated 31 October 1994

III. U.S. Environmental Protection Agency (EPA) Guidance

Guidance for Evaluation of Federal Agency Demonstrations that Remedial Actions are Operating Properly and Successfully Under CERCLA Section 120(h)(3), (Interim) dated August 1996

EPA Memorandum, Subject: Military Base Closures: Guidance on EPA concurrence in the Identification of Uncontaminated Parcels under CERCLA Section 120(h)(4), re-issued March 27, 1997

Enclosure 7 References

IV. Department of the Army Guidance

AR 200-1, Environmental Protection and Enhancement, dated 21 February 1997

DAIM-BO Memorandum, Subject: Clarification of Meaning of Uncontaminated Property for Purposes of Transfer by the United States, dated 9 December 1996

V. WWW BRAC Sites

1. DOD Sites –

DOD Base Closure and Transition Office –
<http://emissary.acq.osd.mil/bctoweb/bctohome.nsf>

DOD Environmental Base Realignment and Base Closure (BRAC) Program
<http://www.dtic.mil/envirodod/envbrac.html>

DOD Base Closure and Community Reinvestment
<http://www.acq.osd.mil/iai/bccr.htm>

DOD Office of Economic Adjustment
<http://www.acq.osd.mil/oea/index.html>

2. Environmental Protection Agency

EPA OSWER Federal Facilities Base Realignment and Closure
<http://www.epa.gov/swerffrr/brac.htm>

3. Department of the Army

Army Base Realignment and Closure Office
<http://www.hqda.army.mil/acsimweb/brac/brac3.htm>

CERL BRAC/NEPA "How To" Manual
<http://www.cecer.army.mil/facts/sheets/PL19.html>

Corps of Engineers Base Realignment and Closure (Camp Bonneville)
- Good Slide Presentation of Process.
<http://www.nps.usace.army.mil/geotech/bnvl/brac95/index.htm>

Presidio of San Francisco BRAC Environmental Restoration Program
- General information as well as facts on Presidio Cleanup and Conversion

Enclosure 7
References

<http://www.presidiosanfran.com>

4. Department of the Air Force

Air Force Base Conversion Agency
<http://www.afbca.hq.af.mil>

5. Department of the Navy

Navy NAVFAC Base Closure Site
<http://164.224.238.53:81/csohome.nsf>

Navy Facilities Engineering Command - information on Navy BRAC sites
http://www.ncts.navy.mil/homepages/navfac_es/bcp.htm

Navy Environmental BRAC News
<http://www.navy.mil/homepages/navfac/env/newslet.html>

FINDING OF SUITABILITY TO LEASE

(FOSL)

*Parcel 1.8, Parcel 6.1, Parcel 9.1, Parcel 10.2, Parcel 10.3, Parcel
16.1, Parcel 16.2, Parcel 17.2, Parcel 17.3*

Defense Distribution Depot Memphis, Tennessee

(FOSL Number 6)

July 8, 1998



DEPARTMENT OF THE ARMY
HEADQUARTERS, U.S. ARMY MATERIEL COMMAND
5001 EISENHOWER AVENUE, ALEXANDRIA, VA 22333 - 0001

376 438

REPLY TO
ATTENTION OF

AMCEN-R

24 AUG 1998

MEMORANDUM THRU Commander, U.S. Army Engineers Division, South Atlantic, ATTN: CESAD-RE, 77 Forsyth Street, Room #313, 77 Forsyth Street, S.W., Atlanta, GA 30335-6801

FOR Commander, U.S. Army Corps of Engineer, Mobile District, ATTN: CESAM-RE-MM, P.O. Box 2288, Mobile, AL 36628-0001

SUBJECT: Finding of Suitability to Lease (FOSL-6) for Defense Distribution Depot Memphis, Tennessee (DDMT)

1. References:

a. Memorandum, AMCEN-R, 3 Apr 97, subject: Report of Availability for a Master Lease with the Memphis Depot Redevelopment Agency.

b. Memorandum, DLSC-BBB, 15 Jun 98, SAB (Encl 1).

2. Enclosed for your action is the approved FOSL-6 (Encl 2) with supporting documentation for adding Buildings 359 and 559, the open land area surrounding these two buildings and the open area surrounding buildings 250, 349, 350, 429, 430, 449, 450, 549, 550, 649, and 650 at DDMT to the master lease with Memphis Depot Redevelopment Agency.

3. The approved Report of Availability (ROA) for the entire installation, including the property addressed in this FOSL, was forwarded with reference 1a.

4. The Final Environmental Assessment for Master Lease, Defense Distribution Depot Memphis, Tennessee, dated Sep 96, is the National Environmental Policy Act Document for this action.

5. Request a modification to the master lease adding buildings 359 and 559, the open land area surrounding these two buildings and the open area surrounding buildings 250, 349, 350, 429, 430,

AMCEN-R

SUBJECT: Finding of Suitability to Lease (FOSL-6) for Defense Distribution Depot Memphis, Tennessee (DDMT)

449, 450, 549, 550, 649, and 650 be executed in accordance with the ROA and FOSL-6.

6. Points of contact for this action are Mr. John Farrar, AMCEN-R, commercial (703) 617-0726/DSN 767-0726 and Mr. Joe Goetz, AMCEN-R, commercial (703) 617-8904/DSN 767-8904.

7. AMC -- America's Arsenal for the Brave.

FOR THE COMMANDER:



2 Encls

P. S. MORRIS
Colonel, GS
Deputy Chief of Staff
for Engineering, Housing,
Environment, and Installation
Logistics

CF: (wo/encls)

Assistant Chief of Staff for Installation Management, ATTN:
DAIM-BO, 600 Army Pentagon, Washington, D.C. 20310-0600
Headquarters, U.S. Army Corps of Engineers, ATTN: CERE-C,
Pulaski Bldg #4133, 20 Massachusetts Avenue, Washington, D.C.
20314-1000

Director, Defense Logistics Agency, ATTN: DLSC-BBB, 8725 John J.
Kingman Road, Suite 2533, Fort Belvoir, VA 22060-6221

Commander, Defense Distribution Depot Memphis, ATTN: DDMT-D,
2163 Airways Boulevard, Memphis, TN 38114-5210

1. PURPOSE

The purpose of this Finding Of Suitability To Lease (FOSL) is to document the environmental suitability of Parcels 1.8, 6.1, 9.1, 10.2, 10.3, 16.1, 16.2, 17.2 and 17.3 at the Defense Distribution Depot Memphis, Tennessee (DDMT) for leasing to the Depot Redevelopment Corporation (DRC) for light industry, storage or general office use consistent with Department of Defense (DOD) and Army policy. This FOSL has been developed in accordance with the DRC's Reuse Plan. In addition, the FOSL identifies use restrictions as specified in the attached Environmental Protection Provisions (Enclosure 5) necessary to protect human health and the environment and to prevent interference with any existing or planned environmental restoration activities.

2. PROPERTY DESCRIPTION

The proposed property to be leased consists of 52.35 acres that includes nine (9) parcels. Included in these parcels are two (2) buildings (Buildings 359 and 559) and the open land area surrounding these buildings as well as the open land area surrounding Buildings 250, 349, 350, 429, 430, 449, 450, 549, 550, 649 and 650. Site maps of the property proposed to be leased can be found at Enclosure 1.

3. ENVIRONMENTAL CONDITION OF THE PROPERTY

A determination of the environmental condition of the facilities has been made based on the Community Environmental Response Facilitation Act (CERFA) Letter Report dated December 5, 1996 and an Environmental Baseline Survey (EBS) dated November 6, 1996. The information provided is a result of a complete search of agency files during the development of these environmental surveys. The following documents also provided information on environmental conditions of the property: Draft Final BRAC Cleanup Plan Version 2 (DDSP-FE, November 1997), Asbestos Reinspection (DDC-WP, October 1996), Final Environmental Assessment for Master Interim Lease (Tetra Tech, September 1996), DDMT Radiological Survey (Administrative Support Center East, August 1996), Remedial Investigation Soil Sampling Letter Report (CH2M Hill, May 1997), OU - 2 and OU - 3 Field Sampling Plans (CH2M Hill, September 1995), Asbestos Identification Survey (Pickering, December 1993 and January 1994), RCRA Facilities Assessment (A.T. Kearney, Inc., January 1990), Final Remedial Investigation Report (Law Environmental, August 1990) and the Installation Assessment (USAEHA, March 1981).

3.1 Environmental Condition of Property Categories

The Department of Defense (DOD) Environmental Condition of Property (ECP) Categories for the property are as follows:

ECP Category 1: Parcel 16.2 - Building 559 only

ECP Category 4: Parcel 17.3 - Building 359 only

ECP Category 7:

- Parcel 1.8 - Open land area surrounding the buildings in Parcel 1, including the parking lots and grassy areas, the flagpole (Building 143), switch station building (Building 147) and the antenna tower (Building 146)
- Parcel 6.1 - Open land area surrounding buildings in Parcel 6
- Parcel 9.1 - Open land area surrounding buildings in Parcel 9
- Parcel 10.2 - Open land area surrounding buildings in Parcel 10 except land in Parcel 10.3
- Parcel 10.3 - Open land area between southern corners of Buildings 550 and 650 (reported spill area)
- Parcel 16.1 - Open land area surrounding buildings in Parcel 16
- Parcel 17.2 - Open land area surrounding buildings in Parcel 17

A summary of the ECP Categories for specific buildings or parcels is provided in Table 1 – Description of Property (Enclosure 2).

3.2 Storage, Release or Disposal of Hazardous Substances

Hazardous substances were stored in Building 359. It is assumed this storage was in excess of the 40 CFR Part 373 reportable quantities. Hazardous substances were released in Building 359 as well as the open land area surrounding the buildings in Parcels 1, 6, 9, 10, 16 and 17. It is assumed, unless otherwise noted, these releases were in excess of the 40 CFR Part 373 reportable quantities. The release of hazardous substances was either remediated at the time of the release or is currently under evaluation as part of the installation restoration program. There is no risk to human health and the environment so long as the tenant adheres to the Environmental Protection Provisions (Enclosure 5) with particular reference to Provision 14 regarding ground disturbing activities. These activities shall not be allowed without prior written approval from the Government. A summary of the buildings or areas in which hazardous substance activities occurred is provided in Table 2 – Notification of Hazardous Substance Storage, Release or Disposal (Enclosure 3).

3.3 Petroleum and Petroleum Products

3.3.1 Storage, Release, or Disposal of Petroleum Products

Petroleum products were stored in excess of 55 gallons in underground and above-ground storage tanks at Building 359. See Section 3.3.2 for more information regarding these tanks. There is no evidence that any petroleum or petroleum products in excess of 55 gallons at one time were released or disposed on the property. A summary of the buildings or areas in which petroleum products activities occurred is provided in Table 3 – Notification of Petroleum Product Storage, Release or Disposal (Enclosure 4).

3.3.2 Underground and Above-Ground Storage Tanks (UST/AST)

There is one (1) above-ground storage tank at Building 359 that was used for the storage of petroleum products. There were seven (7) underground storage tanks at Building 359 that

were used for the storage of petroleum products. There is no evidence of petroleum product releases at the following Building 359 USTs/ASTs: 12,000-gallon fuel oil UST (closed in place); 500-gallon fuel oil UST (closed in place); 500-gallon blow down UST (closed in place); 500-gallon fuel oil UST (removed); 1,000-gallon fuel oil UST (removed); 12,000-gallon fuel oil UST (removed); 500-gallon fuel oil UST (removed); 500-gallon diesel fuel AST (currently in place).

A summary of the buildings or areas in which petroleum products were stored is provided in Table 3 – Notification of Petroleum Product Storage, Release or Disposal (Enclosure 4).

3.4 Polychlorinated Biphenyls (PCB) Equipment

There are no PCB containing transformers or other PCB containing equipment, except hermetically sealed fluorescent light bulb ballasts that may contain PCBs, located on the property listed in this FOSL. There is no evidence of unremediated PCB releases from these ballasts.

3.5 Asbestos

The EBS and the Asbestos Identification Survey (Pickering, December 1993 and January 1994) indicate Asbestos Containing Materials (ACM) are present in the following buildings:

Building 359:	Thermal System Pipe Insulation (to include joints) Interior Window Putty Duct Tape 12 x 12 Floor Tiles and Mastic 9 x 9 Floor Tiles and Mastic
Building 559:	Cement Asbestos Wall Board Floor Tile Mastic Roof Flashing

The ACM does not currently pose a threat to human health or the environment because all friable asbestos that posed an unacceptable risk to human health has been removed or encapsulated. The lease will include the asbestos warning and covenant included in the Environmental Protection Provisions (Enclosure 5).

3.6 Lead-Based Paint (LBP)

Based on the age of the buildings (constructed prior to 1978), the following buildings are presumed to contain lead-based paint: 359 and 559. The lease will include the lead-based paint warning and covenant provided in the Environmental Protection Provisions (Enclosure 5).

3.7 Radiological Materials

There is evidence that the Department of Defense used or stored radioactive materials on the following properties included in this FOSL: Building 359, Section 3 - storage of items such as

watches and compasses containing tritium (H-3). There is no evidence that any releases of radiological materials occurred at these buildings. A radiological field survey was conducted at the site, and the survey concluded that this area was suitable for unrestricted use.

3.8 Radon

In keeping with DOD policy to not perform radon assessment and mitigation prior to transfer of BRAC property, there were no radon surveys conducted in the buildings in this FOSL.

3.9 Unexploded Ordnance

Based on a review of existing records and available information, none of the buildings or surrounding land proposed for lease are known to contain unexploded ordnance.

3.10 Other Hazardous Conditions

There are no other known hazardous conditions that present an unacceptable threat to human health or the environment on the property.

4. REMEDIATION

In October 1992, the U.S. Environmental Protection Agency (EPA) placed DDMT on the National Priorities List (NPL) for environmental restoration. DDMT has since entered into a Federal Facilities Agreement (FFA) with the Tennessee Department of Environment and Conservation (TDEC) and the EPA. Environmental contamination on the property described in this document does not present a hazard to leasing it. In addition, environmental conditions on adjacent property do not present a hazard to the leasing of the property. Table 2 - Notification of Hazardous Substance Storage, Release or Disposal (Enclosure 3) and Table 3 - Notification of Petroleum Product Storage, Release or Disposal (Enclosure 4) provide details regarding environmental conditions for each individual parcel or building contained within this FOSL. Regulators have concurred with DDMT that the open area surrounding buildings in Parcels 1, 6, 9, 10, 16 and 17 does not pose risks above levels deemed protective provided that the property is used for the proposed purpose and the lessee strictly adheres to the Environmental Protection Provisions (Enclosure 5).

5. REGULATORY/PUBLIC COORDINATION

The U.S. EPA Region 4, TDEC and the public were notified of the initiation of the FOSL. Regulators have reviewed this FOSL and provided comments. These comments have been incorporated as appropriate. Regulatory/public comments and responses are provided in Enclosure 6.

6. NATIONAL ENVIRONMENTAL POLICY ACT (NEPA) COMPLIANCE AND CONSISTENCY WITH LOCAL REUSE PLAN

The environmental impacts associated with proposed lease of the property have been analyzed in accordance with the National Environmental Policy Act (NEPA). The results of this analysis have been documented in the Final Environmental Assessment for Master Interim Lease, Defense Distribution Depot Memphis, Tennessee, dated September 1996. The environmental effects of the activities anticipated under the proposed lease were determined not to be significant. In addition, the proposed use of the property is consistent with the intended reuse of the property set forth in the Depot Redevelopment Corporation Reuse Plan.

7. ENVIRONMENTAL PROTECTION PROVISIONS

On the basis of the above results from the site-specific EBS and other environmental studies and in consideration of the intended use of the property, certain terms and conditions are required for the proposed lease. These terms and conditions are set forth in the attached Environmental Protection Provisions (Enclosure 5) and will be included in the lease.

8. FINDING OF SUITABILITY TO LEASE

Based on the above information, I have concluded that all Department of Defense (DOD) requirements to reach a Finding of Suitability to Lease (FOSL) to the Depot Redevelopment Corporation for light industrial use have been fully met for the property subject to the terms and conditions in the attached Environmental Protection Provision (Enclosure 5). As required by CERCLA section 120(h)(3)(B), I have determined that the property is suitable for lease for the intended purpose, the uses contemplated for the lease are consistent with protection of human health and the environment, and there are adequate assurances that the United States will take any additional remedial action found to be necessary that has not been taken on the date of the lease.

As required under the DOD FOSL Guidance, notification of hazardous substance activities and petroleum product activities shall be provided in the lease documents. Refer to Table 2 - Notification of Hazardous Substance Storage, Release or Disposal (Enclosure 3) and Table 3 - Notification of Petroleum Product Storage, Release or Disposal (Enclosure 4).



P. S. MORRIS

Colonel, GS

Deputy Chief of Staff for Engineering, Housing,
Environment and Installation Logistics

7 Enclosures

Encl 1 Site Maps of Property

Encl 2 Table 1 - Description of Property

Encl 3 Table 2 - Notification of Hazardous Substance Storage, Release or Disposal

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P.S. MORRIS
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7 Enclosures

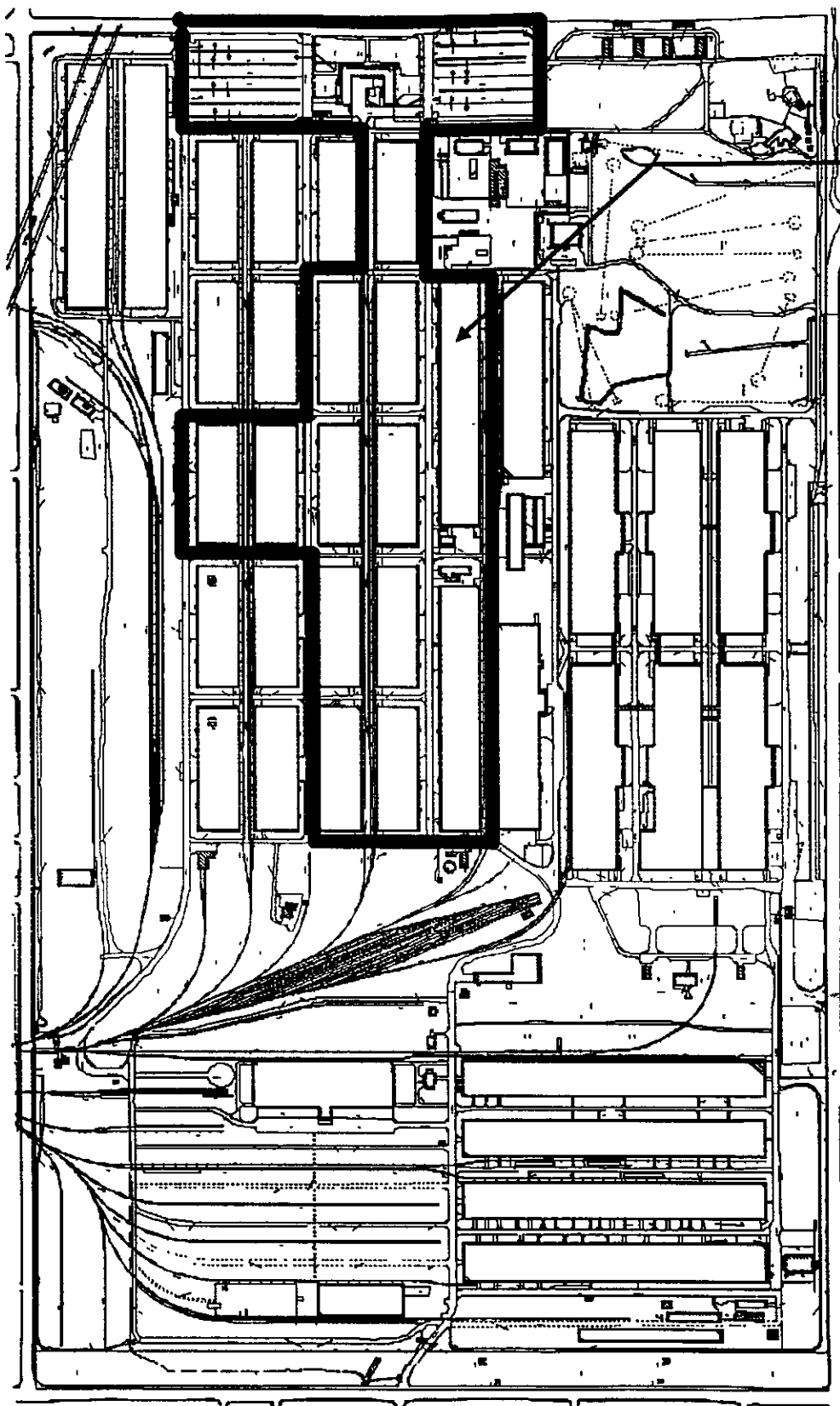
Encl 1 Site Maps of Property

Encl 2 Table 1 - Description of Property

Encl 3 Table 2 - Notification of Hazardous Substance Storage, Release or Disposal

) Encl 4 Table 3 - Notification of Petroleum Product Storage, Release or Disposal
Encl 5 Environmental Protection Provisions
Encl 6 Regulatory/Public Comments and Responses
Encl 7 Reference Materials

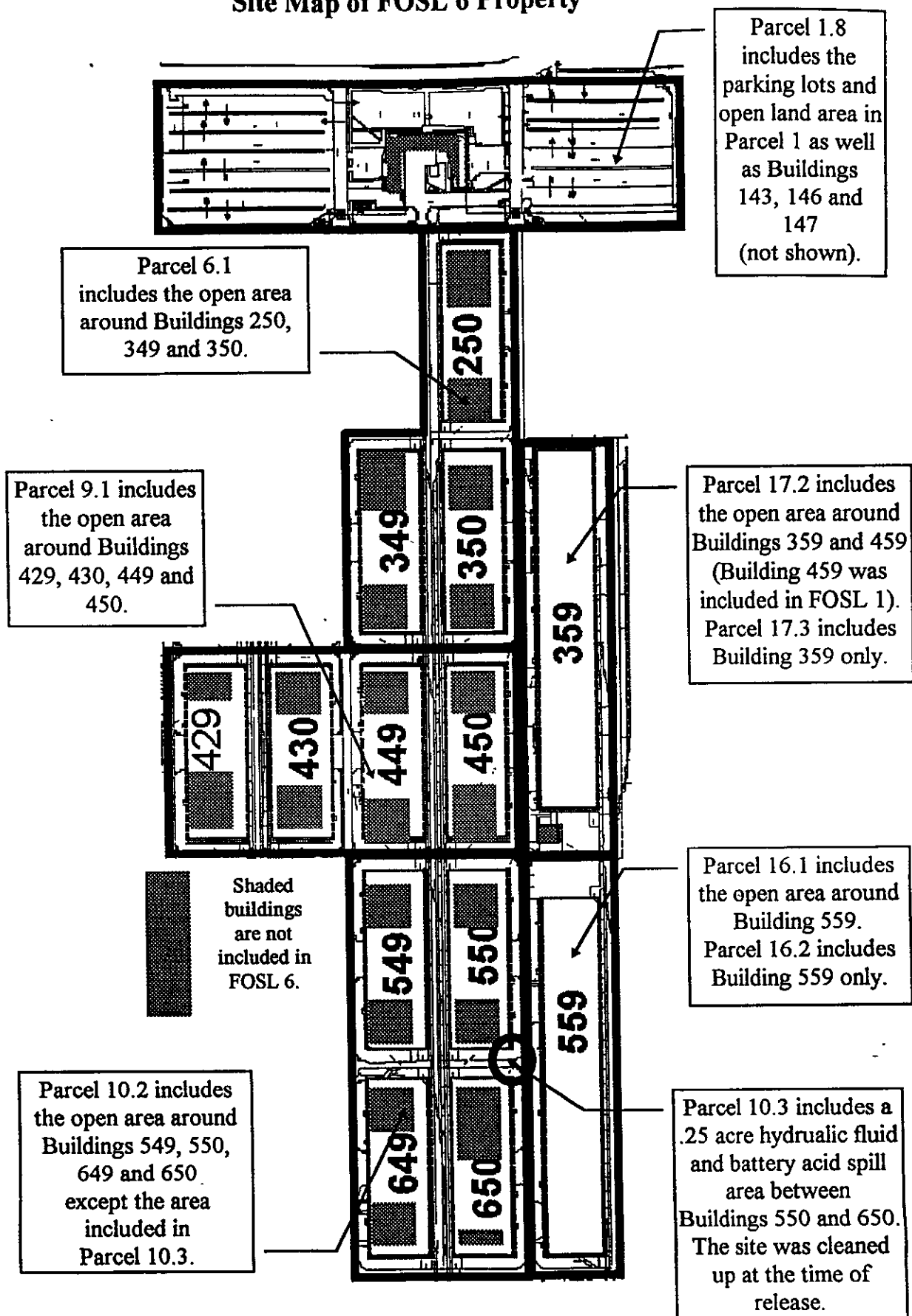
Enclosure 1
Site Map of FOSL 6 Property



Relative
position of
parcels included
in FOSL 6

Enclosure 1

Site Map of FOSL 6 Property



Enclosure 2
Table 1 - Description of Property

Building Number and Property Description	EBS Parcel Designation	Condition Category	Remedial Actions
Parcel 1.8 includes Buildings 143 (flagpole), 146 (antenna tower) and 147 (switch station building) as well as the grassy areas and parking lots in Parcel 1 (around Buildings 144, S145, 129, 139 and Gates 1 and 2 which were included in FOSL 1).	1.8(7)	7	The grassy area in this parcel was treated with pesticides. This parcel was sampled and found to contain dieldrin at levels that exceeded screening criteria. Due to the presence of pesticides in soil samples, this parcel requires additional evaluation as part of the installation restoration program. Appropriate health and safety measures will be implemented during all remediation activities to ensure the protection of human health and the environment. Therefore, the performance of industrial and/or commercial operations at this site in accordance with the Lease Restrictions will not pose an unacceptable risk to human health or the environment. ¹
Parcel 6.1 includes only the open land area in Parcel 6 surrounding Buildings 250, 349 and 350.	6.1(7)	7	This parcel contains railroad tracks that were sprayed with pesticides, herbicides, and waste oil containing pentachlorophenol (PCP) in the past. No screening site samples were taken in this parcel; however, SS70/71 (facility-wide railroad tracks) soil samples taken from tracks in Parcel 7, adjacent to Parcel 6, were found to contain PAHs at levels that exceeded screening criteria. The grassy area in this parcel was also treated with pesticides. This parcel was sampled and found to contain dieldrin at levels that exceeded screening criteria. Due to the presence of pesticides in soil samples and the potential presence of PAHs, this parcel requires additional evaluation as part of the installation restoration program. Appropriate health and safety measures will be implemented during all remediation activities to ensure the protection of human health and the environment. Therefore, the performance of industrial and/or commercial operations at this site in accordance with the Lease Restrictions will not pose an unacceptable risk to human health or the environment. ¹
Parcel 9.1 includes only the open land area in Parcel 9 surrounding Buildings 429, 430, 449 and 450.	9.1(7)	7	This parcel contains railroad tracks that were sprayed with pesticides, herbicides and waste oil containing PCP in the past. Sampling was conducted as part of Screening Site 70/71 (facility-wide railroad tracks). Sampling results indicated PAH levels that exceeded the screening criteria. The grassy area in this parcel was also treated with pesticides. This parcel was sampled and found to contain dieldrin at levels that exceeded screening criteria. Due to the presence of pesticides and PAHs in soil samples, this parcel requires additional evaluation as part of the installation restoration program. Appropriate health and safety measures will be implemented during all remediation activities to ensure the protection of human health and the environment. Therefore, the performance of industrial and/or commercial operations at this site in accordance with the Lease Restrictions will not pose an unacceptable risk to human health or the environment. ¹

Enclosure 2
Table 1 - Description of Property

Building Number and Property Description	EBS Parcel Designation	Condition Category	Remedial Actions
Parcel 10.2 includes only the open land area in Parcel 10 surrounding Buildings 549, 550, 649 and 650 except the land area included in Parcel 10.3.	10.2(7)	7	This parcel contains railroad tracks that were sprayed with pesticides, herbicides and waste oil containing PCP in the past. Sampling was conducted as part of Screening Site 70/71 (facility-wide railroad tracks). Sampling results indicated PAH contamination levels that exceeded the BCT screening levels. The grassy area in this parcel was also treated with pesticides. This parcel was sampled and found to contain dieldrin at levels that exceeded screening criteria. Due to the presence of pesticides and PAHs found in soil samples, this parcel requires additional evaluation as part of the installation restoration program. Appropriate health and safety measures will be implemented during all remediation activities to ensure the protection of human health and the environment. Therefore, the performance of industrial and/or commercial operations at this site in accordance with the Lease Restrictions will not pose an unacceptable risk to human health or the environment. ¹
Parcel 10.3 includes a .25 acre hydraulic fluid and battery acid spill area between Buildings 550 and 650. The site was cleaned up at the time of release.	10.3(7)	7	A battery acid and hydraulic fluid spill was reported on March 18, 1993 in this area. The area was sampled, and no contaminants attributable to the spill were found. Arsenic was found at levels that exceeded screening criteria. The grassy area in this parcel was also treated with pesticides. Due to the presence of pesticides and arsenic found in soil samples, this parcel requires additional evaluation as part of the installation restoration program. Appropriate health and safety measures will be implemented during all remediation activities to ensure the protection of human health and the environment. Therefore, the performance of industrial and/or commercial operations at this site in accordance with the Lease Restrictions will not pose an unacceptable risk to human health or the environment. ¹
Parcel 16.1 includes only the open land area in Parcel 16 surrounding Building 559.	16.1(7)	7	This parcel contains railroad tracks that were sprayed with pesticides, herbicides, and waste oil containing PCP in the past. The grassy area in this parcel was also treated with pesticides. This parcel was sampled, and one sample indicated dieldrin at a level that exceeded screening criteria. Due to the presence of pesticides found in soil samples, this parcel requires additional evaluation as part of the installation restoration program. Appropriate health and safety measures will be implemented during all remediation activities to ensure the protection of human health and the environment. Therefore, the performance of industrial and/or commercial operations at this site in accordance with the Lease Restrictions will not pose an unacceptable risk to human health or the environment. ¹

Enclosure 2
Table 1 - Description of Property

Building Number and Property Description	EBS Parcel Designation	Condition Category	Remedial Actions
Parcel 16.2 includes Building 559, a 240,000 square foot building erected in 1942 that was used as a general purpose warehouse (clothing/equipment).	16.2(1)	1	Building 559 may have been fumigated in the past. Air sampling for fumigants in other buildings similarly fumigated was performed in the winter of 1997. The BCT reviewed the air sample results and determined that no further action was required. Therefore, the performance of industrial and/or commercial operations at this site in accordance with the Lease Restrictions will not pose an unacceptable risk to human health or the environment. ¹
Parcel 17.2 includes only the open land area in Parcel 17 surrounding Buildings 359 and 459 (Building 459 was included in FOSL 1).	17.2(7)	7	This parcel contains railroad tracks that were sprayed with pesticides, herbicides and waste oil containing PCP in the past. The grassy area in this parcel was also treated with pesticides. This parcel was sampled and one sample contained dieldrin at a level that exceeded screening criteria. Due to the presence of pesticides found in soil samples, this parcel requires additional evaluation as part of the installation restoration program. Two 12,000-gallon, one 1,000-gallon, and three 500-gallon USTs were removed from this parcel between 1993 and 1995. There have been no documented releases associated with these tanks, and no evidence has been found of disposal or migration of petroleum products. Appropriate health and safety measures will be implemented during all remediation activities to ensure the protection of human health and the environment. Therefore, the performance of industrial and/or commercial operations at this site in accordance with the Lease Restrictions will not pose an unacceptable risk to human health or the environment. ¹
Parcel 17.3 includes Building 359, a 240,000 square foot building erected in 1942 that was used as a general purpose warehouse (medical supplies).	17.3(4)	4	Building 359 may have been fumigated in the past. Air sampling for fumigants in other buildings similarly fumigated was performed in the winter of 1997. The BCT reviewed the air sample results and determined that no further action was required. A sulfuric acid spill occurred on August 27, 1993 in section 2 of this building and was cleaned up immediately by the facility spill response team. The BCT determined that no further action was required. Therefore, the performance of industrial and/or commercial operations at this site in accordance with the Lease Restrictions will not pose an unacceptable risk to human health or the environment. ¹

¹ Provided the lessee strictly adheres to the Environmental Protection Provisions (Enclosure 5), including but not limited to Provision 14 - No subsurface disturbance, excavation, drilling or digging without prior written approval from the Government.

Category 1: Areas where no release or disposal of hazardous substances or petroleum products has occurred (including no migration of these substances from adjacent areas).

Category 2: Areas where only release or disposal of petroleum products has occurred.

Category 3: Areas where release, disposal, and/or migration of hazardous substances has occurred, but at concentrations that do not require a removal or remedial response.

Category 4: Areas where release, disposal, and/or migration of hazardous substances has occurred, and all removal or remedial actions to protect human health and the environment have been taken.

Enclosure 2
Table 1 - Description of Property

Category 5: Areas where release, disposal, and/or migration of hazardous substances has occurred, and removal or remedial actions are underway, but all required remedial actions have not yet been taken.

Category 6: Areas where release, disposal, and/or migration of hazardous substances has occurred, but required actions have not yet been implemented.

Category 7: Areas that are not evaluated or require additional evaluation.

Enclosure 3

Table 2 - Notification of Hazardous Substance Storage, Release or Disposal

Building Number	Name of Hazardous Substance	Date of Storage, Release or Disposal	Remedial Actions
Parcel 1.8 - Open land area in Parcel 1	Pesticides	Exact start date unknown assumed facility activation in 1942 - September 1997	The grassy area in this parcel was treated with pesticides. This parcel was sampled and found to contain dieldrin at levels that exceeded screening criteria. Due to the presence of pesticides in soil samples, this parcel requires additional evaluation as part of the installation restoration program. Appropriate health and safety measures will be implemented during all remediation activities to ensure the protection of human health and the environment. Therefore, the performance of industrial and/or commercial operations at this site in accordance with the Lease Restrictions will not pose an unacceptable risk to human health or the environment. ¹
Parcel 6.1 - Open land area in Parcel 6	Pesticides	Exact start date unknown assumed facility activation in 1942 - September 1997	This parcel contains railroad tracks that were sprayed with pesticides, herbicides, and waste oil containing PCP in the past. No screening site samples were taken in this parcel; however, SS70/71 (facility-wide railroad tracks) soil samples taken from tracks in Parcel 7, adjacent to Parcel 6, were found to contain PAHs at levels that exceeded screening criteria. The grassy area in this parcel was also treated with pesticides. This parcel was sampled and found to contain dieldrin at levels that exceeded screening criteria. Due to the presence of pesticides in soil samples and the potential presence of PAHs, this parcel requires additional evaluation as part of the installation restoration program. Appropriate health and safety measures will be implemented during all remediation activities to ensure the protection of human health and the environment. Therefore, the performance of industrial and/or commercial operations at this site in accordance with the Lease Restrictions will not pose an unacceptable risk to human health or the environment. ¹

Enclosure 3

Table 2 - Notification of Hazardous Substance Storage, Release or Disposal

Building Number	Name of Hazardous Substance	Date of Storage, Release or Disposal	Remedial Actions
Parcel 9.1 - Open land area in Parcel 9	Pesticides	Exact start date unknown assumed facility activation in 1942 - September 1997	This parcel contains railroad tracks that were sprayed with pesticides, herbicides and waste oil containing PCP in the past and grassy areas that were sprayed with pesticides. Sampling was conducted as part of Screening Site 70/71 (facility-wide railroad tracks). Sampling results indicated PAH levels that exceeded the screening criteria. The grassy areas were sampled and found to contain dieldrin at levels that exceeded screening criteria. Due to the presence of pesticides and PAHs in soil samples, this parcel requires additional evaluation as part of the installation restoration program. Appropriate health and safety measures will be implemented during all remediation activities to ensure the protection of human health and the environment. Therefore, the performance of industrial and/or commercial operations at this site in accordance with the Lease Restrictions will not pose an unacceptable risk to human health or the environment. ¹
Parcel 10.2 - Open land area in Parcel 10 except the land in Parcel 10.3	Pesticides Herbicides	Exact start date unknown assume facility activation in 1942 - September 1997	This parcel contains railroad tracks that were sprayed with pesticides, herbicides and waste oil containing PCP in the past and grassy areas that were sprayed with pesticides. Sampling was conducted as part of Screening Site 70/71 (facility-wide railroad tracks). Sampling results indicated PAH levels that exceeded the screening criteria. The grassy areas were sampled and found to contain dieldrin at levels that exceeded screening criteria. Due to the presence of pesticides and PAHs found in soil samples, this parcel requires additional evaluation as part of the installation restoration program. Appropriate health and safety measures will be implemented during all remediation activities to ensure the protection of human health and the environment. Therefore, the performance of industrial and/or commercial operations at this site in accordance with the Lease Restrictions will not pose an unacceptable risk to human health or the environment. ¹

Enclosure 3

Table 2 - Notification of Hazardous Substance Storage, Release or Disposal

Building Number	Name of Hazardous Substance	Date of Storage, Release or Disposal	Remedial Actions
Parcel 10.3 - Spill area between Buildings 550 and 650.	Pesticides	Exact start date unknown assume facility activation in 1942 - September 1997	A battery acid and hydraulic fluid spill was reported on March 18, 1993 in this area. The area was sampled, and no contaminants attributable to the spill were found. Arsenic was found at levels that exceeded screening criteria. The grassy area in this parcel was also treated with pesticides. Due to the presence of pesticides and arsenic found in soil samples, this parcel requires additional evaluation as part of the installation restoration program. Appropriate health and safety measures will be implemented during all remediation activities to ensure the protection of human health and the environment. Therefore, the performance of industrial and/or commercial operations at this site in accordance with the Lease Restrictions will not pose an unacceptable risk to human health or the environment. ¹
Parcel 16.1 - Open land area in Parcel 16	Pesticides Herbicides	Exact start date unknown assume facility activation in 1942 - September 1997	This parcel contains railroad tracks that were sprayed with pesticides, herbicides, and waste oil containing PCP in the past. The grassy area in this parcel was also treated with pesticides. This parcel was sampled, and one sample indicated dieldrin at a level that exceeded screening criteria. Due to the presence of pesticides found in soil samples, this parcel requires additional evaluation as part of the installation restoration program. Appropriate health and safety measures will be implemented during all remediation activities to ensure the protection of human health and the environment. Therefore, the performance of industrial and/or commercial operations at this site in accordance with the Lease Restrictions will not pose an unacceptable risk to human health or the environment. ¹
Parcel 16.2 - Building 559	Pesticides	Exact start date unknown assume 1942 (building construction) - September 1997	Building 559 may have been fumigated in the past. Air sampling for fumigants in other buildings similarly fumigated was performed in the winter of 1997. The BCT reviewed the air sample results and determined that no further action was required. Therefore, the performance of industrial and/or commercial operations at this site in accordance with the Lease Restrictions will not pose an unacceptable risk to human health or the environment. ¹

Enclosure 3

Table 2 - Notification of Hazardous Substance Storage, Release or Disposal

Building Number	Name of Hazardous Substance	Date of Storage, Release or Disposal	Remedial Actions
Parcel 17.2 - Open land area in Parcel 17	Pesticides	Exact start date unknown assume 1942 (building construction) - September 1997	This parcel contains railroad tracks that were sprayed with pesticides, herbicides and waste oil containing PCP in the past. The grassy area in this parcel was also treated with pesticides. This parcel was sampled and one sample contained dieldrin at a level that exceeded screening criteria. Due to the presence of pesticides found in soil samples, this parcel requires additional evaluation as part of the installation restoration program. Two 12,000-gallon, one 1,000-gallon, and three 500-gallon USTs were removed from this parcel between 1993 and 1995. There have been no documented releases associated with these tanks, and no evidence has been found of disposal or migration of petroleum products. Appropriate health and safety measures will be implemented during all remediation activities to ensure the protection of human health and the environment. Therefore, the performance of industrial and/or commercial operations at this site in accordance with the Lease Restrictions will not pose an unacceptable risk to human health or the environment. ¹
Parcel 17.3 - Building 359	Pesticides (fumigants), Potassium dichromate (film fixer)	Exact start date unknown assumed 1942 (bldg construction) - September 1997 Acid spill 8/27/93	Building 359 may have been fumigated in the past. Air sampling for fumigants in other buildings similarly fumigated was performed in the winter of 1997. The BCT reviewed the air sample results and determined that no further action was required. A sulfuric acid spill occurred on August 27, 1993 in section 2 of this building and was cleaned up immediately by the facility spill response team. no additional remedial action is required. No record of release or disposal of potassium dichromate in the building. Therefore, the performance of industrial and/or commercial operations at this site in accordance with the Lease Restrictions will not pose an unacceptable risk to human health or the environment. ¹

¹ Provided the lessee strictly adheres to the Environmental Protection Provisions (Enclosure 5), including but not limited to Provision 14 - No subsurface disturbance, excavation, drilling or digging without prior written approval from the Government.

Enclosure 4

Table 3 - Notification of Petroleum Product Storage, Release or Disposal

Building Number *	Name of Petroleum Product(s)	Date of Storage, Release, or Disposal	Remedial Actions
Parcel 17.2 - Open land area in Parcel 17; tanks associated with Building 359	Fuel oil Diesel	<ul style="list-style-type: none"> •12,000-gallon fuel oil UST operated between 1942 and 1994. •500-gallon fuel oil UST operated between 1942 and 1994. •500-gallon blow down UST operated between 1942 and 1994. •500-gallon fuel oil UST operated between 1942 and 1993. •1,000-gallon fuel oil UST operated between 1980 and 1993. •12,000-gallon fuel oil UST operated between 1942 and 1993. •500-gallon fuel oil UST operated between 1942 and 1993 •1,000-gallon diesel fuel AST operated between 1993 to present. 	<p>12,000-gallon tank closed in place 1994.</p> <p>500-gallon tank closed in place 1995.</p> <p>500-gallon tank closed in place 1994.</p> <p>500-gallon tank removed in 1993.</p> <p>1,000-gallon tank removed in 1993.</p> <p>12,000-gallon tank removed in 1993.</p> <p>500-gallon tank removed in 1993.</p> <p>There have been no documented releases associated with these tanks, and no evidence was found of disposal or migration of petroleum products</p>

Enclosure 5

Environmental Protection Provisions

The following conditions will be placed in the lease to ensure there will be no unacceptable risk to human health or the environment and no interference to the ongoing Memphis Depot Caretaker installation restoration program (IRP) and to ensure regulatory requirements for the IRP and other compliance programs administered by the Army are met.

1. The sole purpose(s) for which the leased premises and any improvements thereon may be used, in the absence of prior written approval of the Government for any other use, is for uses similar or comparable to past or current activities of the Depot. These include light industry, storage, sorting operations, receiving, packaging and shipping, support activities, mechanical shop to support material handling equipment, training, education, and general office.
2. The Lessee shall neither transfer nor assign this Lease or any interest therein or any property on the leased premises, nor sublet the leased premises or any part thereof or any property thereon, nor grant any interest, privilege, or license whatsoever in connection with this Lease without the prior written consent of the Government. Such consent shall not be unreasonably withheld or delayed. Every sublease shall contain the Environmental Protection Provisions herein.
3. The Lessee and any sublessee shall comply with the applicable Federal, state, and local laws, regulations, and standards that are or may become applicable to Lessee's or sublessee's activities on the Leased Premises.
4. The Lessee and any sublessee shall be solely responsible for obtaining at its cost and expense any environmental permits required for its operations under the Lease, independent of any existing permits.
5. The 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 the Government is responsible for enforcing them. Such inspections are without prejudice to the right of duly constituted enforcement officials to make such inspections. The Government normally will give the Lessee or sublessee twenty-four (24) hours prior notice of its intention to enter the Leased Premises unless it determines the entry is required for safety, environmental, operations, or security purposes. The Lessee shall have no claim on account of any entries against the United States or any officer, agent, employee, or contractor thereof.
6. The Government acknowledges that Defense Distribution Depot Memphis, Tennessee has been identified as a National Priorities List (NPL) Site under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) of 1980, as amended. The Lessee acknowledges that the Government has provided it with a copy of the Defense Distribution Depot Memphis, Tennessee Federal Facilities Agreement (FFA) entered into by the United States Environmental Protection Agency (EPA) Region 4, the State of Tennessee, and the Defense Logistics Agency effective March 1995, and will provide the Lessee with a copy of any amendments thereto. The Lessee agrees that should any conflict arise between the terms of such agreement as it presently exists or may be amended and the provisions of this Lease, the terms of the FFA will take precedence. The Lessee further agrees that notwithstanding any other

Enclosure 5

Environmental Protection Provisions

provisions of the Lease, the Government assumes no liability to the Lessee or its sublessees or licenses should implementation of the FFA interfere with the Lessee's or any sublessee's or licensee's use of the Leased Premises. The Lessee shall have no claim on account of any such interference against the United States or any officer, agent, employee or contractor thereof, other than for abatement of rent.

7. The Government, EPA, and TDEC 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 in these subparagraphs, and for such other purposes consistent with any provision of the FFA:

(a) to conduct investigations and surveys, including, where necessary, drilling, soil and water sampling, test-pitting, testing soil borings and other activities related to the Defense Distribution Depot Memphis, Tennessee installation restoration program (IRP) or FFA;

(b) to inspect field activities of the Government and its contractors and subcontractors in implementing the Defense Distribution Depot Memphis, Tennessee IRP or FFA;

(c) to conduct any test or survey required by the EPA or TDEC relating to the implementation of the FFA or environmental conditions at the Leased Premises or to verify any data submitted to the EPA or TDEC by the Government relating to such conditions,

(d) to construct, operate, maintain, or undertake any other response or remedial action, as required or necessary under the Defense Distribution Depot Memphis, Tennessee IRP or FFA, including, but not limited to, monitoring wells, pumping wells, and treatment facilities;

(e) to conduct Environmental Compliance Assessment System Surveys (ECAS)

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

9. The Lessee further agrees that in the event of any assignment or sublease of the Leased Premises, it shall provide to the EPA and TDEC by certified mail a copy of the agreement or sublease of the Leased Premises (as the case may be) within fourteen (14) days after the effective date of such transaction. The 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.

Enclosure 5

Environmental Protection Provisions

10. The Lessee shall strictly comply with the hazardous waste requirements under the Resource Conservation and Recovery Act (RCRA) or its Tennessee equivalent. Except as specifically authorized by the Government in writing, the Lessee must provide at its own expense hazardous waste management facilities, complying with all laws and regulations. Government hazardous waste management facilities will not be available to the Lessee. Any violation of the requirements of this condition shall be deemed a material breach of this Lease.

11. Defense Distribution Depot Memphis, Tennessee 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 the Department of the Army.

12. The Lessee shall prepare and maintain a Government-approved plan for responding to hazardous waste, fuel, and other chemical spills prior to commencement of operations on the leased premises. Such a plan shall be independent of the Memphis Depot Caretaker plan and, except for initial fire response and/or spill containment, shall not rely on installation 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 any Government officer conducting timely cleanup actions, the Lessee agrees to reimburse the Government for its costs.

13. The Lessee shall not construct or make or permit its sublessees or assigns to construct or make any alterations, additions, or improvements to, or installations upon or otherwise modify or alter the leased premises in any way which may adversely affect the Memphis Depot Caretaker environmental program, environmental cleanup, human health, or the environment, without the 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 or alterations, additions, modifications, improvements, or installations (collectively "work") in the proximity of operable units that are a part of a National Priorities List (NPL) site, such consent may include a requirement for 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.

14. The Lessee shall not conduct or permit its sublessees to conduct any subsurface excavation, digging, drilling, or other disturbance of the surface without the prior written approval of the Government.

15. The Lessee shall strictly comply with the hazardous waste permit requirements under the Resource Conservation and Recovery Act (RCRA), or its state equivalent, and any other applicable laws, rules or regulations. The Lessee must provide at its own expense such hazardous waste storage facilities that comply with all laws and regulations as it may need for such storage. Any violation of the requirements of this provision shall be deemed a material breach of this Lease.

Enclosure 5
Environmental Protection Provisions

16. LEAD-BASED PAINT WARNING AND COVENANT:

(a) The Leased Premises do not contain residential dwellings and are not being leased for residential or child care purposes. The Lessee is notified that the Leased Premises contain buildings built prior to 1978 that contain lead-based paint.

(b) Available information concerning known lead-based paint and/or lead-based paint hazards, the location of lead-based paint and/or lead-based paint hazards, and the condition of painted surfaces is contained in the Environmental Baseline Survey that has been provided to the Lessee. Additionally, the following report pertaining to lead-based paint and/or lead-based paint hazards has been provided to the Lessee: Lead Based Paint Risk Assessment for DDMT (Barge, Waggoner, Sumner, and Cannon, December 1995, revised April 1996). Additionally, the Lessee has been provided with a copy of the federally-approved pamphlet on lead poisoning prevention. The Lessee hereby acknowledges receipt of all of the information described in this subparagraph.

(c) The Lessee acknowledges that it has received the opportunity to conduct a risk assessment or inspection for the presence of lead-based paint and/or lead-based paint hazards prior to execution of this Lease.

(d) The Lessee shall not permit use of any buildings or structures on the Leased Premises for residential habitation without first obtaining the written consent of the Government. As a condition of its consent, the Government may require the Lessee to: (i) inspect for the presence of lead-based paint and/or lead-based paint hazards in and around buildings and structures on the Leased Premises; (ii) abate and eliminate lead-based paint hazards in accordance with all applicable laws and regulations; and (iii) comply with the notice and disclosure requirements under applicable federal, state, and local laws or regulations. The Lessee agrees to be responsible for any future remediation of lead-based paint found to be necessary on the Leased Premises.

(e) The Government assumes no liability for remediation or damages for personal injury, illness, disability, or death, to the Lessee, its successors or assigns, sublessees or to any other person, including members of the general public, arising from or incident to possession and/or use of any portion of the Leased Premises containing lead-based paint as residential housing. The Lessee further agrees to indemnify and hold harmless the Government, its officers, agents and employees, from and against all suits, claims, demands or actions, liabilities, judgments, costs and attorneys' fees arising out of, or in any manner predicated upon, personal injury, death or property damage resulting from, related to, caused by or arising out of the possession and/or use of any portion of the Leased Premises containing lead-based paint as residential housing. This section and the obligations of the Lessee hereunder shall survive the expiration or termination of this Lease and any conveyance of the Leased Premises to the Lessee. The Lessee's obligation hereunder shall apply whenever the United States of America incurs costs or liabilities for actions giving rise to liability under this section.

Enclosure 5
Environmental Protection Provisions

17. NOTICE OF THE PRESENCE OF ASBESTOS AND COVENANT:

(a) The Lessee is hereby informed and does acknowledge that friable and non-friable asbestos or asbestos-containing materials (ACM) has been found on the Leased Premises, as described in the final base-wide EBS. The ACM on the Leased Premises does not currently pose a threat to human health or the environment. All friable asbestos that posed a risk to human health was either removed or encapsulated.

(b) The Lessee covenants and agrees that its use and occupancy of the Leased Premises will be in compliance with all applicable laws relating to asbestos; and that the Government assumes no liability for future remediation of asbestos or damages for personal injury, illness, disability, or death, to the Lessee, its successors or assigns, sublessees, or to any other person, including members of the general public, arising from or incident to the purchase, transportation, removal, handling, use, disposition, or other activity causing or leading to contact of any kind whatsoever with asbestos on the Leased Premises described in this Lease, whether the Lessee, its successors or assigns have properly warned or failed to properly warn the individual(s) injured. The Lessee agrees to be responsible for any future remediation of asbestos found to be necessary on the Leased Premises.

18. The Lessee shall not use the Leased Premises for the storage or disposal of non-Department of Defense owned hazardous or toxic materials, as defined in 10 U.S.C. 2692, unless authorized under 10 U.S.C. 2692 and properly approved by the Government

19. The Army may impose any additional environmental protection conditions and restrictions during the terms of this lease that it deems necessary by providing written notice of such conditions or restrictions to the Lessee.

Enclosure 6

Regulatory/Public Comments and Responses for FOSL 6

Please find the Environmental Protection Agency (EPA), U. S. Department of Army (various offices), Army Materiel Command (AMC), Defense Logistics Agency (DLA) comments and Memphis Depot Caretaker (MDC) responses for FOSL 6.

EPA Comments to FOSL 6

1. As required by CERCLA Section 120(h)(5), DoD shall notify the state prior to entering into any lease that will encumber the property beyond the date of termination of DoD's operations. The notification shall include the length of lease, the name of lessee, and a description of the uses that will be allowed under the lease of the property. At National Priority List sites, DoD shall provide this notification to the United States Environmental Protection Agency as well.

COMMENT NOTED. The MDC will provide EPA and TDEC workable drafts of FOSLs as soon as they are available.

2. Section 1. Purpose. The section should identify the leased properties as Parcels 1.8, 6.1, 9.1, 10.2, 16.1, 17.2 and 17.3.

COMMENT INCORPORATED.

3. Section 2. Property Description. Please insert -- and the open land area surrounding the buildings -- after "*two (2) buildings*". There are two maps labeled as Enclosure 1, please refer to the second map as Enclosure 1a.

COMMENT INCORPORATED. The paragraph shall read, "The proposed property to be leased consists of 52.35 acres that includes nine (9) parcels. Included in these parcels are two (2) buildings (Buildings 359 and 559) and the open land area surrounding these buildings as well as the open land area surrounding Buildings 250, 349, 350, 429, 430, 449, 450, 549, 550, 649 and 650. Site maps of the property proposed to be leased can be found at Enclosure 1."

4. Section 3.1. Environmental Condition of Property Categories. The section should identify the parcel number associated with each property.

COMMENT INCORPORATED.

5. Section 3.2. Storage, Release or Disposal of Hazardous Substances. Please insert -Description of Property- after "Table 1." Please delete "*Products*" after "*Substance*" (on line 7).

COMMENT INCORPORATED.

Enclosure 6

Regulatory/Public Comments and Responses for FOSL 6

6. Section 3.4. Polychlorinated Biphenyls (PCB) Equipment. Please change "*unremediated*" to -- PCB -- and "*PCB equipment*" to -- the light ballasts --.

COMMENT INCORPORATED. The second sentence will be changed to read, "There is no evidence of unremediated PCB releases from these ballasts."

7. Section 3.5. Asbestos Please change "*asbestos containing material*" to --Asbestos Containing Material (ACM) --.

COMMENT INCORPORATED.

8. Section 4. Remediation. Please insert -- described in this document -- after "*property*" and change "*the property*" (after "*leasing*") to -- it -- (on line 4). The statement on lines 6-8 is inaccurate for properties categorized as 7. Please provide clarification.

COMMENT INCORPORATED. The sentence will be changed as follows, "Regulators have concurred with DDMT that the open area surrounding buildings in Parcels 1, 6, 9, 10, 16 and 17 does not pose risks above levels deemed protective provided that the property is used for the proposed purpose and the lessee strictly adheres to the Environmental Protection Provisions (Enclosure 5)."

9. Section 5. Regulatory Coordination. Please add the following sentence at the end of the paragraph "*Regulatory/public comments and responses are provided in Enclosure 6 and 7 respectively.*"

COMMENT INCORPORATED. Regulatory/public comments and responses will be provided in Enclosure 6

10 Section 6 National Environmental Policy Act (NEPA) Compliance and Consistency with Local Reuse Plan. Please change "*Local Reuse Authority*" to -- Depot Redevelopment Corporation -- (on line 7).

COMMENT INCORPORATED.

11. Section 7. Environmental Protection Provisions. Please insert -- (Enclosure 4) -- after "*Provisions*" (on line 4) and delete "*(Enclosure 4)*" (on line 5).

COMMENT INCORPORATED.

Enclosure 6

Regulatory/Public Comments and Responses for FOSL 6

12. Section 8 Finding of Suitability to Lease. Please insert -- (DoD) -- after "*Defense*"; also please change "*finding of suitability to lease*" to -- Finding of Suitability to Lease (FOSL) --. In the second paragraph, line 2, please change "*See*" to -- Refer to -- and also insert --and Table 3 - Notification of Petroleum Product Storage, Release or Disposal (Enclosure 4)--after "(Enclosure 3)."

COMMENT INCORPORATED.

13. Enclosure 1. Please identify each parcel on both maps. There are two different maps labeled Enclosure 1, please re-label the second map as Enclosure 1a.

COMMENT NOTED. The large site map provides the relative position of the parcels within the entire facility. The text shall be changed to reflect that site maps are included at Enclosure 1.

14. Enclosure 2. Page 10, row 1, column 4, on line 6, delete "*safety and health*", on line 7 insert -- and the environment--after "*human health*", on lines 8-11 delete "*The performance. . . human health.*"

COMMENT NOTED. Incorporated "and the environment." The sentence beginning, "The performance . . ." shall be changed to read, "Therefore, the performance . . ." A footnote shall be added to this sentence that will read, "Provided the lessee adheres to the Environmental Protection Provisions (Enclosure 5), including but not limited to provision 14 (no subsurface disturbance, excavation, drilling, or digging without prior written approval from the Government)" This footnote will be added to the end of Tables 1 and 2. No deletions have been made as the language fulfills Army requirements and provides perspective tenants the information that remediation will be conducted in a safe and protective manner

15 Enclosure 2 Page 10, row 2, column 4, on line 8 delete "*safety and health*", on line 9 insert -- and the environment--after "*human health*", on lines 10-13 delete "*The performance. . . human health.*"

COMMENT NOTED. See response to Comment 14.

16. Enclosure 2. Page 10, row 3, column 4, on line 12 delete "*safety and health*", on line 13 insert -- and the environment--after "*human health*", on lines 14-17 delete "*The performance. . . human health.*"

COMMENT NOTED. See response to Comment 14.

17. Enclosure 2. Page 11, row 1, column 4, on line 12 delete "*safety and health*", on line 13 insert -- and the environment--after "*human health*", on lines 14-17 delete "*The performance. . . human health.*"

COMMENT NOTED. See response to Comment 14.

Enclosure 6
Regulatory/Public Comments and Responses for FOSL 6

18. Enclosure 2. Page 11, row 2, column 4, on line 8 delete "*safety and health*", on line 9 insert -- and the environment--after "*human health*", on lines 10-13 delete "*The performance. . . human health.*" Please indicate if dieldrin exceeded the screening levels.

COMMENT NOTED/INCORPORATED. See response to Comment 14.

19. Enclosure 2. Page 11, row 3, column 4, on line 8 delete "*safety and health*", on line 10 insert -- and the environment--after "*human health*", on lines 10-13 delete "*The performance. . . human health.*"

COMMENT NOTED. See response to Comment 14.

20. Enclosure 2. Page 12, row 1, column 4, on the last line insert -- and the environment--.

COMMENT INCORPORATED.

21. Enclosure 2. Page 12, row 2, column 4, on line 13 delete "*safety and health*", on line 15 insert -- and the environment--after "*human health*", on lines 15-18 delete "*The performance. . . human health.*"

COMMENT NOTED. See response to Comment 14.

22. Enclosure 2. Page 12, row 3, column 4, on the last line insert -- and the environment--.

COMMENT INCORPORATED.

23 Please note that category 7 does not provide enough information about the risk associated with a particular site (implies no risk assessment conducted), so it is improper to say that the performance of industrial and/or commercial operations at the property (even with the provisions) will not pose an unacceptable risk to human health or the environment.

COMMENT NOTED. See response to Comment 14.

24. Enclosure 3. The title should be -- Notification of Hazardous Substance Storage, Release or Disposal --.

COMMENT INCORPORATED.

25. Enclosure 3. Page 13, row 1, column 4, please insert --additional-- before "*remedial action.*"

COMMENT INCORPORATED.

Enclosure 6
Regulatory/Public Comments and Responses for FOSL 6

26. Enclosure 3. Page 13, row 2, column 4 on line 4 delete "*health and safety*"; on line 6 insert -- and the environment -- after "*human health*"; on lines 6-10 delete "*The performance ... human health*".

COMMENT NOTED. See response to Comment 14.

27. Enclosure 3. Page 13, row 3, column 4 on line 4 delete "*health and safety*"; on line 6 insert -- and the environment -- after "*human health*"; on lines 6-10 delete "*The performance ... human health*".

COMMENT NOTED. See response to Comment 14.

28. Enclosure 3. Page 13, row 4, column 4 on line 4 delete "*health and safety*"; on line 6 insert -- and the environment -- after "*human health*"; on lines 6-10 delete "*The performance ... human health*".

COMMENT NOTED. See response to Comment 14.

29. Enclosure 3. Page 14, row 1, column 4 on line 4 delete "*health and safety*"; on line 6 insert -- and the environment -- after "*human health*"; on lines 6-10 delete "*The performance ... human health*".

COMMENT NOTED. See response to Comment 14

30. Enclosure 3. Page 14, row 3, column 4 on line 9 delete "*health and safety*"; on line 11 insert -- and the environment -- after "*human health*"; on lines 11-14 delete "*The performance ... human health*".

COMMENT NOTED. See response to Comment 14

31. Enclosure 3. Page 14, row 4, column 4 on line 4 delete "*health and safety*"; on line 6 insert -- and the environment -- after "*human health*"; on lines 6-10 delete "*The performance ... human health*".

COMMENT NOTED. See response to Comment 14.

32. Enclosure 3. Page 14, row 4, column 4 on line 4 delete "*health and safety*"; on line 6 insert -- and the environment -- after "*human health*"; on lines 6-10 delete "*The performance ... human health*".

COMMENT NOTED. See response to Comment 14.

Enclosure 6
Regulatory/Public Comments and Responses for FOSL 6

33. Please note that category 7 does not provide enough information about the risk associated with a particular site (implies no risk assessment conducted), so it is improper to say that the performance of industrial and/or commercial operations at the property (even with the provisions) will not pose an unacceptable risk to human health or the environment.

COMMENT NOTED. See response to Comment 14.

34. Enclosure 4. The title should be -- Notification of Petroleum Product Storage, Release or Disposal--.

COMMENT INCORPORATED.

35. Enclosure 5. Please note that in Provision #17(b) "Grantor" should be -- *the Department of Defense* --.

COMMENT INCORPORATED. Changed to "the Government."

36. Enclosure 5. Please note that "GRANTEE" in Provision #18(b) should be -- Lessee.

COMMENT INCORPORATED.

37. Enclosure 5 Provision #19 implies that there are DoD hazardous or toxic materials stored at the Depot.

COMMENT NOTED. It is an important covenant in that it tells the Lessee that hazardous substances shall not be brought onto the property unless specifically allowed by the Government

U.S. Department of Army Comments on FOSL #6

Army Materiel Command Real Estate (John Farrar)

1. Section 3.1: Building 559 is listed as an ECP Category 1, yet it is also listed in paragraph 3.2 as having had a hazardous substance release.

COMMENT INCORPORATED. Reference to Building 559 in paragraph 3.2 has been deleted.

Army OGC (Craig Teller)

No legal objection.

Army TJAG (MAJ Allison Polchek)

No legal objection.

Enclosure 6
Regulatory/Public Comments and Responses for FOSL 6

Army BRACO (MS. Robin Mills)

1. HQDA/BTT should not be in a position of reviewing FOSLs that have not been staffed with the regulators first. I can see that there will be exceptions, but HQDA/BTT needs to know (for political reasons if nothing else) whether or not the regulators concur/non-concur with the FOSL.

COMMENT NOTED.

2. Page 3. Please clarify whether or not the regulators have signed off on the Cat 1 property (CERFA Clean??).

COMMENT NOTED. During BRAC Cleanup Team meetings, regulators have approved the category 1 properties following discussions of sampling data.

3. Page 5. Please clarify/state that the sites that caused the NPL listing are/or are not part of this lease (or does contaminated groundwater underlie the buildings????).

COMMENT NOTED. Sites that caused the NPL listing are not included in this lease. However, sites recognized by the regulators as CERCLA sites, which are included in the CERCLA remedial investigation and considered part of the NPL site, are in this lease (i.e. all grassy areas and all rail road tracks).

4. On page 5, the statement "environmental contamination on the property does not present a hazard to leasing the property" but no read WHY is given. Please state why the property is safe for the intended use (i.e. based on the nature of the contamination and the planned use of the facility (buildings only?), and the negligible risk of the contaminant coming into human contact etc...the property is suitable to lease for the intended purpose. It may also be wise to point out in the protection provisions any restrictions/access that will be needed based on the on-going work. A statement concerning the "suitableness" of this parcel needs to be in the body of the FOSL as well as in the protection provisions

COMMENT NOTED. The following sentence has been added to Page 5: "Regulators have concurred with DDMT that the open area surrounding buildings in Parcels 1, 6, 9, 10, 16 and 17 does not pose risks above levels deemed protective provided that the property is used for the proposed purpose and the lessee strictly adheres to the Environmental Protection Provisions (Enclosure 5)." Also, a footnote has been added to the tables reads, "Provided the lessee adheres to the Environmental Protection Provisions (Enclosure 5), including but not limited to provision 14 (no subsurface disturbance, excavation, drilling, or digging without prior written approval from the Government)." This footnote will be added to the end of Tables 1, 2 and 3.

Enclosure 6
Regulatory/Public Comments and Responses for FOSL 6

Defense Logistics Agency Comments on FOSL #6

HQ-DLA Legal

1. I have read the Army Materiel Command Guidance for FOST/FOSL. The above-noted Finding of Suitability to Lease (FOSL) were reviewed in light of that guidance. Inasmuch as the provisions to be included in the leases for Environmental Protection during the lease term are basically boilerplate, I will defer to the Army on the inclusion of those provisions. The language is repeated in the three documents and notes that the property is listed on the National Priorities List. Covenants for asbestos contamination, PCBs, lead-based paints, etc. are contained in the documents. Although we acknowledge the existence of the contaminants we ask the lessees to hold us harmless. Whether or not we would be sustained in these indemnifications and hold harmless provisions may be a legal issue not resolved now. The documents also outline contaminants stored on the property or utilized on the property. We do not know whether DLA is or was a contributory party to the use of the hazardous substances but it is noted that in certain instances remediation has taken place or a process for remediation has commenced. As a note in review, one wonders whether a policy of spraying dieldrin for pesticide purposes was considered a necessary property maintenance activity whether it was warranted or not. Was there any evidence of pest infestation to merit such use?

To be consistent with the FOSL guidance models, we need to make express statements that the proposed leases are consistent with the redevelopment plans proposed by the Memphis LRA.

Secondly I note in review that our documents are still in review by local environmental authorities and EPA. The Section 5 analysis is therefore incomplete because of the concurrent review. Otherwise I find no legal insufficiency in the documents meriting redrafting or significant change in format.

COMMENT NOTED. No records are available regarding Army's pest management program during the 1940s - 1960s. No records have been located regarding the Depot's pest management program during the 1960s until the 1970s when dieldrin was prohibited by the EPA for use. Paragraph 1. PURPOSE will include this sentence, "This FOSL has been developed in accordance with the Depot Redevelopment Corporation's Reuse Plan."

HQ-DLA (Karen Moran)

1. Page 2, para 1, line 2. Should it be "parcels OF property"?

COMMENT INCORPORATED.

2. Reword to read "...that the Army or DLA used.."

COMMENT NOTED. Changed to read Department of Defense.

Enclosure 6
Regulatory/Public Comments and Responses for FOSL 6

3 Page-8-9. Suggest including another map which shows the parcel delineations referred to throughout Table 1. It is very confusing without this kind of a guide.

COMMENT INCORPORATED.

Enclosure 7 References

I. The statutory and regulatory requirements relating to FOST/FOSLs are as follows:

CERCLA §120(h), 42 U.S.C. §9620(h) - Property Transferred by Federal Agencies

10 U.S.C. § 2667(f) as amended by section 2906 of the FY 94 Defense Authorization Act requiring DOD and EPA to consult on FOSL procedures

40 CFR PART 373 - Reporting Hazardous Substance Activity when Selling or Transferring Federal Real Property.

II. The DOD Guidance relating to FOST/FOSLs is as follows:

DOD Guidance on the Environmental Review Process to Reach a Finding of Suitability to Transfer (FOST) for Property Where Release or Disposal has Occurred, dated 1 June 1994.

DOD Guidance on the Environmental Review Process to Reach a Finding of Suitability to Transfer (FOST) for Property Where No Release or Disposal has Occurred, dated 1 June 1994.

DOD Policy on the Environmental Review Process to Reach a Finding of Suitability to Lease (FOSL), dated 18 May 1996.

DOD Fast Track to FOST - A Guide to Determining if Property is Environmentally Suitable to Transfer , July 1997

DOD Fact Sheet – A Field Guide to FOSL, Fall 1996

DOD Memorandum, Subject Clarification of “Uncontaminated” Environmental Condition of Property at Base Realignment and Closure (BRAC) Installations, dated 21 October 1996

DOD Memorandum, Subject: Asbestos, Lead paint and Radon Policies at BRAC Properties, dated 31 October 1994

III. U.S. Environmental Protection Agency (EPA) Guidance

Guidance for Evaluation of Federal Agency Demonstrations that Remedial Actions are Operating Properly and Successfully Under CERCLA Section 120(h)(3), (Interim) dated August 1996

EPA Memorandum, Subject: Military Base Closures: Guidance on EPA concurrence in the Identification of Uncontaminated Parcels under CERCLA Section 120(h)(4), re-issued March 27, 1997

Enclosure 7 References

IV. Department of the Army Guidance

AR 200-1, Environmental Protection and Enhancement, dated 21 February 1997

DAIM-BO Memorandum, Subject: Clarification of Meaning of Uncontaminated Property for Purposes of Transfer by the United States, dated 9 December 1996

V. WWW BRAC Sites

1. DOD Sites –

DOD Base Closure and Transition Office –
<http://emissary.acq.osd.mil/bctoweb/bctohome.nsf>

DOD Environmental Base Realignment and Base Closure (BRAC)
Program
<http://www.dtic.mil/envirodod/envbrac.html>

DOD Base Closure and Community Reinvestment
<http://www.acq.osd.mil/iai/bccr.htm>

DOD Office of Economic Adjustment
<http://www.acq.osd.mil/oea/index.html>

2. Environmental Protection Agency

EPA OSWER Federal Facilities Base Realignment and Closure
<http://www.epa.gov/swerffrr/brac.htm>

3. Department of the Army

Army Base Realignment and Closure Office
<http://www.hqda.army.mil/acsimweb/brac/brac3.htm>

CERL BRAC/NEPA "How To" Manual
<http://www.cecer.army.mil/facts/sheets/PL19.html>

Corps of Engineers Base Realignment and Closure (Camp Bonneville)
- Good Slide Presentation of Process.
<http://www.nps.usace.army.mil/geotech/bnvl/brac95/index.htm>

Presidio of San Francisco BRAC Environmental Restoration Program
- General information as well as facts on Presidio Cleanup and Conversion
<http://www.presidiosanfran.com>

Enclosure 7 References

4. Department of the Air Force

Air Force Base Conversion Agency
<http://www.afbca.hq.af.mil>

5. Department of the Navy

Navy NAVFAC Base Closure Site
<http://164.224.238.53:81/csohome.nsf>

Navy Facilities Engineering Command - information on Navy BRAC sites
http://www.ncts.navy.mil/homepages/navfac_es/bcp.htm

Navy Environmental BRAC News
<http://www.navy.mil/homepages/navfac/env/newslet.html>

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