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FINAL CLOSURE FOR OFFSITE WEAPONS STORAGE AREA NAS FORT WORTH TX
2/1/2001
THE ENVIRONMENTAL COMPANY



**NAVAL AIR STATION
FORT WORTH JRB
CARSWELL FIELD
TEXAS**

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**Final
Closure Report for the Offsite Weapons Storage Area
NAS Fort Worth JRB Carswell Field, Texas**

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Contract No. F41624-95-8002
Delivery Order 0009

February 2001

Air Force Center for Environmental Excellence
3207 North Road
Brooks AFB, TX 78235-5353



**FINAL
CLOSURE REPORT FOR THE
OFFSITE WEAPONS STORAGE AREA**

AT

**NAVAL AIR STATION FORT WORTH
JOINT RESERVE BASE (JRB)
CARSWELL FIELD, TEXAS**

February 5, 2001

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PREFACE

A Resource Conservation and Recovery Act (RCRA) Facility Investigation (RFI) of the Offsite Weapons Storage Area (WSA) at Naval Air Station (NAS) Fort Worth, Joint Reserve Base, Carswell Field, Texas (identified as Project No 96-8117), was conducted to determine whether hazardous constituents have been released into the environment.

Closure activities were conducted after completion of the Final RFI to reduce contaminated soil levels to below site-specific cleanup levels. This Closure Report describes the closure methods used, summarizes the sample results, and documents attainment of Texas Natural Resources Conservation Commission (TNRCC) site closure requirements.

This Closure Report was prepared by The Environmental Company, Inc. (TEC) under contract No. F41624-95-D-8002, Delivery Order 0009, prepared for Project No. 96-8117. This report was written under the direction of Mr. Bob Duffner, P.E., TEC Project Manager. The Contracting Officer's Representative for this project is Mr. Charles Pringle, Air Force Center for Environmental Excellence (AFCEE), Environmental Restoration Branch (ERB), Brooks Air Force Base (AFB), Texas.

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Final Closure Report
Offsite Weapons Storage Area
NAS Fort Worth JRB Carswell Field
Contract No F41624-95-D-8002/Delivery Order 009
February 5, 2001

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NOTICE

This report has been prepared for the United States Air Force (USAF) by The Environmental Company, Inc (TEC) for the purpose of aiding in the implementation of a final remedial action plan under the Air Force Installation Restoration Program (IRP).

Although the area of study is being investigated in accordance with IRP guidance, the area has not been identified as an IRP site. NAS Fort Worth (formerly Carswell Air Force Base) is undergoing property disposal/reuse pursuant to the Defense Base Closure and Realignment Act of 1990 and Round II of the Base Closure Commission deliberations. The area is being considered for property disposal or reuse, and the Air Force Base Conversion Agency (AFBCA) desires to investigate the area to confirm or deny the presence of contamination

As the report relates to actual or possible releases of potentially hazardous substances, its release prior to a USAF final decision on remedial action may be in the public's interest. The limited objectives of this report and the ongoing nature of the IRP, along with the evolving knowledge of site conditions and chemical effects on the environment and health, must be considered when evaluating this report because subsequent facts may become known that may make this report premature or inaccurate.

Acceptance of this report in performance of the contract under which it is prepared does not mean that the Air Force adopts the conclusions, recommendations, or other views expressed herein, which are those of the contractor only and do not necessarily reflect the official position of the USAF.

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LIST OF ACRONYMS AND ABBREVIATIONS

ACBM	Asbestos Containing Building Material
ACM	Asbestos-Containing Materials
AFB	Air Force Base
AFBCA	Air Force Base Conversion Agency
AFCEE	Air Force Center for Environmental Excellence
AL/OEBZ	Armstrong Laboratory Health Physics Branch
ARARs	Applicable or Relevant and Appropriate Requirements
ATSDR	Agency for Toxic Substances and Disease Registry
Bgs	below ground surface
BTEX	Benzene, Toluene, Ethylbenzene, Xylene
cm ²	square centimeters
cm/sec	centimeters per second
COPC	Chemical of Potential Concern
CULs	Cleanup Levels
DDE	Dichlorodiphenyltrichloroethane
DoD	Department of Defense
DTIC	Defense Technical Information Center
DW	Drainageway
EBS	Environmental Baseline Survey
EDQ	Environmental Data Quality
EOD	Explosive Ordnance Disposal
EPC	Exposure Point Concentration
ERB	Environmental Restoration Branch

LIST OF ACRONYMS AND ABBREVIATIONS (CONT.)

°F	Degrees Fahrenheit
GWP	Groundwater Protection
HQ	Hazard Quotient
IRP	Installation Restoration Program
JRB	Joint Reserve Base
LLRWBS	Low-level Radioactive Waste Burial Site
MCL	Maximum Contaminant Levels
MDL	Method Detection Limit
M & E	Metcalf & Eddy
mg/kg	milligrams per kilogram
MSC	Medium-Specific Concentration
Msl	mean sea level
NA	Not Applicable
NAS	Naval Air Station
ND	Non-detectable
PAHs	Polynuclear Aromatic Hydrocarbons
PCB	Polychlorinated Biphenyls
pCi/L	microcuries per liter
ppb	parts per billion
ppm	parts per million
PQL	Practical Quantitation Limit
PR	Preliminary Review

LIST OF ACRONYMS AND ABBREVIATIONS (CONT.)

PSTD	Petroleum Storage Tank Division
QC	Quality Control
RCRA	Resource Conservation and Recovery Act
RFA	RCRA Facility Assessment
RFI	RCRA Facility Investigation
RI/FS	Remedial Investigation/Feasibility Study
RME	Reasonable Maximum Exposure
RRS	Risk Reduction Standard
RRSN	Risk Reduction Standard Number
SPLP	Synthetic Precipitation Leachate Procedure
SVOC	Semi-volatile Organic Compound
SWMU	Solid Waste Management Unit
TAC	Texas Administrative Code
TCE	Trichloroethylene
TEC	The Environmental Company, Inc.
TNRCC	Texas Natural Resources Conservation Commission
TPH	Total Petroleum Hydrocarbon
TRPH	Total Recoverable Petroleum Hydrocarbon
ug/g	micrograms per gram
ug/kg	micrograms per kilogram
UNITEC	Universal Technologies, Inc.
USAF	United States Air Force
USDA	United States Department of Agriculture

LIST OF ACRONYMS AND ABBREVIATIONS (CONT.)

USEPA	United States Environmental Protection Agency
USNRC	United States Nuclear Regulatory Commission
UST	Underground Storage Tank
UST	Unified Services of Texas
UTL	Upper Tolerance Limit
UTL _{95,95}	Upper Tolerance Limit with 95 Percent Coverage
VOC	Volatile Organic Compound
VSI	Visual Site Inspection
WSA	Weapons Storage Area

1.0 INTRODUCTION

The Environmental Company, Inc. was contracted by the United States Air Force Center for Environmental Excellence (AFCEE) to perform a Resource Conservation and Recovery Act (RCRA) Facility Investigation (RFI) for the Offsite Weapons Storage Area (WSA) at Naval Air Station (NAS) Fort Worth Joint Reserve Base (JRB) Carswell Field, Texas. The results of this investigation were provided in an RFI Report (TEC, 1999), which concluded that soil removal and associated confirmation sampling would be necessary in order to close the site under Texas Natural Resources Conservation Commission (TNRCC) Risk Reduction Standard Number (RRSN) 1 and/or 2. This closure report summarizes the previous RFI investigation results, describes soil removal and confirmation sampling activities, and documents attainment of TNRCC RRSN 1 and/or 2.

The RFI investigation, RFI report, removal and confirmation sampling activities, and closure reporting have been performed under Contract No. F41624-95-D-8002, Delivery Order 0009, Project Number 96-8117. The Offsite WSA is associated with TNRCC Solid Waste Registration No. 650004 and Hazardous Waste Permit No. HW-50289.

1.1 PROJECT BACKGROUND

The Offsite WSA is described below. This section includes a description of the site location, a history of NAS Fort Worth and the Offsite WSA, the environmental setting of the region, and site descriptions.

1.1.1 Installation Location

The Offsite WSA was an off-base facility supporting Carswell Air Force Base (AFB), which has since been realigned as NAS Fort Worth JRB. NAS Fort Worth JRB is located in north-central Texas in Tarrant County, approximately 8 miles west of Fort Worth, Texas (see Figure 1-1).

NAS Fort Worth JRB property totals 2,555 acres and consists of a main station and two noncontiguous land parcels. The area surrounding NAS Fort Worth is predominantly suburban and includes the residential areas of Fort Worth, Westworth Village, and White Settlement

The Offsite WSA is located on a 247-acre offsite parcel under the ownership and control of the Air Force Base Conversion Agency (AFBCA). This parcel is surrounded by an additional 264 acres of easements controlled by the AFBCA. The Offsite WSA is located at approximately 32 degrees north latitude and 97 degrees west longitude, in north-central Texas. It lies approximately 4 miles west of NAS Fort Worth, just north of White Settlement Road (see Figure 1-2). The 70-acre Offsite WSA facility was built in 1956 and is enclosed within a security fence. A 1984 aerial photograph of the site is provided in Figure 1-3, and a detailed map of the site facilities is provided in Figure 1-4. Both of these figures show the fenced area of the Offsite WSA surrounded by the outer ring of Air Force property. The Offsite WSA is bordered primarily by rural land, with some

ranches and farms located nearby. A residential development is located south of White Settlement Road.

Facilities at the Offsite WSA include two munitions inspection shops, 16 ordnance storage buildings (including 11 bunkers), one entry control building, a less-than-90-day hazardous waste storage area (Solid Waste Management Unit [SWMU 59]), and an emergency power plant. During its operational period, the Offsite WSA also maintained an Explosive Ordnance Disposal (EOD) Range, a small radioactive waste burial site (SWMU 60), a water storage tank, and two nonpotable water wells. The radioactive waste burial site has been closed and remediated since the Offsite WSA operations were terminated, and the EOD Range has been physically cleared of explosives and metals. The locations of Offsite WSA buildings are shown on Figure 1-4.

1.1.2 Offsite WSA History

The Offsite WSA, built in 1956, was officially closed with the rest of Carswell AFB on 30 September 1993. Site activities included the storage and maintenance of munitions, disposal of ordnance and, to a limited degree, storage of low-level radioactive waste. A discussion of previous environmental investigations conducted at the WSA facilities is provided in Section 1.2.

Maintenance was conducted within buildings and outdoors. The majority of the indoor ordnance maintenance took place inside Bldg. 8503. In support of these activities, paint booths were installed in Bldg. 8503. Air Force personnel reported that painting and sanding of practice bombs also occurred outdoors (Long, 1996). The majority of outdoor maintenance allegedly took place around the perimeter of Bldg. 8503; north of Bldgs. 8554, 8556, 8558, 8560, and 8852; and between Bldgs. 8503 and 8531 (Figure 1-4).

Ordnance and spent engine cartridges were disposed of at an EOD Range that was constructed in 1971. This disposal area consisted of 3 acres of land directly west of the main complex (see Figure 1-4). As discussed in Section 1.2, the EOD Range no longer is used and was cleared of explosives in February 1993.

The Low-level Radioactive Waste Burial Site (LLRWBS), identified as SWMU 60 by the TNRCC, was located 400 feet west of Bldg. 8503 (see Figure 1-4). The LLRWBS was used between 1957 and 1969. The burial site consisted of three dry wells constructed from 12-inch-diameter cast iron pipes encased in 2.25 inches of grout. These pipes were vertically embedded 18 feet into the ground. The pipes were permanently capped in 1969 and were finally removed in November 1996. A more detailed discussion of the remediation work at SWMU 60 is presented in Section 1.3.

1.1.3 Environmental Setting

1.1.3.1 Physical Geography

The Offsite WSA land area is characterized by broad, gently to moderately sloping terraces of sedimentary rock mantled by a variable thickness of light brown to black loamy soil. The Offsite WSA is situated on a ridge between Live Oak Creek and one of

its tributaries to the north. Topography within the fenced area of the Offsite WSA consists of a gently sloping surface with elevations ranging from approximately 770 feet above mean sea level (msl) along the western boundary fence to approximately 730 feet above msl near the east fence (see Figure 1-4). The plateau's gentle slopes end abruptly at the drainages, which feed into Live Oak Creek and its tributaries to the south, east, and north of the Offsite WSA. Gradients become much steeper in these drainages, with up to 30 feet of vertical drop per 100 feet of horizontal distance (see Figure 1-5).

The primary surface water features in the vicinity of the Offsite WSA are Live Oak Creek, located approximately 400 feet south of the Offsite WSA boundary, and an unnamed ephemeral tributary to Live Oak Creek, located immediately north of the fenced Offsite WSA property (see Figure 1-5). A series of drainageways and ditches transmit surface water directly offsite. The Offsite WSA drainageways flow into the major drainages to the south, east, and north. All surface water associated with the site eventually discharges into Live Oak Creek or its northern tributary.

Live Oak Creek flows northeast from the Offsite WSA and enters Lake Worth approximately 3 miles east of the site. Lake Worth and Live Oak Creek primarily are used for recreational purposes and fishing. Lake Worth is a source of drinking water for the City of Fort Worth.

1.1.3.2 Geology and Hydrogeology

Soils

The Soil Survey of Tarrant County (Ressel, 1981) shows 10 distinct soil units in and around the Offsite WSA (see Figure 1-7). All of these soils are moderately alkaline, reflecting the limestone bedrock of the region, and most are shallow. RFI drilling confirmed that the soil layer is thin at the Offsite WSA, with depth to bedrock exceeding 6 feet only in scattered locations. Alluvial materials are found only along stream channels of Live Oak Creek and its northern tributary. Additional descriptions of the soils in the Offsite WSA area are provided in the RFI report (TEC, 1999).

Bedrock Geology

The stratigraphy of the area surrounding the Offsite WSA consists of, from youngest to oldest, the Goodland Limestone, the Walnut Formation, the Paluxy Formation, and the Glen Rose Formation (see Figures 1-6 and 1-8).

Cretaceous bedrock is exposed both in and near the Offsite WSA. Goodland Limestone crops out west of the Offsite WSA property boundary and is the uppermost unit in the background wells installed by Jacobs Engineering. Erosion and the drop in elevation from the area of the background wells to the Offsite WSA have eliminated the Goodland Limestone from the surface at the Offsite WSA. Weathered Walnut Formation crops out over most of the area inside the fenced Offsite WSA (Barnes, 1972). This formation was found to be 25 to 30 feet thick in the two background wells. Outcrops of this formation within the Offsite WSA consist of weathered fossiliferous limestone. Underlying the Walnut Formation is the Paluxy Formation. This formation is not exposed within the

fenced Offsite WSA facility, but only in the steeper drainages along Live Oak Creek and its northern tributary, as well as in a quarry south of the Offsite WSA. The more resistant Walnut Formation limestone caps the poorly cemented sandstones of the Paluxy, allowing weathering and erosion to produce steeper slopes in the Paluxy Formation. This formation was found to be 170 to 190 feet thick in the Offsite WSA background wells, which were drilled to the Paluxy/Glen Rose Formation contact (Jacobs, 1997b). In the Offsite WSA area, the Paluxy Formation consists of fine- to coarse-grained sandy material with varying degrees of cementation and varying amounts of shale. The Glen Rose Formation does not crop out in the area surrounding the Offsite WSA, but is an important hydrologic unit.

Local Hydrogeology

The important hydrogeologic units beneath the Offsite WSA are:

- surficial overburden;
- Walnut Formation aquitard;
- Paluxy Aquifer; and
- Glen Rose Formation aquitard (see Figures 1-6 and 1-8).

Previous investigations have identified shallow groundwater at a depth of 5 feet below ground surface (bgs) (Radian, 1989). This water is contained within the surficial overburden at the site. Results of drilling done during the RFI indicate that this water occurs sporadically across the site and contains saturated soil in areas where surface waters have migrated downward and are moving along the bedrock/soil interface. This shallow subsurface water, like the surface water at the Offsite WSA, is assumed to follow the topography and radiate out from the site to the south, east, and north. This water would then discharge to the numerous ravines around the site perimeter that feed tributaries of Live Oak Creek.

Although the Walnut Formation can contain groundwater in shallow weathered zones, it generally functions as an aquitard. During the Offsite WSA Background Study (Jacobs, 1997b), water was observed in weathered zones of the formation only after heavy rains via surface infiltration. Previous studies of competent Walnut Formation produced a hydraulic conductivity value of 7.0×10^{-10} cm/sec (Jacobs, 1997a). This information indicates that downward flow of groundwater through the Walnut Formation is limited.

The Paluxy Aquifer is the principal source of groundwater in the vicinity of the Offsite WSA. The Paluxy is believed to exist under unconfined or semiconfined conditions, depending on depth of encounter and the local stratigraphic sequence. Most of the water wells in the area are completed in the lower, coarser-grained, and more permeable section of the Paluxy Aquifer. Geotechnical results from samples collected in background well WJEPX925 confirm that the lower portions of the Paluxy Formation are more porous and have a higher conductivity (Jacobs, 1997b). A sample collected from 161 to 162 feet bgs in the well showed an effective porosity of 1.6 percent and an average hydraulic conductivity of 9.1×10^{-8} cm/sec. In contrast, samples collected from

195 to 196 and 249 to 250 feet bgs had effective porosities of 28.66 and 28.91 percent and average hydraulic conductivities of 2.29×10^{-3} and 3.47×10^{-3} cm/sec, respectively. It should also be noted that even the upper portions of the Paluxy Formation have significantly higher hydraulic conductivities than the overlying Walnut Formation.

Most recharge to the Paluxy Aquifer occurs where the formation crops out west and north of the Offsite WSA and in the lake bed of Lake Worth. The amount of recharge via outcrops along Live Oak Creek is unknown.

Two inactive wells located on the Offsite WSA property, are screened in the Paluxy Aquifer (see Figure 1-4). The main water supply well, XU3212-902, and the back-up well, XU3212-901, were installed using cable tool drilling methods (Johnson, 1997). Both holes were drilled to 300 feet bgs, then allowed to collapse to 186.6 and 184 feet bgs, respectively. Steel casing was placed to the final total depth and perforated to produce the well screen. These wells reportedly delivered nonpotable water to the site for toilet flushing and other noncontact uses. As there was no potable water source at the site, bottled water was provided.

Previous studies in the region have determined that groundwater in the Paluxy Aquifer flows to the east (A.T. Kearney, 1989). Measurements made during the Offsite WSA background study (Jacobs, 1997b) and during this RFI confirm a strong eastward flow component in the Paluxy Aquifer. Due to the configuration of the wells at the site, however, the exact direction of groundwater flow could not be determined. Assuming an easterly direction, a hydraulic gradient of 1.85 to 1.96 feet per 100 feet was calculated from measurements made during the RFI.

The Glen Rose Formation lies beneath the Paluxy Formation and is composed of fine-grained limestone, shale, marl, and sandstone beds. This formation is not exposed at the Offsite WSA, but was encountered in the Jacobs Engineering background wells. Although sands in the Glen Rose Formation yield small amounts of water to wells in Fort Worth and western Tarrant County, the formation generally serves as an aquitard, separating the groundwater in the Paluxy Aquifer from groundwater in the deeper Twin Mountains Aquifer.

1.1.3.3 Climate

The climate at the Offsite WSA is typified by humid, hot summers and cool, relatively dry winters. The average annual precipitation is 31.5 inches, with the majority falling between April and October. The average annual relative humidity is 63 percent. The average annual air temperature is 66 degrees Fahrenheit (°F). July is the warmest month, with an average monthly air temperature of 86°F, and January is the coldest month, with an average monthly air temperature of 45°F. Temperatures can change rapidly in the region, often 20°F to 30°F in a matter of hours (Ressel, 1981).

Prevailing winds are southerly from March to November and northerly from December to February. The average wind speed is 8 knots. Thunderstorms with wind speeds in

excess of 65 knots, as well as hail storms, are common in the region. Climate conditions in the summer make tornado formations possible (Ressel, 1981).

1.1.3.4 Demographics

The Offsite WSA is located in Tarrant County in north-central Texas, adjacent to the westernmost side of the City of Fort Worth city limits. The areas to the south and east of the site are within city limits, while the areas north and west are considered county Fort Worth extraterritorial jurisdiction (City of Fort Worth, 1991) (see Figure 1-2). The closest established city other than Fort Worth is White Settlement, located approximately 3 miles east of the site.

Current population and demographic information for the area in the vicinity of the site and surrounding areas is based on the 1990 U.S. Census. The site lies within census tract 484391142.02, which in 1990 had an estimated population of 5,402 persons. The majority of the population were 6 to 65 years of age (U.S. Census Bureau, 1990). Figure 1-9 depicts the census tracts that lie in the vicinity of the site and surrounding area. For purposes of the human health assessment, the 1990 population characteristic of the area within a 2-mile radius was reviewed. This entire area lies within portions of three census tracts, representing a total of 11,771 persons.

Trends suggest that the population in the area surrounding the site will increase over the next several years. Census block group data for the area encompassing neighborhoods to the southeast of the site and immediately south of White Settlement Road indicate a 78 percent increase in the number of residents between 1990 (1,314 persons) and 1997 (2,343 persons) (City of Fort Worth, 1997). White Settlement's population increased 14.5 percent between 1980 and 1990 (TNRIS, 1997). The north-central region of Texas, where the site is located, is currently the most populous part of the state, with 24 percent of the state's population. From 1980 to 1990, the population in the region grew 31 percent. By 2050, the population is projected to increase 119 percent (TWDB, 1997).

1.1.3.5 Ecology

The Offsite WSA is located on the border between the Western Cross Timbers and Grand Prairie vegetation zones of north-central Texas (Bailey, 1980). The late seral forest and woodland plant communities that originally dominated these vegetation zones were the Post Oak-Blackjack Oak Series (*Quercus stellata-Quercus marilandica*) and the Pecan-Southern Hackberry Series (*Carva illinoensis-Celtis laevigata*), respectively. The post Oak-Blackjack Oak Series consists of open deciduous woodlands with components of tallgrass grasslands in the understory. The Pecan-Southern Hackberry Series is a deciduous woodland or forest that occupies floodplains. In drier floodplains along smaller streams such as Live Oak Creek, the Plateau Live Oak-Netleaf Hackberry Series (*Quercus fusiformis-Celtis reticulata*) may also be present (Bailey, 1980).

1.1.4 Site Descriptions

The Offsite WSA contains a number of sites and/or locations that were historically investigated before the RFI or were investigated during the RFI (see Figure 2-1). These sites and/or locations include:

- the less-than-90-day Waste Accumulation Area (SWMU 59);
- outdoor maintenance and material storage areas;
- an explosive ordnance deposition range;
- former underground storage tank (UST) areas;
- a former waste dump;
- low-level radiation areas within Bunker 8531;
- a former low-level radioactive waste burial site (SWMU 60); and
- electrical transformers.

Each of these sites and/or locations is described below. Offsite WSA buildings or facilities located within these areas are listed in Table 1-1 along with year constructed and approximate area. Following these descriptions, previous investigative activities and past removal activities are summarized in Sections 1.2 and 1.3, respectively.

Less-than-90-day Waste Accumulation Area (SWMU 59)

The less-than-90-day Waste Accumulation Area (SWMU 59) consists of a 4-foot by 5-foot metal enclosure. The 8-foot high enclosure has a metal roof that overhangs openings along the upper side walls. Entry to the enclosure is provided by a lockable gate-type door. The enclosure is located along the western edge of the concrete pad that surrounds Bldg. 8503 and is elevated approximately 6 inches above the pad on a concrete floor (see Figure 1-4). There is no lip or berm around the edge of the floor.

Environmental media potentially impacted by an SWMU typically are considered a part of the unit. Since the accumulation area is positioned directly along the edge of the concrete pad, soils along the pad and in a drainage ditch directly west of the accumulation area may be considered part of SWMU 59 if contaminated as a result of associated activities (see Figure 1-4).

The accumulation area enclosure is locked and empty and no longer is used. Investigations associated with SWMU 59 are discussed below in Section 1.3.2.

Outdoor Maintenance and Material Storage Areas

Additional maintenance and material storage activities reportedly occurred outdoors. Maintenance activities may have taken place around the perimeter of Bldg. 8503, north of Bldgs. 8554, 8556, 8558, 8560, and 8852, and between Bldgs. 8503 and 8531 (see Figure 1-4) (Long, 1996).

Explosive Ordnance Deposition Range

Ordnance and spent engine cartridge disposal was conducted at the EOD Range, which was constructed in 1971. It consists of 3 acres of land directly west of the fenced Offsite WSA main complex (see Figure 1-4). As discussed below in Sections 1.2.4 and 1.3.3, the EOD Range no longer is used and was cleared of explosives in February 1993.

Former Underground Storage Tanks Areas

Five USTs were installed at the Offsite WSA and later removed. These reportedly contained fuel oil and diesel and were used for power generation, heating, and vehicle fueling (A.T. Keamey, 1989). Tank capacities ranged from 750 gallons to 2,000 gallons and were associated with Buildings 8500, 8503, 8505, 8507, and 8514. The tank associated with Bldg. 8514 was registered with the TNRCC Petroleum Storage Tank Division (PSTD) as PST 91568. No other Offsite WSA tanks were registered. The building locations are shown on Figure 1-4. Table 1-2 provides a summary of the USTs. Historic diagrams of the USTs are provided in Appendix A of this report. There is no documentation of the UST removal activities.

Former Waste Dump

The former waste dump was located in an arroyo formed by a 10-foot-high limestone ledge across an intermittently flowing tributary to Live Oak Creek. The former waste dump was within the Air Force property boundary, approximately 250 feet north of the fenced Offsite WSA (see Figure 1-4). The debris found in the dump site included nonhazardous material such as wooden pallets, used bomb crates, scrap metal, newspapers, loose sand, and other materials (M&E, 1993). This former dump site has been investigated and remediated as described below in Sections 1.2.5 and 1.3.1.

Low-level Radiation Area Within Bunker 8531

A general radiation survey of all buildings was conducted in 1995 (USAF, 1996a). During the survey, three small, localized areas of low-level radioactive contamination were detected in Offsite WSA Bunker 8531. The areas covered approximately 8 square feet. There is no historic information associated with the source of the low-level radiation detected. Descriptions of the radiation surveys are provided below.

Former Low-level Radioactive Waste Burial Site (SWMU 60)

The LLRWBS was located 400 feet west of Bldg. 8503 within the Offsite WSA fenced area (see Figure 1-4). The LLRWBS, which was used between 1957 and 1969, was identified as SWMU 60 by the TNRCC. The burial site consisted of three dry wells constructed from 12-inch-diameter cast iron pipes encased in 2.25 inches of grout. These pipes are vertically embedded 18 feet into the ground. The pipes were permanently capped in 1969. As discussed below in Section 1.3.2, these pipes were removed along with surrounding soil in November 1996.

Electrical Transformers

Electrical transformers are onsite within a fenced area near the power generating facility and on telephone poles throughout the site. Past investigative activities have included surveys of electrical transformers. These activities are described below.

1.2 PREVIOUS INVESTIGATIONS

Prior to the RFI, a number of environmental investigations and studies were conducted to identify sources of possible contamination and to assess the extent and magnitude of contamination and its potential impacts on human health and the environment. A chronological summary of previous investigative activities performed at the Offsite WSA is presented in Table 1-3. These studies are discussed in more detail below. A summary of the RFI is provided in Section 3.0.

1.2.1 RI/FS for Carswell AFB

An RI/FS Stage II investigation was conducted at NAS Fort Worth, including the Offsite WSA (Radian, 1989). The RI/FS noted reports of the disposal of small quantities of waste cleaners and solvents west of Bldg. 8503 in the shallow ditch adjacent to the less-than-90-day Waste Accumulation Area (see Figure 1-4). The report estimated the disposal rate to be 5 to 10 gallons per year. Eight hand-augered holes were drilled in the ditch. Holes were augered to bedrock refusal at depths ranging from 1 foot to 4 feet bgs. Groundwater was not encountered in the hand-augered borings. Twelve soil samples were collected from the hand-augered borings and were submitted for laboratory analysis of volatile organic compounds (VOCs) and semivolatile organic compounds (SVOCs).

Low levels of trichloroethylene (TCE) (nondetectable (ND) to 0.0619 milligrams per kilogram [mg/kg]) were reported in soil samples collected from the ditch west of Bldg. 8503. Toluene was detected in several soil samples at concentrations ranging from 0.0028 mg/kg to 0.049 mg/kg.

A baseline risk screening was also performed to determine potential carcinogenic risks associated with the Carswell AFB IRP sites. The Offsite WSA was reported to present a low risk to human health. In a ranking of 1 to 7, with 1 indicating the greatest need for remedial action, the Offsite WSA was ranked 4. Category 4 is defined to include areas where storage, release, disposal, and/or migration of hazardous substances or petroleum products has occurred, and all remedial actions necessary to protect human health and the environment have been taken.

According to Air Force IRP requirements, each site is further categorized based on overall status within the program. Category 1 defines sites where no further action is required, Category 2 defines sites where additional effort is needed to determine health risks of contaminants and remedial alternatives, and Category 3 defines sites where a feasibility study process has been completed. The Offsite WSA was placed as a Category 2. It was recommended that additional work be performed, including detailed evaluation and selection of remedial alternatives to address TCE contamination in soil.

1.2.2 RCRA Facility Assessment PR/VS

In 1989, A.T. Keamey conducted a Preliminary Review (PR) and Visual Site Inspection (VSI) for Carswell AFB to evaluate SWMUs and other areas of concern for releases to soil and groundwater (A.T. Keamey, 1989). The RCRA Facility Assessment (RFA) made a broad assessment of release pathways at all SWMUs located at Carswell.

The assessment identified the Offsite WSA Waste Accumulation Area (SWMU 59), located directly west of the southern end of Bldg. 8503 along the edge of the concrete pad as described above (see Figure 1-4). The RFA also stated that paint thinners and TCE had been discharged into a ditch west of Bldg. 8503. Based on the results of the previous RI/FS investigation (Radian, 1989), the past and ongoing potential for release of TCE to soil and groundwater was considered high. The RFA recommended initiating an RFI for this unit due to the presence of TCE in the soil. It should be noted that the RFA incorrectly identified the ditch area as SWMU 65, separate from the Waste Accumulation Area. The ditch is associated with the accumulation area activities and therefore should be considered a part of SWMU 59.

The RFA also recognized the former LLRWBS (SWMU 60), as described above. The RFA indicated that the wells may have contained plutonium-contaminated swipe samples, rubber gloves, paper bags, and uranium oxide. However, during the interim removal action in 1996, only luminous dials were identified (see Section 1.3.2). No documented history of radioactive releases was cited for this site. Past groundwater sampling data indicated, however, that the nonpotable water supply well contained total radium (8.5 picocuries per liter [pCi/L]) in excess of Federal drinking water standards (5 pCi/L). The RFA was not able to determine whether the detected radium was representative of background conditions or in some way was associated with the burial site.

1.2.3 Basewide Environmental Baseline Survey for Carswell AFB

An Environmental Baseline Survey (EBS) of Carswell AFB was conducted by the Air Force in 1993 (USAF, 1993a). The EBS reviewed facility environmental features such as the potential for contamination, storage tanks, oil/water separators, pesticides, biohazardous wastes, ordnance, asbestos-containing building material (ACBM), lead-based paint, and Polychlorinated Biphenyls (PCB)-containing materials.

Based on these characteristics, the EBS placed the areas of the Offsite WSA property into one of seven categories. Only Categories 2, 3, 6, and 7 were used for this site.

- Category 2: areas where only storage of hazardous substances or petroleum products has occurred, but no release, disposal, or migration from adjacent areas has occurred.
- Category 3: areas where storage, release, disposal, and/or migration of hazardous substances or petroleum products has occurred, but at concentrations that do not require removal or remedial action.

- Category 6: areas where storage, release, disposal, and/or migration of hazardous substances or petroleum products has occurred, but required response actions have not yet been implemented.
- Category 7: areas that are unevaluated or that require additional evaluation.

The following list summarizes how the property was categorized:

- Category 2: The majority of the Offsite WSA.
- Category 3: Part of the southwest portion of the fenced area that includes Bldgs 8504, 8505, 8506, and 8507 (based on the presence of USTs and ACMs and the potential for lead-based paint).
- Category 6:
 - Bldgs. 8500 and 8502 (based on the presence of USTs and ACMs and the potential for lead-based paint).
 - Bldg. 8503 (based on the presence of hazardous materials and wastes, the presence of USTs and ACBMs, and the potential for lead-based paint).
 - The Waste Accumulation Area (SWMU 59, Bldg. 8512) (based on the presence of hazardous wastes).
- Category 7: The EOD Range.

The asbestos survey identified ACMs in six buildings at the Offsite WSA (Bldgs. 8500, 8502, 8503, 8505, 8506, and 8514). ACMs identified during the survey included sheet rock, pipe fittings, floor tiles, asphalt and gravel, piping, pipe insulation, and roof materials. Sampling was limited during the survey, so the results are not considered comprehensive.

The EBS reported that all transformers with 50 parts per million (ppm) or more PCBs were replaced or retrofitted at an unknown date with PCB-free materials. All transformers at the Offsite WSA are currently labeled as being PCB-free.

1.2.4 Explosive Ordnance Disposal Range Investigations

An initial survey of the 3-acre range was conducted by Air Force personnel from Ogden Aerial Logistics Center, Hill AFB, Utah, to determine whether unexploded ordnance was present and to estimate the project-associated remediation costs (USAF, 1993b). Air Force personnel swept the area within a radius of 900 feet from the demolition point with an ordnance locator. Small arms, actuators, and starter cartridges were observed in two EOD burial pits. The survey team was unable to determine the size of the pits. Additional survey of the area was recommended.

1.2.5 Soil and Debris Characterization

Metcalf & Eddy (M&E) was retained to remove debris from a waste dump associated with the Offsite WSA (M&E, 1993). The site investigation had two phases:

- an initial characterization of the debris (July 20, 1993); and
- debris removal and confirmatory sampling (September 30, 1993).

In the initial characterization, M&E, took three soil samples and four associated quality control (QC) samples. To quantify potential contaminants associated with the dump debris, soil samples were taken upgradient of the dump, downgradient of the dump, and within the dump. The samples were analyzed for VOCs, SVOCs, benzene, toluene, ethylbenzene, xylene (BTEX), total petroleum hydrocarbons (TPHs), radionuclides (including gross alpha and gross beta particles), and metals. The report indicated that most of the analytical results were below the method detection limits and were below regulatory levels. Based upon these results, the debris was characterized as nonhazardous waste. Details of the debris removal effort are presented below in Section 1.3.

1.2.6 Offsite WSA Radiological Site Assessment

Weapons Storage Area Site Assessment (USAF, 1995)

As part of an area-wide survey of the Offsite WSA, the Armstrong Laboratory Health Physics Branch (AL/OEBZ) identified three localized areas of low-level radioactive contamination in Bunker 8531. The areas cover approximately 8 square feet. Three swipe samples were taken from the contaminated areas. Swipe sample results indicated a small amount of localized contamination. The report indicated that the levels were potentially above the Uranium-235/Uranium-238 and Plutonium-239 public use release limits, as published by *United States Nuclear Regulatory Commission (USNRC) Regulatory Guide 1.86*. The AL/OEBZ recommended that additional swipe samples be collected to determine which alpha-emitting isotope is present and to identify applicable release limit criteria.

Consultative Letter: Radiological Evaluation of Suspected Hot Spots in Bunker 8531 (USAF, 1996a)

As a follow-up to the initial AL/OEBZ survey of Bunker 8531, an additional survey and sampling were conducted at the area of concern. The additional sampling activities performed were:

- removable alpha and beta radiation characterized by swipe sampling from five hot spots;
- fixed alpha and beta radiation assessed using a radiation detector;
- fixed gamma-ray exposure rate measured from the surface of the hot spots; and
- background alpha, beta, and gamma radiation levels measured inside and outside the bunker.

The radiological evaluation concluded that the entire elevated area is below release criteria in accordance with *USNRC Regulatory Guide 1.86* and should be considered releasable for public use.

Consultative Letter: Final Status Decommissioning Survey of WSA (USAF, 1996a)

The final letter documented the decommissioning survey efforts. In addition to those efforts and results described above, the final letter summarized the results of the overall

effort. This effort included fixed alpha/beta/gamma contamination surveys of all bunkers using mobile floor monitors. Swipe samples were taken from predetermined floor and wall locations. Walls were checked for alpha/beta/gamma fixed contamination using hand-held monitors at the same locations where swipe samples were taken.

Levels of alpha, beta, and gamma radiation were below the respective reporting limits of 2 pCi/swipe, 2 pCi/swipe, and 50 pCi/swipe in all samples. These levels are less than the USNRC standards for removable alpha/beta/gamma contamination. X-ray measurements did not significantly differ from ambient background levels. Based on these results as well as those described above, the final status report stated that the Offsite WSA meets the release criteria in accordance with *USNRC Regulatory Guide 1.86* and was therefore considered releasable for public use.

1.2.7 Background Study

A background study was completed at the Offsite WSA in 1997 (Jacobs, 1997b). The goal of the study was to establish background concentrations of radium and TPH in surface soils, subsurface soils, and groundwater, and to determine whether concentrations previously detected onsite were representative of these background concentrations.

A total of 21 surface soil, 21 subsurface soil, and 15 groundwater samples were collected to characterize these media for background concentrations. Two upgradient monitoring wells were installed in the Paluxy Aquifer during this study. In addition, two groundwater samples were collected from each of the onsite water supply wells.

Upper tolerance limits (UTLs) of background concentrations were determined for each parameter. The maximum detected values for TPH, radium-226, radium-228, and total radium from the two samples collected from the onsite water supply wells were compared to the background UTLs. The results of this effort concluded that the onsite values were consistent with background concentrations and do not indicate site-related contamination.

1.3 PREVIOUS REMEDIAL ACTIONS

A number of remedial actions have been completed at the Offsite WSA including:

- soil and debris removal at the waste dump;
- removal of the dry well and other soil associated with the LLRWBS (SWMU 60);
- clearance of the EOD Range; and
- removal of USTs

1.3.1 Waste Dump Soil and Debris Removal

Following the waste dump soil and debris characterization described above, a removal action was initiated. The debris was characterized as a nonhazardous waste material and was removed from the site and was transported to a local, nonhazardous landfill. Confirmation samples taken from the removal area indicated that all parameters were

below method detection limits or below regulatory levels with the exception of a trace concentration of TCE. The parameters tested included VOCs, SVOCs, BTEX, TPHs, gross alpha, gross beta, and metals. Based on the analytical results, the waste dump was considered remediated (M&E, 1993).

1.3.2 Low-level Radioactive Waste Burial Site (SWMU 60) Interim Remedial Action

The LLRWBS, which consisted of three burial tubes and soil adjacent to the tubes, was excavated in May 1996 (M&E, 1996). There was no reported evidence of any release of hazardous materials to the environment. Four soil borings were advanced at SWMU 60 to evaluate background concentrations of selected radionuclides. Each boring was advanced to a depth of 18 feet. Soil samples were continuously collected and field-screened for gamma radiation. Four samples were selected from each borehole and were submitted for laboratory analysis of selected radionuclides. The samples were collected from intervals of 0 to 1 foot, 5 to 6 feet, 11 to 12 feet, and 17 to 18 feet bgs (M&E, 1996). Additional alpha and beta screening was performed as part of the health and safety screening.

According to the lab results performed on the soil samples, radium-226 was detected between 0.47 pCi/g and 1.27 pCi/g. The UTL of radium-226 was determined from background sampling to be 0.89 pCi/g. The clean-up criteria were defined as three times the UTL (2.67 pCi/g). Therefore, the excavated soil was returned to the excavation as backfill (M&E, 1996). Both the soils and groundwater associated with SWMU 60 have been closed under TNRCC Risk Reduction Standard Number 1 and are not considered within this closure report.

1.3.3 Clearance of the EOD Range

The EOD Range clearance was conducted between 16 August 1995 and 15 September 1995. The EOD Range was swept using metal detectors to an approximate depth of 10 feet bgs during the clearance. All metallic items were excavated and removed. Based on all of these actions, the EOD Range was determined to be cleared of all detected explosive ordnance. The clearance report indicated that no restrictions due to physical hazards (e.g., undetonated ordnance) should be placed on future use of the land. (USAF, 1996b)

1.3.4 Underground Storage Tank Removal

Five USTs on the Offsite WSA reportedly contained diesel and fuel oil as summarized in Table 1-2. Although the tanks have been removed, there is no documentation of the effort (Long, 1996). However, during field investigation conducted for the RFI, disturbed soil, presumed to be fill, was identified from surface to bedrock at each UST location. Geologic logs for each borehole are provided in Appendix D of the RFI report (TEC, 1999). Depth to bedrock ranged from 1 foot at the Bldg. 8500 UST location to 8 feet at the Bldg. 8507 UST location. The combination of fill and increased depth to bedrock at the immediate tank location indicates that the tanks were placed directly in pits dug into the bedrock. After tank removal, fill was likely placed in each pit.

1.4 RCRA FACILITY INVESTIGATION

The objective of the RFI was to characterize environmental conditions and to determine the nature and extent of contamination resulting from activities and/or sources at Offsite WSA areas suspected of releasing solid wastes to the environment including:

- Areas A-1 and A-2 which is made up of outdoor material storage and maintenance areas;
- Area A-3, which includes SWMU 59 (less-than-90-day storage area and surrounding unpaved surfaces);
- Area A-5 disturbed surface area southwest of the control fence;
- the EOD range;
- bunker floor drain outlets;
- five removed UST locations [included two tank locations regulated by the TNRCC Petroleum Storage Tank Division (PSTD)],
- areas beneath transformers;
- a leachfield; and
- Area A-4 vehicle fueling areas (regulated by the TNRCC PSTD).

The objective of the subsequent remedial action was to remove the soil from these areas that exceeded the TNRCC RRSN 2 cleanup levels (CULs) in support of site closure in accordance with Title 30 of the Texas Administrative Code (TAC) §335.554 and §335.555.

In addition to removal actions completed in relation to attainment of Risk Reduction Standards, soil was also removed at one tank location regulated under 30 TAC §354. These actions are reported in this document for completeness; however, closure requirements have been reported separately to TNRCC PSTD. A copy of the PSTD closure report is provided in Appendix B.

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Final Closure Report
Offsite Weapons Storage Area
NAS Fort Worth JRB Carswell Field
Contract No F41624-95-D-8002/Delivery Order 009
February 5, 2001

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Table 1-1. Offsite WSA Facilities

Facility No.	Use	Year Constructed	Square Footage
8500	Safety, Control & Identification	1956	932
8501	Water Tank Storage	1956	1,219*
8502	Water Supply Facility	1956	78
8503	Surveillance Inspection Shipping	1956	6,959
8504	Water Supply Facility	1956	78
8505	Electric Power Station	1956	1,488
8506	Small Arms Ammunition Storage	1956	5,000
8507	Spares Storage	1956	2,500
8508	Pyrotechnic Storage	1956	351
8509	Segmented Magazine Storage	1956	540
8510	Low-level Radioactive Waste Burial Site (removed and remediated)	1989	385*
8511	Detonator Storage	1956	126
8512	Waste Accumulation Area (SWMU 59)	1991	86
8514	Conventional Munitions Shop	1956	2,600
8515	Vehicle Fuel Station (removed)	1956	4
8520	Explosive Ordnance Disposal Range (cleared)	1971	NA
8531	Munitions Storage Igloo	1956	1,576
8533	Munitions Storage Igloo	1956	1,266

Table 1-1. Offsite WSA Facilities (CONT.)

Facility No.	Use	Year Constructed	Square Footage
8535	Munitions Storage Igloo	1956	2,147
8537	Munitions Storage Igloo	1956	2,147
8539	Munitions Storage Igloo	1956	2,147
8541	Munitions Storage Igloo	1956	2,147
8552	Munitions Storage Igloo	1956	1,060
8554	Munitions Storage Igloo	1956	2,146
8556	Munitions Storage Igloo	1956	2,146
8558	Munitions Storage Igloo	1956	2,146
8560	Munitions Storage Igloo	1956	2,146

* Approximate square footage extrapolated from Jacobs Engineering Site Survey Drawing, 1996

Table 1-2. Summary Of Former Underground Storage Tanks

Building Number	Tank Contents	Tank Size	Tank Dimensions	Function
8514	Diesel	1,000 gallons	10 feet by 6 feet	Vehicle Fueling
8507	Fuel Oil	1,000 gallons	10.6 feet by 4 feet	Heating
8505	Diesel	5,000 gallons	18 feet by 8 feet	Power
8500	Fuel Oil	750 gallons	8 feet by 4 feet	Heating
8503	Fuel Oil	2,000 gallons	12 feet by 6 feet	Heating

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Final Closure Report
Offsite Weapons Storage Area
NAS Fort Worth JRB Carswell Field
Contract No F41624-95-D-8002/Delivery Order 009
February 5, 2001

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Table 1-3. Chronological Summary Of Environmental Reports

Date	Location/ Site	Report Title	Scope	Contaminants Reported	Action/ Recommendation
1989	WSA in general	R/FS Stage II Technical Report (Radiat, 1989)	Evaluated previously identified contamination, performed risk screening, and provided recommendations for 13 sites at Carswell AFB including one at Offsite WSA.	TCE and other indicator contaminants found in boreholes drilled in ditch west of Bldg. 8503/Waste Accumulation Area.	Indicated site posed low risk and recommended determination of TCE extent.
1989	SWMUs 59 and 60	RCRA Facility Assessment PR/VS Report (A.T. Kearney, 1989)	Evaluated SWMUs at Carswell AFB (including those at Offsite WSA) and provided preliminary determination of releases.	SWMU 59 - No reference of previous contamination reported. SWMU 60 - No contamination cited, except previously reported radium (8.5 pCi/L) in supply well.	SWMU 59 - RFI recommended. SWMU 60 - No further action recommended.
March 1993	EOD Range	EOD Range Survey (USAF, 1993b)	Surveyed and swept EOD Range for ordnance and ordnance residue.	Ordnance found at range, small arms, and actuators in one pit. Text referenced radioactive burial pit and TCE previously found in soil near Bldg. 8503.	Ordnance clearing recommended.

Table 1-3. Chronological Summary Of Environmental Reports (CONT.)

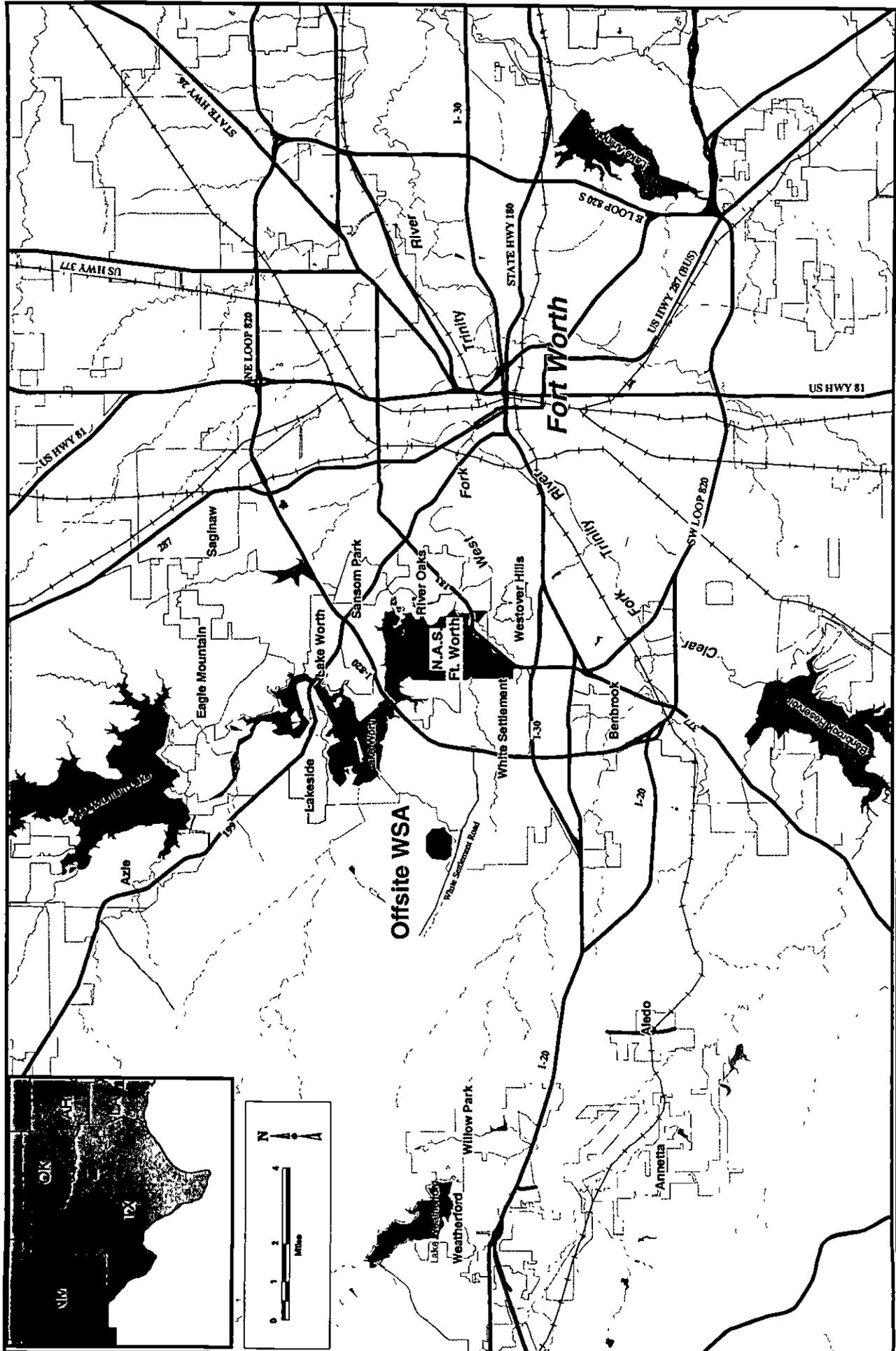
Date	Location/ Site	Report Title	Scope	Contaminants Reported	Action/ Recommendation
June 1996	Soil and Debris Dump	Report of Soil Debris Removal Activity at the Offsite Weapons Storage Area (M&E, 1996)	Sampled soil around waste dump to determine potential contaminants and remove debris from waste dump.	No hazardous constituents found in the soil above background levels.	Debris in waste dump treated and transported as non-hazardous waste. Dump clean and closed.
1993	WSA in general	Basewide Environmental Baseline Survey Carswell Air Force Base (USAF, 1993a)	Conducted EBS to document physical condition of WSA. Included asbestos and PCB inventories.	Documented presence of LLRWBS at WSA and TCE previously found in soil near Bldg. 8503.	Most of WSA classified as Category 2, EOD Range as a Category 7, and LLRWBS and Bldg. 8503 as Category 6.
February 1995	Munitions bunkers	Weapons Storage Area Site Assessment (USAF, 1995)	Collected three swipe samples from Bunker 8531 for radiological characterization.	Radionuclides were detected in the bunker.	Additional swipe samples needed to determine type of alpha-emitting isotope present.

Table 1-3. Chronological Summary Of Environmental Reports (CONT.)

Date	Location/ Site	Report Title	Scope	Contaminants Reported	Action/ Recommendation
January 1996	Munitions bunkers	Radiological Evaluation of Suspected Hot Spots in Bunker 8531 (USAF, 1996b)	Collected five additional swipe samples from Bunker 8531 to determine quantity of alpha/beta/gamma levels.	Alpha/beta/gamma radiation quantified as well as uranium and plutonium isotopes.	All levels below USNRC release for public use.
April 1996	Munitions bunkers	Final Status Decommissioning Survey of WSA (USAF, 1996c)	Measured background radiation levels in all munitions bunkers on the Offsite WSA.	Alpha/beta/gamma radiation measured in low levels in all bunkers.	All levels below USNRC release for public use.
April 1996	EOD Range	Certificate of Clearance (USAF 1996b)	Conducted clearance of EOD Range.	Ordnance and associated debris found throughout range.	Swept and cleared area of all metallic items.
June 1996	SWMU 60	Interim Remedial Action Low-level Radioactive Waste Burial Site Report (M&E, 1996)	Closed SWMU 60	Radium reported in soil samples at concentrations below clean-up criteria.	Removed three tubes and sampled soil from within the excavation and from four soil borings

Table 1-3. Chronological Summary Of Environmental Reports (CONT.)

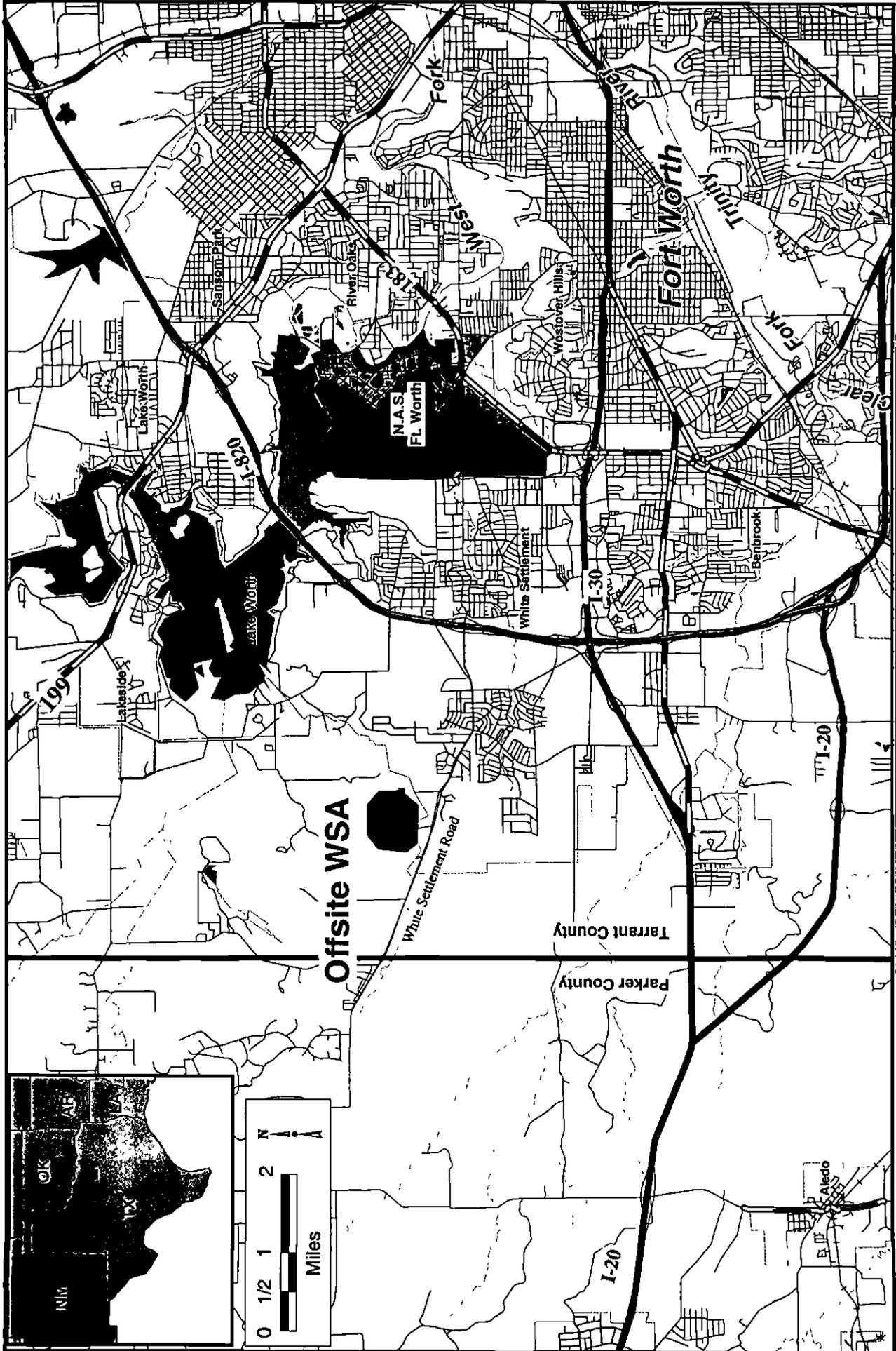
Date	Location/ Site	Report Title	Scope	Contaminants Reported	Action/ Recommendation
July 1997	WSA groundwater in general	Draft RCRA Facility Investigation for Parcel D and Background Study Report (Jacobs, 1997c)	Determined background concentrations of TPH and radium in soils and groundwater.	TPH and radium concentrations onsite determined to be equivalent to those found in background samples.	No further action required.
Date Unknown	USTs	Unknown	Removed five USTs at the WSA.	Tanks reported to contain fuel and diesel oil. There is no documentation as to possible contamination associated with tanks.	USTs reportedly were removed from the WSA; however, there is no documentation of removal action.



Creation Date 12/01/1987
 Rev Date 05/17/1999
 Project Manager B. Duffner
 Prepared By W. Mitchell
 Project No P-3109

Figure 1-1 -- Location Map

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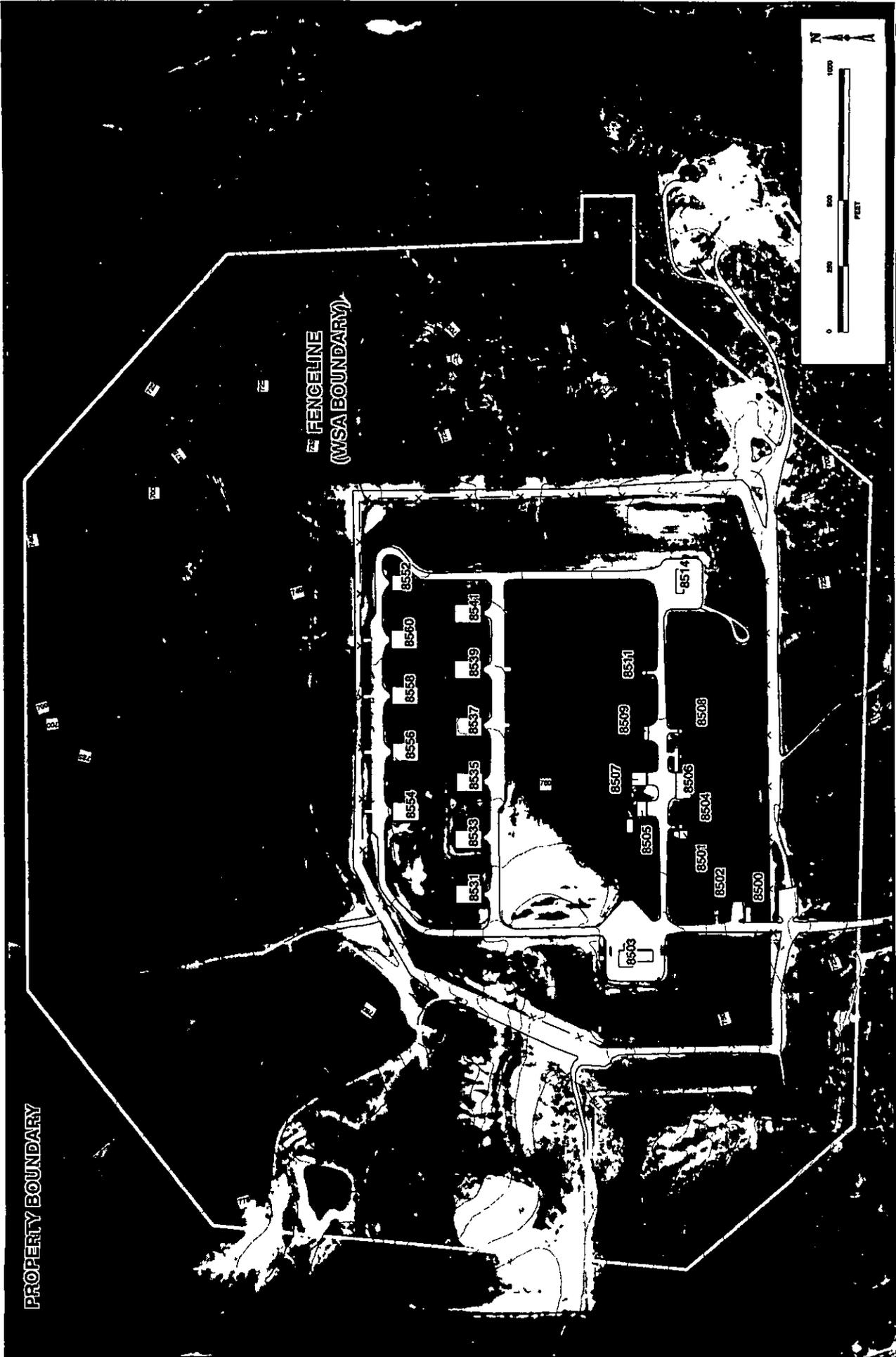


Creation Date 12/01/1997
 Rev Date 05/17/1999
 Project Manager B Duffner
 Prepared By W Mitchell
 Project No P-3109

Figure 1-2 -- Vicinity Map

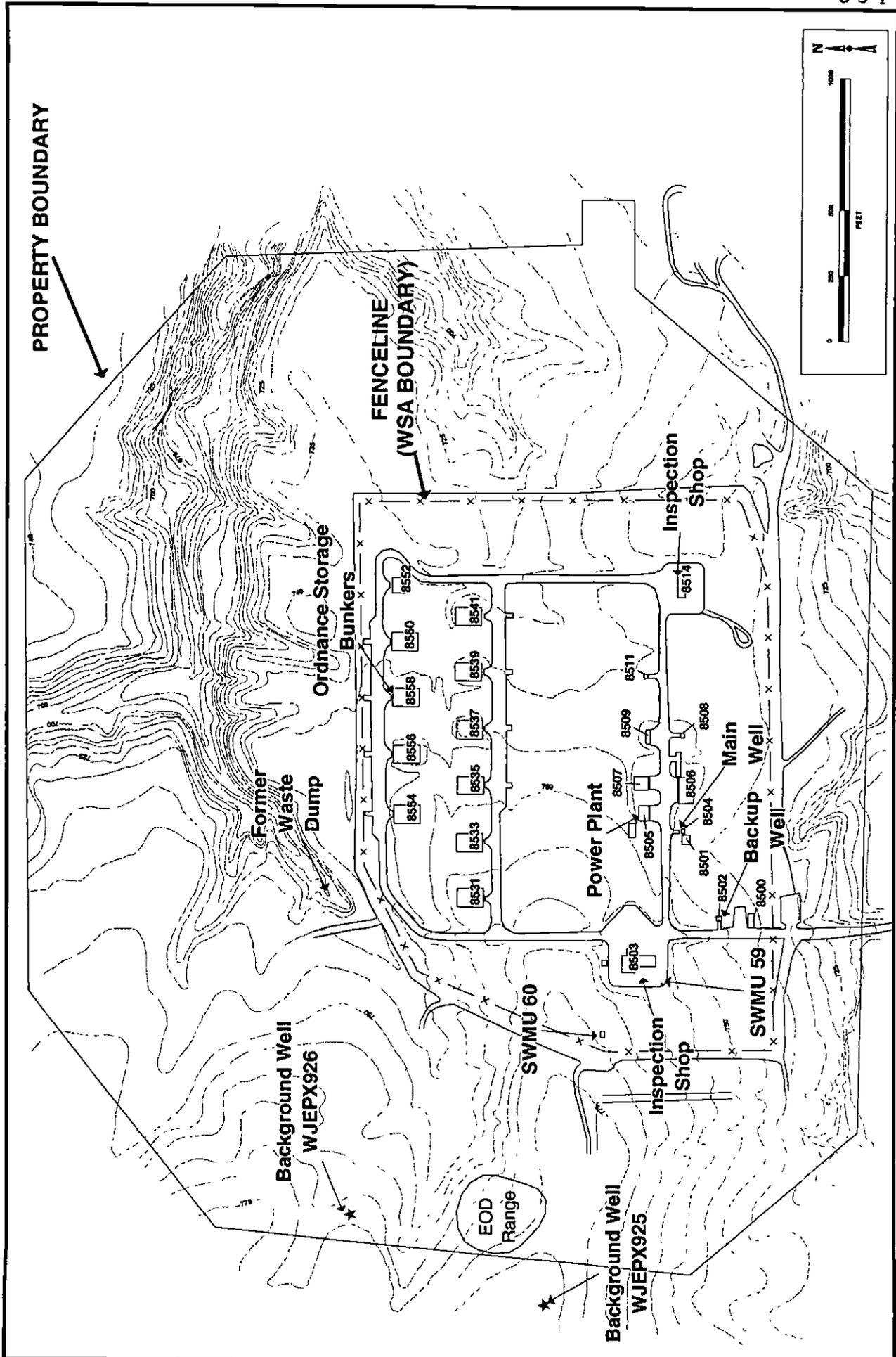


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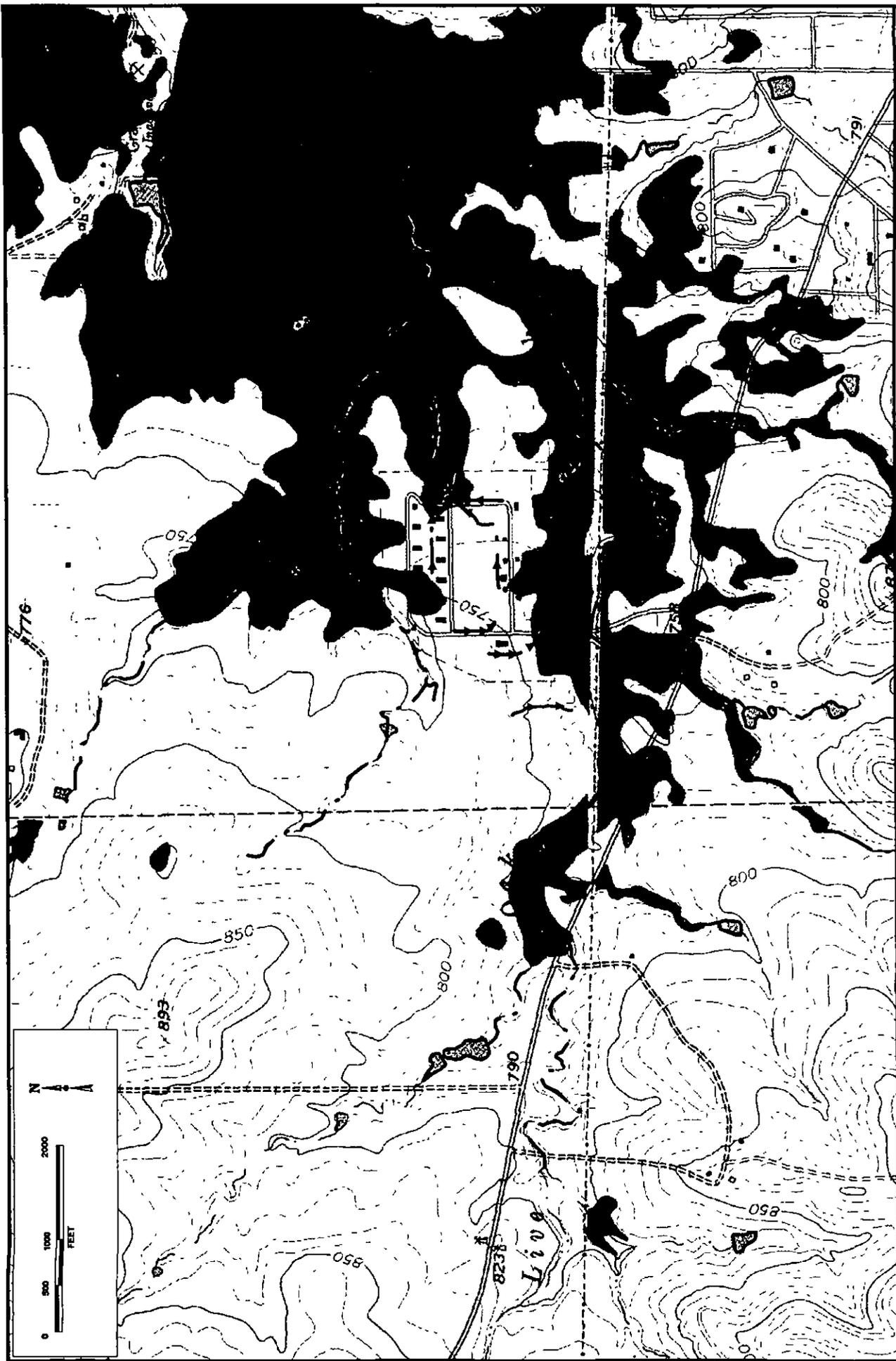
Creation Date 12/01/1997
 Rev. Date 07/15/1999
 Project Manager B. Duffner
 Prepared By W. Mitchell
 Project No. P-3109

Figure 1-3 -- Aerial Photo Overlay



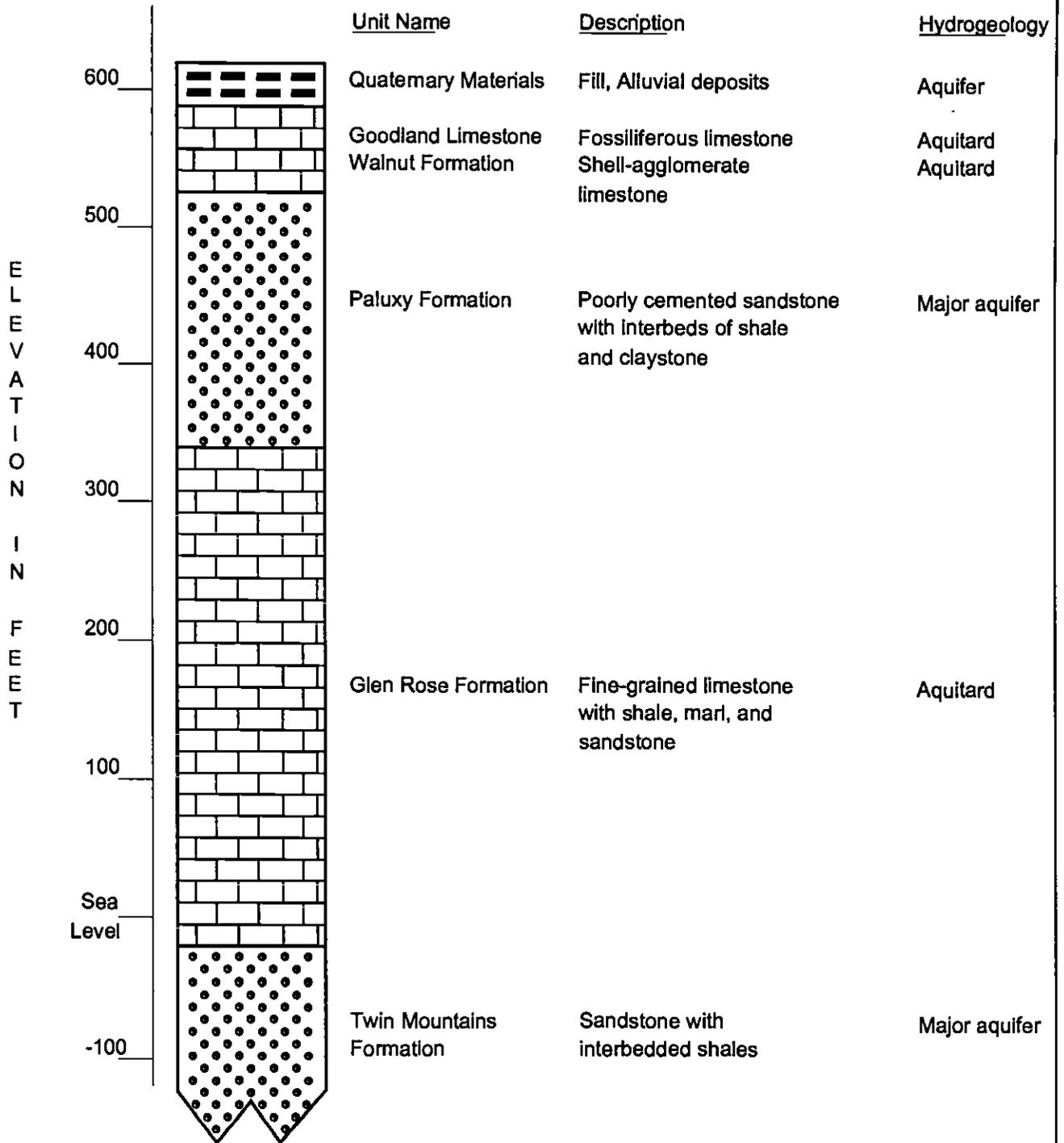
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 Project Manager B. Duffner
 Prepared By W. Mitchell
 Project No P-3109

Figure 1-4 -- Site Map



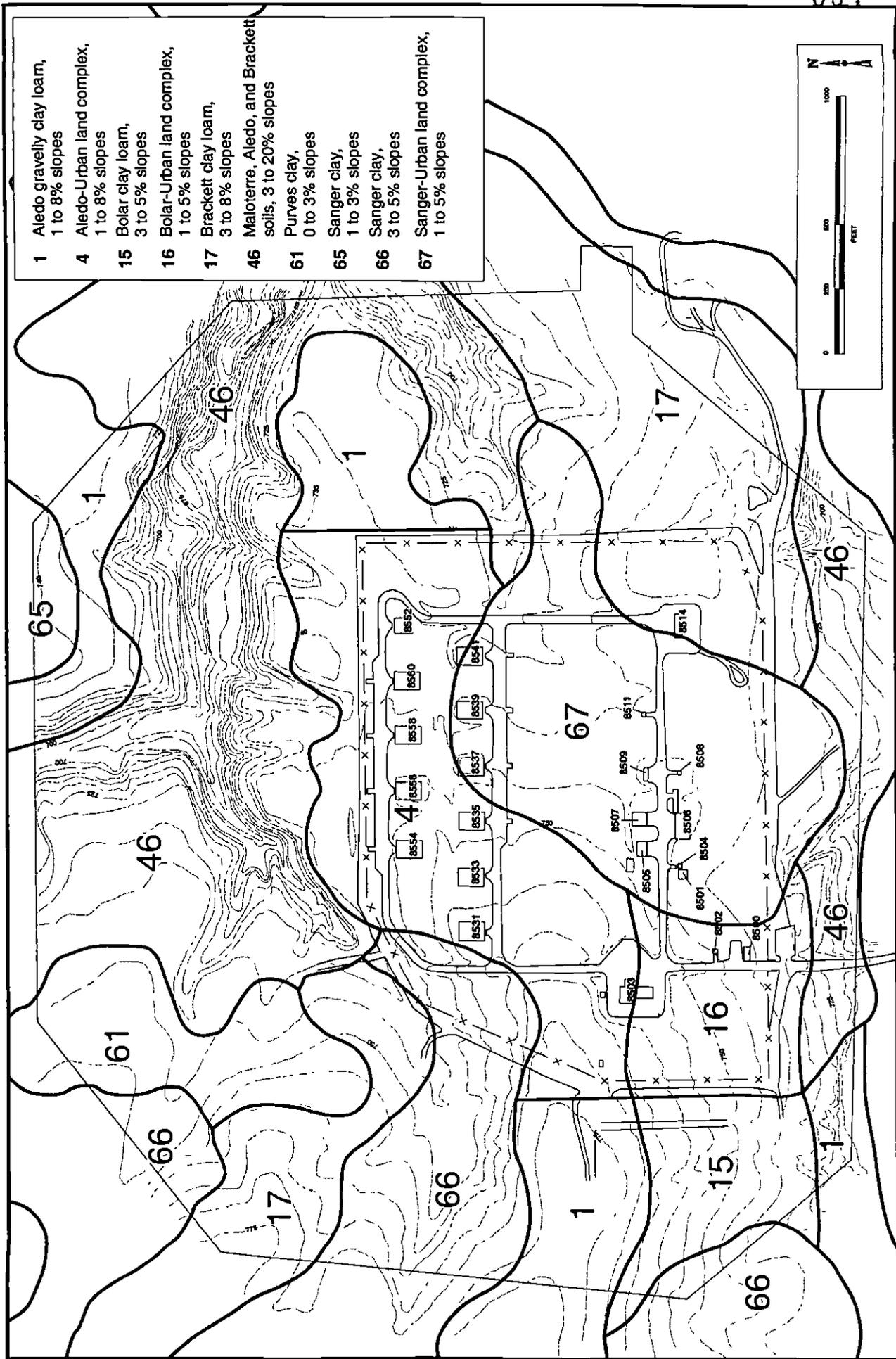
Creation Date 11/01/1997
 Rev Date 07/15/1999
 Project Manager B. Duffner
 Prepared By W. Mitchell
 Project No P-3109

Figure 1-5 -- Drainages Near the Offsite Weapons Storage Area



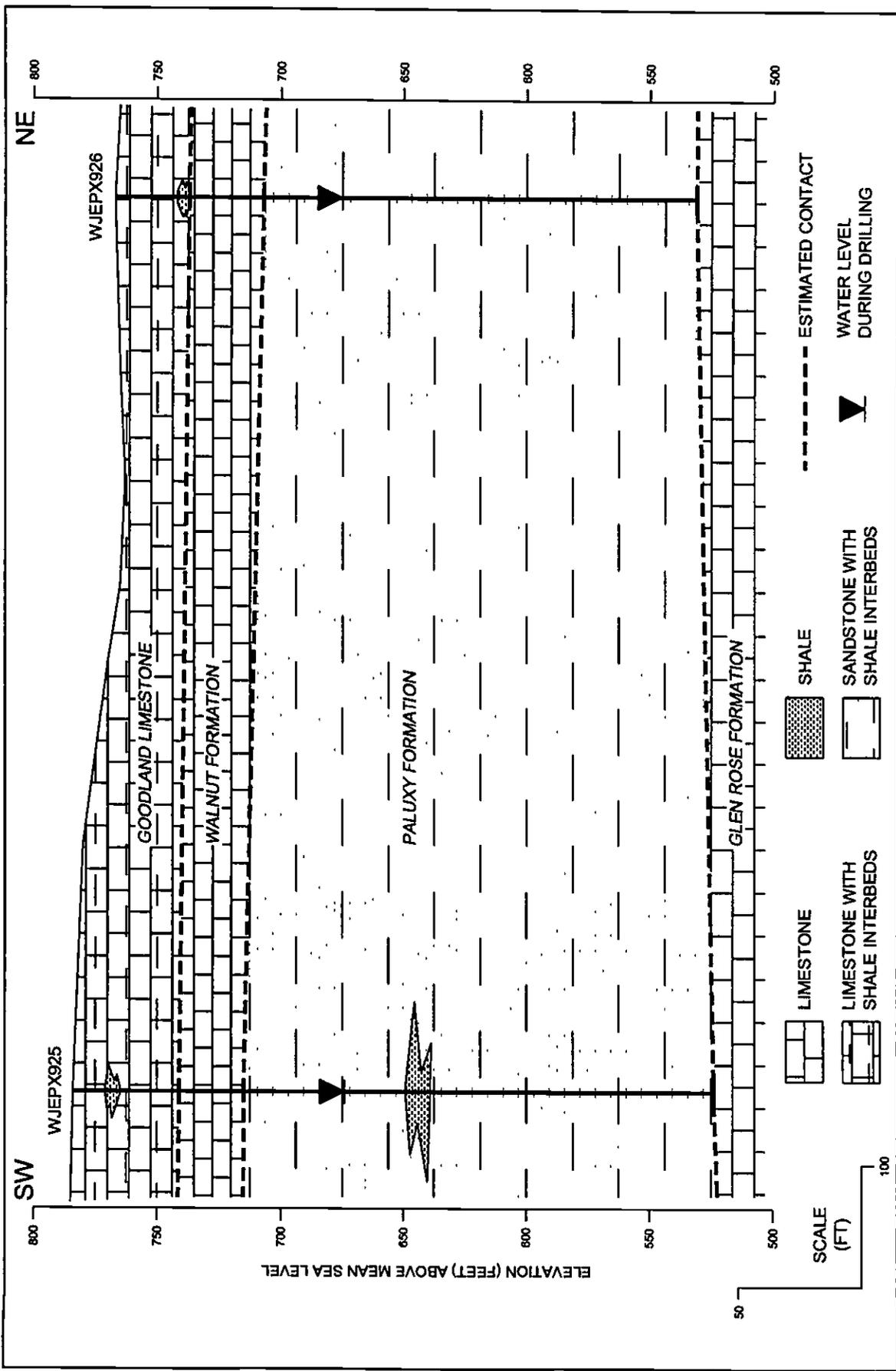
County Water, Page 1-6 Generalized Strat. Columning, Version 07/04

Figure 1-6 -- Generalized Regional Stratigraphic Column



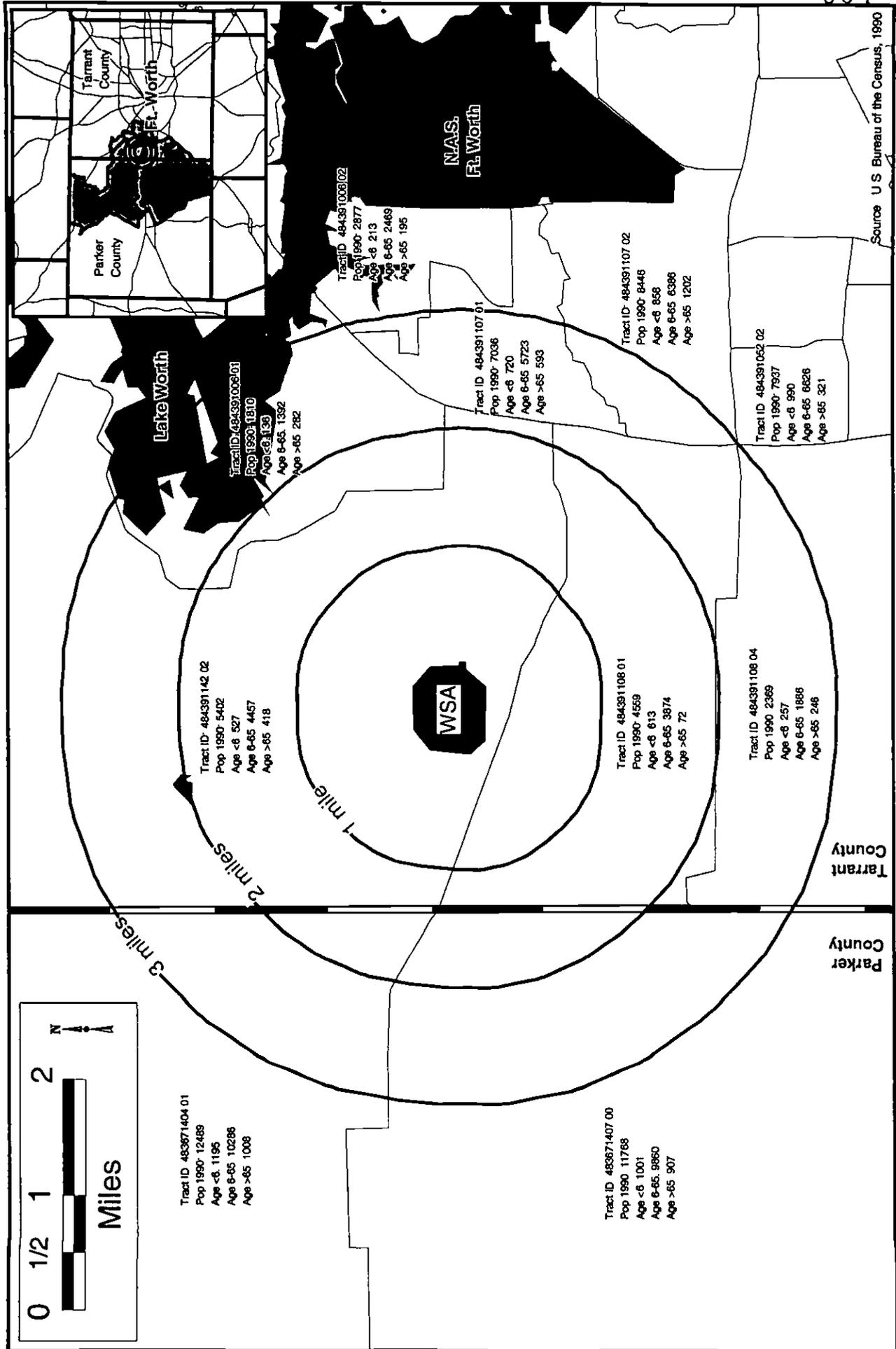
Creation Date 12/01/1997
 Rev Date 07/15/1999
 Project Manager B. Duffner
 Prepared By W. Mitchell
 Project No P-3109

Figure 1-7 -- Local Soil Types



Date: March 1999
 Project Manager: B. Duffner
 Prepared By: L. Myers / A. Long
 Project No: 3109

Figure 1-8 -- Geologic Cross - Section Through Background Monitoring Wells



Creation Date 12/01/1997
 Rev Date 07/16/1999
 Project Manager B. Duffner
 Prepared By W. Mitchell
 Project No P-3109

Figure 1-9 -- Census Demographics



2.0 REGULATORY REQUIREMENTS

Standards adopted for the RFI site closure are the attainment of RRSN1 (Closure/Remediation to Background) and RRSN2 (Closure/Remediation to Health-Based Standards and Criteria) under 30 TAC §335.554 and 30 TAC §335.555, respectively. Table 2-1 presents those standards and the sections of this report in which the fulfilled requirements are described.

The basis for site closure under RRSN 1 and RRSN2 are site background concentrations and health-based CULs. These site-specific values are summarized below in Sections 2.1 and 2.2 along with discussions of methods used in their development.

Section 3.0 provides a summary of the RFI investigation results for surface soils, subsurface soils, sediment, surface water, and groundwater. This summary is presented with respect to both background concentrations (Section 3.1) and CULs (Section 3.2).

2.1 BACKGROUND DETERMINATION

As part of the RFI, thirty samples were collected to establish site-specific background conditions with respect to inorganic analyte concentrations in surface soil, subsurface soil, sediment, surface water, and groundwater. Background concentrations were established using the Tolerance Interval method (USEPA, 1989c, 1992a) and were expressed in terms of the 95 percent upper tolerance limit with 95 percent coverage ($UTL_{95,95}$). The $UTL_{95,95}$ were not established for organic compounds. Background for organic compounds was assumed to be undetected. Site background concentrations were reported in Section 3.1 of the RFI report. Site background concentrations for soil, sediment, and groundwater are summarized in this closure report in Table 2-2. Surface water background concentrations are summarized in Table 2-3.

2.2 CLEANUP LEVELS

The determination of site CULs, along with an evaluation of risk, was initially presented in Section 5.0 of the RFI report (TEC, 1999). Those CULs have since been modified for select polynuclear aromatic hydrocarbons (PAHs) based onsite-specific synthetic precipitation leachate procedure (SPLP) tests conducted during the soil removal confirmation sampling effort. A summary of the CUL determination is presented below in Sections 2.2.1 through 2.2.3.

2.2.1 Identification of Chemicals of Potential Concern

Offsite WSA contamination was characterized during the RFI and reported in Section 3.0 of the RFI report (TEC, 1999). In support of demonstrating Risk Reduction Standard attainment, a summary of this RFI characterization information including figures that identify the location and concentration of contaminants detected above background is provided in Section 3.0 of this closure report.

The soil and water data collected during the RFI were used to identify Chemical of Potential Concern (COPCs) and evaluate attainment of cleanup levels. Environmental characterization data collected before the RFI was primarily limited to analyses of soil samples collected from the drainageway north of SWMU 59 (DW-3). Contaminates identified were limited to volatile compounds. Due to potential volatilization of these compounds over time and the resulting inaccuracies, these data were not incorporated into the RFI Risk Evaluation. However, RFI samples collected from DW-3 confirmed the presence of volatile organics in DW-3.

Metals with at least one concentration exceeding background were carried forward in the RFI Risk Evaluation to produce a list of COPCs for developing CULs. Background was expressed as the 95 percent upper tolerance limit with 95 percent coverage (UTL_{95,95}). Concentrations of several metals exceeded background in all areas where samples were analyzed for inorganics. Inorganics were not target analytes for samples collected from Area A-4, the transformer areas, and the UST areas.

A number of inorganic analytes were reported at concentrations less than 3 times background UTL_{95,95}s with no apparent associated source for contamination. For example, across all study areas, subsurface concentrations of antimony were consistently above the background UTL_{95,95}, while the surface concentrations were below. This occurred because the statistical assessment of antimony background samples yielded a UTL for subsurface (0.92 mg/kg) that was 4.9 times less than the surface UTL (4.5 mg/kg). After collection of a significantly greater number of field samples, it became apparent that the background levels determined for the two horizons are most likely from the same statistical population. Based on a communication with USEPA Region 6 (USEPA, 1997), these concentrations likely represent natural variability in background conditions that were not captured in the relatively limited number of samples collected during the background investigation. USEPA Region 6 indicated that natural levels of antimony tend to vary significantly within even small areas. The reported antimony concentrations in the Offsite WSA samples were consistently low in both magnitude (average surface and subsurface detected concentrations were 1.4 mg/kg and 1.8 mg/kg, respectively) and variability (detected concentrations for surface and subsurface ranged from 0.93 to 2.5 mg/kg and 1.3 to 2.5 mg/kg, respectively) across all areas and between horizons. These concentrations, therefore, are considered to be within the actual local background population. Such exceedances, however, were included in this risk evaluation in order to adequately document the protection of human health and the environment.

With the exception of PAHs detected at anthropogenic background levels, all organic compounds detected in more than 1 percent of the samples collected were carried forward to the Risk Evaluation. A few organic compounds, detected above 1 percent were determined to be either field or laboratory contamination and therefore not related to site media and not carried forward to the Risk Evaluation. These compounds include bis(2-ethylhexyl)phthalate and methylene chloride in soil samples, chloroform detected in one seep surface water sample, tetrachloroethene reported in five leachfield soil samples, and toluene randomly detected in several soil samples. Bis(2-

ethylhexyl)phthalate and methylene chloride were two of three organic compounds detected in soil samples, but were determined to be laboratory or field contaminants because of detects reported in the blank samples. Chloroform was detected in the ambient blank collected during the additional sampling effort at the same concentration as the seep sample. Therefore, the chloroform detected in the surface water sample is assumed to be due to sampling-related or ambient air introduction of the compound and is not considered attributable to the site. Similarly, tetrachloroethene and toluene were detected in the ambient air, equipment, and trip blanks. These compounds were not carried forward to the Risk Evaluation.

As discussed in Section 3.0 of the RFI Report (TEC, 1999), the following compounds were determined to be anomalous detects or anthropogenic background (PAHs only) and are not associated with unpermitted releases or SWMU-related contamination:

- Nickel at A1-028;
- PAHs at A1-019;
- Antimony in Area A-3;
- PAHs in Area A-3 and drainageways DW-1 and DW-4; and
- Thallium and dinitrotoluenes in the EOD Range.

The RFI Report (TEC, 1999) indicated that calcium exceeded the background $UTL_{95,95}$ in one subsurface (0.5-2.5 ft bgs) sample collected from Drainageway (DW) 1 and was one to two orders of magnitude higher than concentrations detected in the other samples. This anomalous concentration is likely due to limestone that is prevalent in this area. Therefore, the concentrations are due to localized geological conditions and calcium was eliminated as a COPC.

Table 2-4 of this report summarizes the soil COPCs identified in the RFI Risk Evaluation for human health according to area and soil horizon sampled. Cleanup levels for these COPCs were developed in the RFI and are as reported in Section 2.2.3 of this report. As shown in Table 2-4, COPCs include metals, PAHs, one phthalate, chlorinated solvents, and four pesticides. The areas with the highest number of COPCs in all chemical categories are the drainageways (see Figure 2-4). In these areas, metals and PAHs are COPCs in both surface and subsurface soil. The PAHs are considered COPCs only in DW-3 and the UST locations. PAHs detected in DW-1 and DW-4 were found to be associated with roadway runoff and were reported at levels comparable to anthropogenic background (TEC, 1996). No PAHs were detected in drainageways DW-2 and DW-5 through DW-9. VOCs and COPCs in A-1, A-2, A-4, and the UST areas. The majority of the VOCs were detected in the surface and subsurface at depths ranging from 0.5 to 10 ft bgs, while the pesticides were only detected in surface soil. In the other 11 study areas, metals were also COPCs in both surface and subsurface soil, except those areas in which samples were not analyzed for these compounds (i.e., Area A-4, the Transformers, and the UST areas). Pesticides as COPCs are limited to A-3, the drainageways, and the Transformer (4,4'-DDE only).

As discussed in the Offsite WSA RFI Work Plan (TEC, 1996c), TPH, which was detected in soil samples collected from the UST area and Area A-4, is represented by individual indicator compounds for which toxicity criteria are available. TPH compounds, which include BTEX and PAHs, were carried through the COPC screening process along with the other detected compounds.

As shown in Table 2-5, only a limited number of inorganic compounds in surface water and Paluxy groundwater were above background and were carried forward as COPCs. No organic compounds were detected in either surface water or groundwater samples.

2.2.2 Human Exposure Pathway Evaluation

Exposure pathways describe the mechanisms through which chemicals released from the source(s) reach potential receptors. Exposure pathways are defined by the following elements, all of which must be present to have a complete exposure pathway:

- Contaminated environmental media;
- Receptor;
- Point of contact with the contaminated medium;
- Feasible route of exposure at the point of contact.

Chemicals with concentrations above background levels were identified in surface soil, subsurface soil, surface water, sediment, and groundwater. Current human receptors, described in Section 4.3.1 of the RFI Report (TEC, 1999), may contact contaminants in the surface soil (0-0.5 feet bgs), but are not expected to contact them in the subsurface. Soil may be excavated and brought to the surface during future development and uses of the site, allowing future populations to contact contaminants currently located and undisturbed in the subsurface soil. Exposure to contaminants in soil may occur via inhalation, ingestion, and dermal contact. Although inhalation is considered a feasible current route of exposure for this Risk Evaluation, exposure via inhalation is expected to be limited because the majority of the site is covered with either vegetation or pavement. All soil exposure pathway elements described above are present and complete for both current and future receptors.

As discussed in Section 4.3.1 of the RFI Report (TEC, 1999), the Paluxy aquifer supplies municipal water to the City of White Settlement. Because of this use, this Risk Evaluation assumes that domestic drinking water is the most beneficial use of the groundwater in the aquifer. With the presence of possible COPCs in the groundwater, residential and industrial consumption of the groundwater is considered a complete exposure pathway. Exposure may occur via ingestion, inhalation of volatiles, and dermal contact. Although the Walnut Formation below the site will likely retard any downward migration of contaminants, the soil to groundwater cross-media protection pathway was evaluated to be consistent with TNRCC Risk Reduction Standards. Therefore, soil cleanup levels protective of groundwater were developed to prevent possible future contaminant migration from soil to groundwater.

Because of the accessible nature of the seasonal and permanent surface water bodies (creeks, drainage ditches, seeps, and ponds) in the vicinity of the site and the presence of limited COPCs, the potential exposure pathways associated with surface water and sediment are considered complete for this evaluation. As discussed in Section 4.3.1 of the RFI Report (TEC, 1999), recreational users and nearby residents could be exposed to site-related compounds via contact with surface waters used for recreational purposes (swimming and wading) and consumption of fish.

Based on information provided in Sections 1.2.4.4, 4.0, and 5.1.1 of the RFI Report (TEC, 1999), the following exposure scenarios were considered complete for the Offsite WSA Risk Evaluation:

- Current Area Residents: Ingestion of, inhalation of, and dermal contact with COPCs in surface soil, surface water, sediment, and leaching from soil to the Paluxy groundwater; consumption of aquatic biota.
- Current Trespassers/Site Visitors: Ingestion of, inhalation of, and dermal contact with COPCs in surface soil, surface water, and sediment; consumption of aquatic biota.
- Future Residents: Ingestion of, inhalation of, and dermal contact with COPCs in surface and subsurface soil, surface water, sediment, and leaching from soil to the Paluxy groundwater; consumption of aquatic biota.
- Future Commercial/Industrial Workers
 - Ingestion of, inhalation of, and dermal contact with COPCs in surface and subsurface soil, surface water, sediment.
 - Ingestion of and dermal contact with COPCs leaching from soil to the Paluxy groundwater.
- Future Construction Workers:
 - Ingestion of, inhalation of, and dermal contact with COPCs in surface and subsurface soil.
 - Inhalation of and dermal contact with COPCs in seep surface water via excavation of subsurface.

2.2.3 Cleanup Levels Development and Screening

CULs for residential soil and industrial soil in non-UST areas were obtained from the TNRCC interoffice memorandum guidance on implementing the existing Subchapter S Risk Reduction Rule (TNRCC, 1998). These CULs were reported in the Offsite WSA RFI Report (TEC, 1999). The RFI Report was issued in June of 1999 and was subsequently approved by TNRCC. In July of 1999, TNRCC updated the interoffice memorandum guidance. The updates contained in the guidance do not impact the CULs identified in the RFI Report (TEC, 1999). No other sources of cleanup levels for these media were necessary because the medium-specific concentrations (MSCs) provided in this guidance reflect newly promulgated standards (e.g., MCLs), current toxicity factors, current inhalation emission factor methodologies, and the dermal absorption exposure pathway (TNRCC, 1998). In addition, several compounds that did

not have RRSN2 MSCs in the original Appendix II of Subchapter S (TNRCC, 1993) are listed with values in the memorandum (e.g., dinitrotoluenes).

TNRCC standards are not specifically available for construction worker exposures. Separate MSCs were not derived because it was determined that MSCs for this scenario, if derived based on USEPA- and TNRCC-recommended exposure assumptions and algorithms, would be higher than those for the other scenarios. This determination was based on a quantitative comparison of the scenario-specific values generated from using the exposure assumptions that are unique among the possible scenarios (i.e., exposure duration, skin surface area exposed, and ingestion rate). In the comparison, the exposure assumptions for the construction worker scenario were assumed to be 1 year for exposure duration, 4,300 cm² for skin surface area, and 480 mg/year for soil ingestion rate. Soil CULs for the trespasser/site visitor scenario were also not developed because exposure frequencies and durations for these receptors would be much lower than for residential populations, resulting in lower risk. Residential CULs are protective of these intermittently exposed populations.

CULs for both surface water and Paluxy groundwater were also obtained from the TNRCC (1998). Because the Paluxy aquifer supplies domestic drinking water, groundwater CULs were based on the residential groundwater MSCs in TNRCC (1998) or maximum contaminant levels (MCLs), whichever was lower. The Texas Surface Water Quality Standards were consulted for surface water CULs, as specified by Subchapter S; however, no values were provided for the COPCs in this medium. Therefore, the residential groundwater RRSN2 values provided in TNRCC (1998) were used as surface water CULs.

CULs for the non-heating oil UST areas (USTs at Bldgs. 8505 and 8514) were developed according to procedures outlined for Plan B Target Concentrations in the PSTD guidance (TNRCC, 1994). Similar to the RRSN2 rules, Federal or Texas promulgated health-based standards or criteria are the primary basis for CULs. When these values were not available, risk-based concentrations were obtained from *Risk-Based Corrective Action for Leaking Storage Tank Sites (RG-36)* (TNRCC, 1994). Before applying these concentrations in this risk evaluation, they were verified to ensure that the most current toxicity factors (USEPA, 1999) were utilized in the generation of the values.

TNRCC (1998) soil MSCs and Plan B target soil concentrations for both residential and industrial direct contact and soil to groundwater migration were evaluated for their use as CULs in this risk evaluation. The direct contact MSCs are risk-based and reflect three exposure routes: ingestion, inhalation of volatiles and particulates, and dermal contact. The soil to groundwater migration MSCs were initially derived by multiplying the respective risk-based target groundwater concentration by a dilution factor of 100. In contrast, the PSTD risk-based guidance incorporates a soil-water partition factor (in addition to the use of a default dilution factor of 100) when determining groundwater protective concentrations. For the PAHs, this partition factor increases the groundwater protective concentration because it reflects the lower vertical mobility of the compounds.

Thus, residential direct soil contact becomes the more significant pathway for potential exposure to PAHs in the removed UST locations.

The MSCs and Plan B target concentrations were derived using reasonable maximum exposure (RME) assumptions and algorithms. Residential RME assumptions reflect a combined early childhood (6 years) and adult exposure for both carcinogens and noncarcinogens in soil and adult exposures only (30 years) for COPCs in groundwater. For the industrial scenario, adult exposure assumptions, consistent with standard work conditions, were used to generate the industrial direct soil contact soil MSCs. These MSCs reflect a standard default exposure frequency of 250 days/year for 25 years. The target risk levels corresponding to the MSCs are consistent with USEPA guidelines and TNRCC standards, which define the noncarcinogenic risk level as a hazard quotient (HQ) of 1; and the carcinogenic risk level as 1×10^{-6} for Class A and B carcinogens and 1×10^{-5} for Class C carcinogens.

The risk-based concentrations and standards considered as potential CULs for both the residential and industrial scenarios are summarized in Table 2-6 of this report. The lowest concentrations for each medium are boxed. As shown in this table, the concentrations corresponding to the groundwater protection pathway are the lowest for all soil COPCs except for those associated with mercury and the UST sites. Given that the vertical migration of COPCs from soil to groundwater is significantly retarded by the Walnut Formation aquitard, and only a limited number of inorganics in groundwater were identified, using the default MSCs as CULs for the soil to groundwater pathway is a highly conservative approach for this site. Furthermore, as demonstrated in Section 4.2 of the RFI report (TEC, 1999), site contamination is generally limited to the surficial layer of soil and vertical migration is not occurring. As a result, potential exposures and risks are likely to be limited to direct surface soil contact pathways for both current and future receptors and not the groundwater migration pathway.

Risk-based concentrations or standards were not available for some of the COPCs (four inorganics and two PAHs). Three of these compounds, magnesium, potassium, and sodium are not expected to pose a risk to human health because they have low toxicity and/or are essential dietary minerals. They therefore were not carried further in the RFI Risk Evaluation. For the two PAH compounds, benzo(g,h,i)perylene and phenanthrene, CULs of similar compounds were substituted in the site concentration CUL comparison presented in Section 5.1.5 of the RFI Report (TEC, 1999). A CUL for iron was developed using the synthetic precipitation leachate procedure (SPLP) results addressed below.

The groundwater protection soil concentrations for several metals are below the background $UTL_{95,95}$, resulting in highly conservative human health values for the metals. Therefore, the SPLP (Method 1312 of SW 846, Test Methods for Evaluating Solid Waste, USEPA) was performed on several soil samples collected during the 1997 RFI field efforts to develop site-specific soil cleanup levels for the soil to groundwater cross-media pathway. The SPLP was performed on a number of archived soil samples, as well as on the potential hot spot verification samples collected in February 1998 (due to holding time restrictions, SVOC and mercury analyses were performed only on

samples collected in February 1998). Analyses on archived samples were only for inorganics and were performed within the method holding time and preservation requirements. The results of the SPLP and corresponding soil concentrations are presented in Table 2-7. The analysis was conducted for metals and PAHs. As specified in TNRCC (1993), soil concentrations corresponding to leachate concentrations that are detected below the residential RRSN2 groundwater concentration (i.e., groundwater MSC) can be used as soil CULs in place of the default groundwater protection standards. Therefore, in Table 2-7 the leachate concentrations are compared to the RRSN2 concentrations. All leachate results below the respective standard are highlighted, except as noted on the table. The highest soil concentration corresponding to a leachate level below the standard is identified as the potential SPLP-based groundwater protection soil CUL for the Offsite WSA Risk Evaluation. SPLP-based values were identified for arsenic, cadmium, chromium, iron, lead, mercury, nickel, and vanadium. Leachate concentrations for antimony were above the RRSN2 groundwater MSCs. PAH leachate concentrations were not detected at the SW846 Method 8270C detection limit, which was above the RRSN2 groundwater MSCs.

A comparison of all the potential concentrations that may be used as the Offsite WSA CULs for metals in soil is presented in Table 2-8. These concentrations, one of which was selected as the CUL for each metal, include the residential direct soil contact, residential groundwater protection, background, and SPLP concentrations. Initially, the lower of the two risk-based concentrations shown in Table 2-8 was selected as the CUL. If this value was below the background, the background was identified as the potential CUL. Because the CULs for the majority of the metals defaulted to background levels, the SPLP was performed on several soil samples to develop more site-specific CULs for the soil to groundwater migration pathway. The most appropriate soil concentration resulting from this procedure was selected as the CUL if it was above the background or risk-based level. Due to soil characteristic differences at drainageway DW-9 (gravel versus silty clay), CULs based on SPLP results (if higher than background) were determined separately for this area. Separate Drainageway DW-9 CULs were selected for arsenic, chromium, iron, lead, and nickel.

TEC completed a limited sampling on October 21, 1999 Phase 1A. Fifteen samples were collected from DW-3, the UST at Building 8500 (UST-8500), and the UST at Building 8507 (UST-8507). An initial soil PAH analysis of 11 soil samples was followed by a second series of SPLP PAH analyses of the same samples using SW846 Method 8310 (see Section 5.0). These analyses provided reporting limits less than the groundwater MSCs, allowing for a further assessment of RRSN2 CULs for PAHs.

A summary of the SPLP-based CUL modification results for PAHs is provided in Table 2-9. As shown on this table, only three of 16 PAHs were detected in SPLP extracts. None of the PAH SPLP extract concentrations were greater than the Groundwater Protection Residential (GWP) MSC. As a result, SPLP-based revised GWP-Residential Soil MSCs were significantly greater than the default values as updated by the TNRCC on July 1, 1998. These revised GWP-Residential Soil MSCs were then compared to soil MSCs for residential use based on inhalation, ingestion, and dermal contact. The lower, more protective of these values were chosen as the new CULs to be used in determining closure status for the Offsite WSA. As shown on Table 2-9, five of the 16 PAH CULs

increased. Although these new CULs did not allow closure of the site under the RRSN2 in its current state, they did significantly decrease the amount of removal effort required (see Section 5.0).

The final soil, groundwater, and surface water CULs for the Offsite WSA are summarized in Table 2-10. The CULs were compared to maximum detected concentrations of COPCs as an additional screening tool to reduce the number of chemicals for which site-specific exposure point concentrations (EPCs) would be calculated. This comparison is presented in Appendix N of the RFI Report (TEC, 1999). COPCs with maximum concentrations above the CULs were further compared to EPCs in Section 5.1.5 of the RFI Report (TEC, 1999). This latter analysis formed the basis for determining whether areas would require further characterization and/or removal actions in order to meet the closure requirements of RRSN2 (see Section 3.0).

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Table 2-1. Summary of Risk Reduction Standards 1 and 2 Site Closure Requirements

Risk Reduction Standard Number 1: Closure/Remediation to Background [§335.554 subsections (b) to (g)]	Risk Reduction Standard Number 2: Closure/Remediation to Health-Based Standards and Criteria [§335.555 subsections (b) to (f)]	Closure Report Section	Closure Report Section
<p>(b) For closure of hazardous waste management units and response to unauthorized discharges of hazardous waste, all hazardous waste and hazardous waste residues and contaminated design and operating system components such as liners, leachate collection systems, and dikes must be removed from the unit or area of the unauthorized discharge. For remediation of media that have become contaminated by releases from a hazardous waste management unit or by other unauthorized discharge of hazardous waste, the contaminated media must be removed or decontaminated to cleanup levels specified in this section.</p>	<p>(b) For closure of hazardous waste management units and response to unauthorized discharges of hazardous waste, all hazardous waste and hazardous waste residues must be removed from the unit or area of the unauthorized discharge. Contaminated design and operating system components such as liners, leachate collection systems and dikes must be removed from the unit or area of the unauthorized discharge. For remediation of media that have become contaminated by releases from a hazardous waste management unit or by other unauthorized discharge of hazardous waste, the contaminated media must be removed or decontaminated to cleanup levels specified in this section or such other lower levels necessary to be in conformance with current hazardous waste regulations.</p>	5.0	5.0
<p>(c) For closure of non-hazardous industrial solid waste management units, response to unauthorized discharges of non-hazardous industrial solid waste, and the remediation of media that have become contaminated by discharges of non-hazardous industrial solid waste or other contaminants, all waste and waste residues, contaminated design and operating system components such as liners, leachate collection systems, and dikes, and contaminated media must be removed or decontaminated to cleanup levels specified in this section.</p>	<p>(c) For closure of non-hazardous industrial solid waste management units, response to unauthorized discharges of non-hazardous industrial solid waste, and the remediation of media that have become contaminated by discharges of non-hazardous industrial solid waste or other contaminants, all waste and waste residues, contaminated design and operating system components such as liners, leachate collection systems, and dikes, and contaminated media must be removed or decontaminated to cleanup levels specified in this section.</p>	5.0	5.0

Table 2-1. Summary of Risk Reduction Standards 1 and 2 Site Closure Requirements (CONT.)

Risk Reduction Standard Number 1: Closure/Remediation to Background [§335.554 subsections (b) to (g)]	Risk Reduction Standard Number 2: Closure/Remediation to Health-Based Standards and Criteria [§335.555 subsections (b) to (g)]	Closure Report Section	Closure Report Section
<p>(d) Background as represented by results of analyses of samples taken from media that are unaffected by waste management or industrial activities shall be used to determine compliance with the requirements of this section. If the Practical Quantitation Limit (PQL) is greater than background, then the PQL rather than background shall be used as the cleanup level provided that the person satisfactorily demonstrates to the executive director that lower levels of quantitation of a contaminant are not possible.</p>	<p>(d) The concentration of a contaminant in contaminated media of concern such as groundwater, surface water, air, or soil shall not exceed cleanup levels as defined in §335.556 of this title (relating to Determination of Cleanup Levels for Risk Reduction Standard Number 2).</p> <p>(1) If the PQL and/or the background concentration, determined in a manner consistent with §335.554 of this title (relating to Attainment of RRSN1) for a contaminant is greater than the cleanup level, the greater of the PQL or background shall be used for determining compliance with the requirements of this section.</p>	3.1	3.1
<p>(e) Attainment of cleanup levels shall be demonstrated by collection and analysis of samples from the media of concern using the procedures of §335.553(d) of this title (relating the Required Information).</p>	<p>(2) Attainment of cleanup levels shall be demonstrated by collection and analysis of samples from the contaminated media of concern using the procedures of §335.553(d) of this title (relating to Required Information).</p>	3.1	3.1
<p>(e) The person must prepare a document that he intends to use to fulfill the deed certification requirements of §335.560 of this title (relating to Post Closure Care and Deed Certification for RRSN2) and include this document as part of the report of subsection (f) of this section.</p>			Appendix B

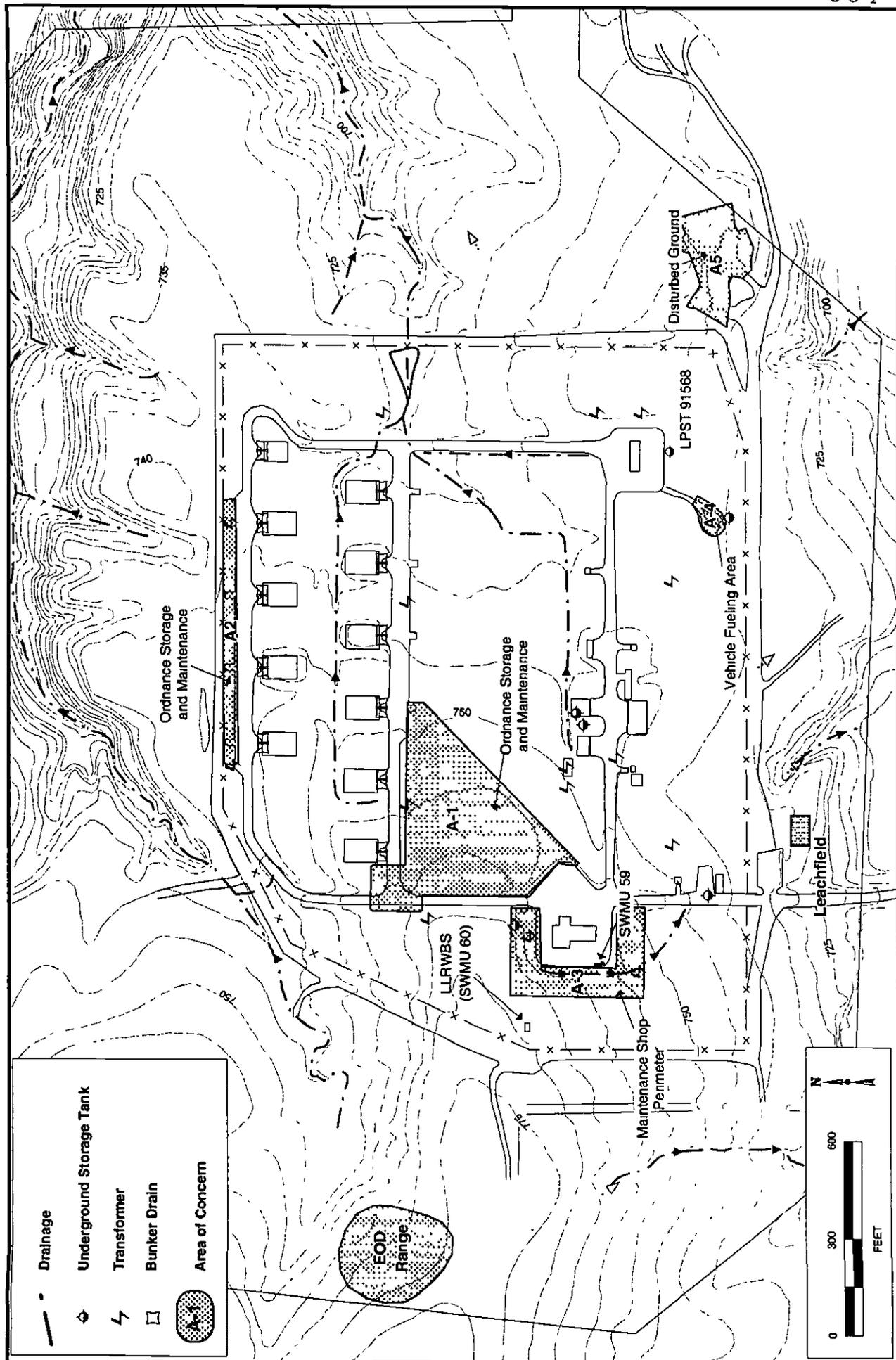
Table 2-1. Summary of Risk Reduction Standards 1 and 2 Site Closure Requirements (CONT.)

Risk Reduction Standard Number 1: Closure/Remediation to Background [§335.554 subsections (b) to (g)]	Closure Report Section	Risk Reduction Standard Number 2: Closure/Remediation to Health-Based Standards and Criteria [§335.555 subsections (b) to (g)]	Closure Report Section
(f) The person must submit a report to the executive director in accordance with §335.553(a) of this title (relating to Required Information) that documents compliance with the requirements of this section.	Closure Report Section	(f) The person must submit a report to the executive director in accordance with §335.553(a) of this title (relating to Required Information) that documents compliance with the requirements of this section. The executive director may require additional information or analysis, such as but not limited to consideration of cumulative health effects and cross-media contamination, prior to accepting a certification of closure or remediation under this performance standard. Upon approval of the report by the executive director, the person shall comply with the requirements of §335.560 of this title (relating to Post Closure Care and Deed Certification for RRSN2).	Closure Report (Deed Certificate provided in Appendix C)
(g) Provided that attainment of this risk reduction standard for the facility or area can be demonstrated to the executive director pursuant to this section, the person is released from deed recordation requirements of §335.5 of this title (relating to Deed Recordation of Waste Disposal) and post-closure care responsibilities.	N/A		

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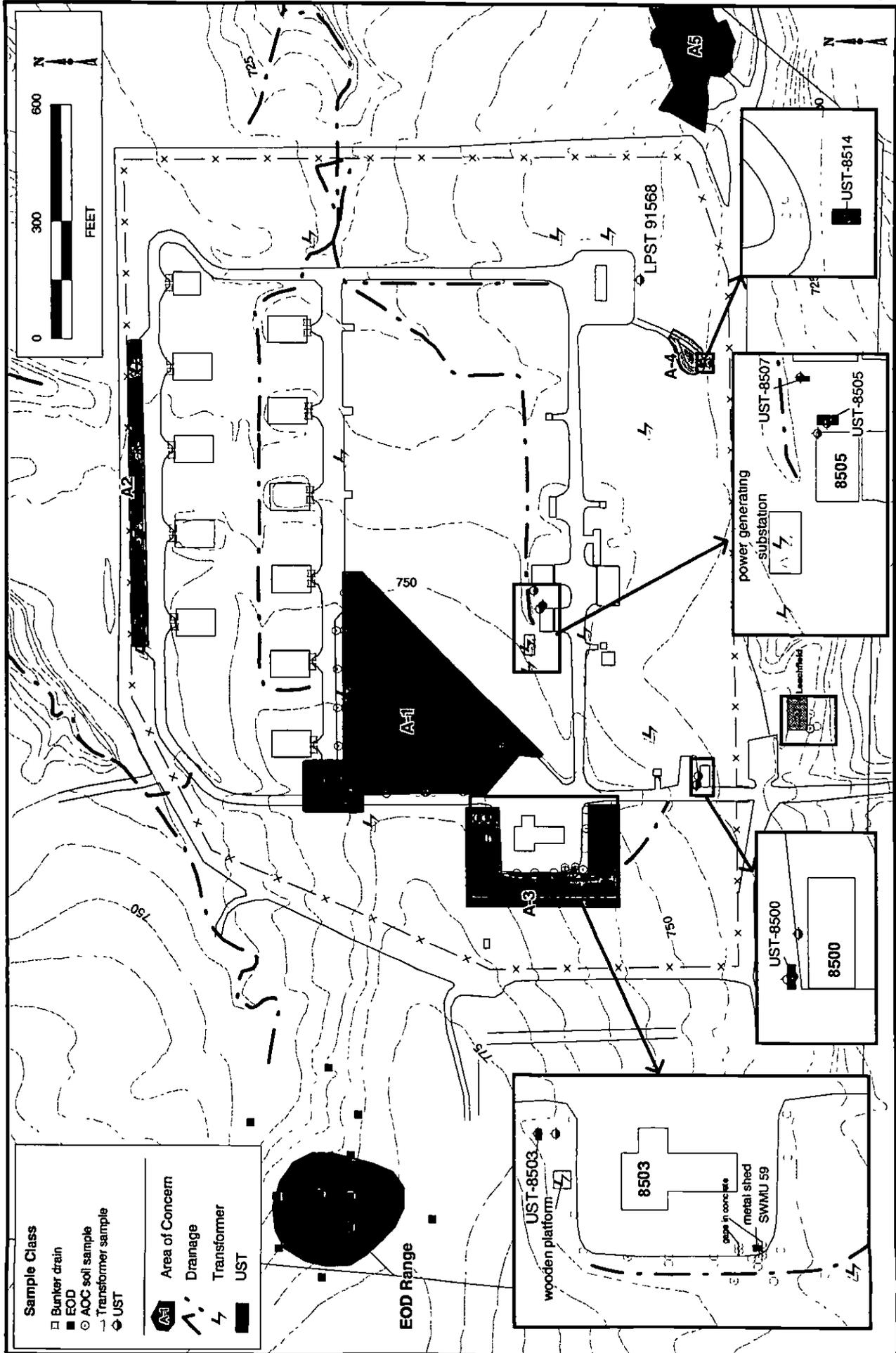
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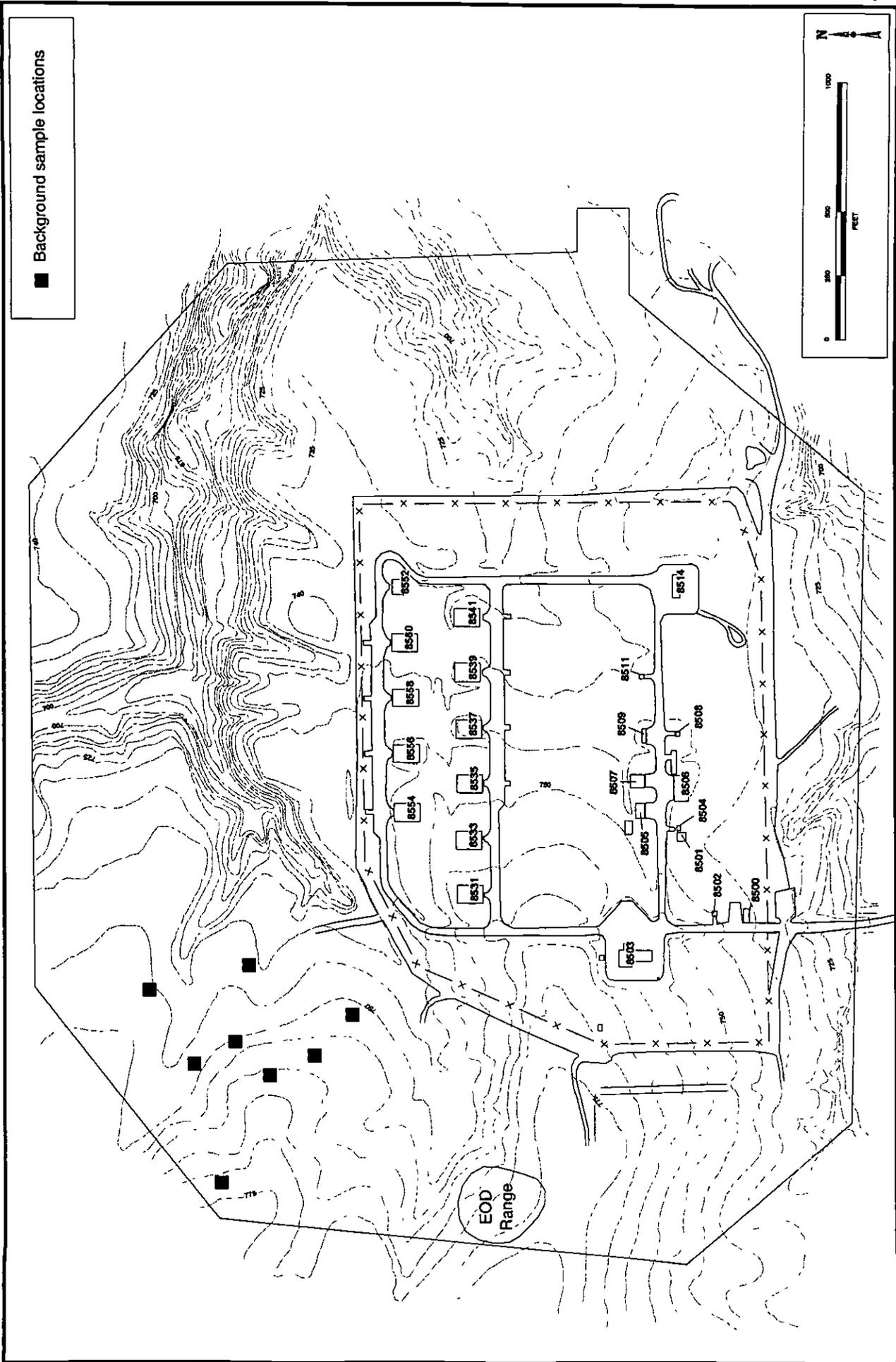
Creation Date 12/01/1997
 Rev Date 07/16/1999
 Project Manager B. Duffner
 Prepared By W. Mitchell
 Project No P-3109

Figure 2-1 -- Field Investigation Areas



Creation Date 12/01/1997
 Rev Date 09/26/2000
 Project Manager B. Duffner
 Prepared By D. Becharf
 Project No P-3109

Figure 2-2 -- Surface and Subsurface Soil Sample Locations

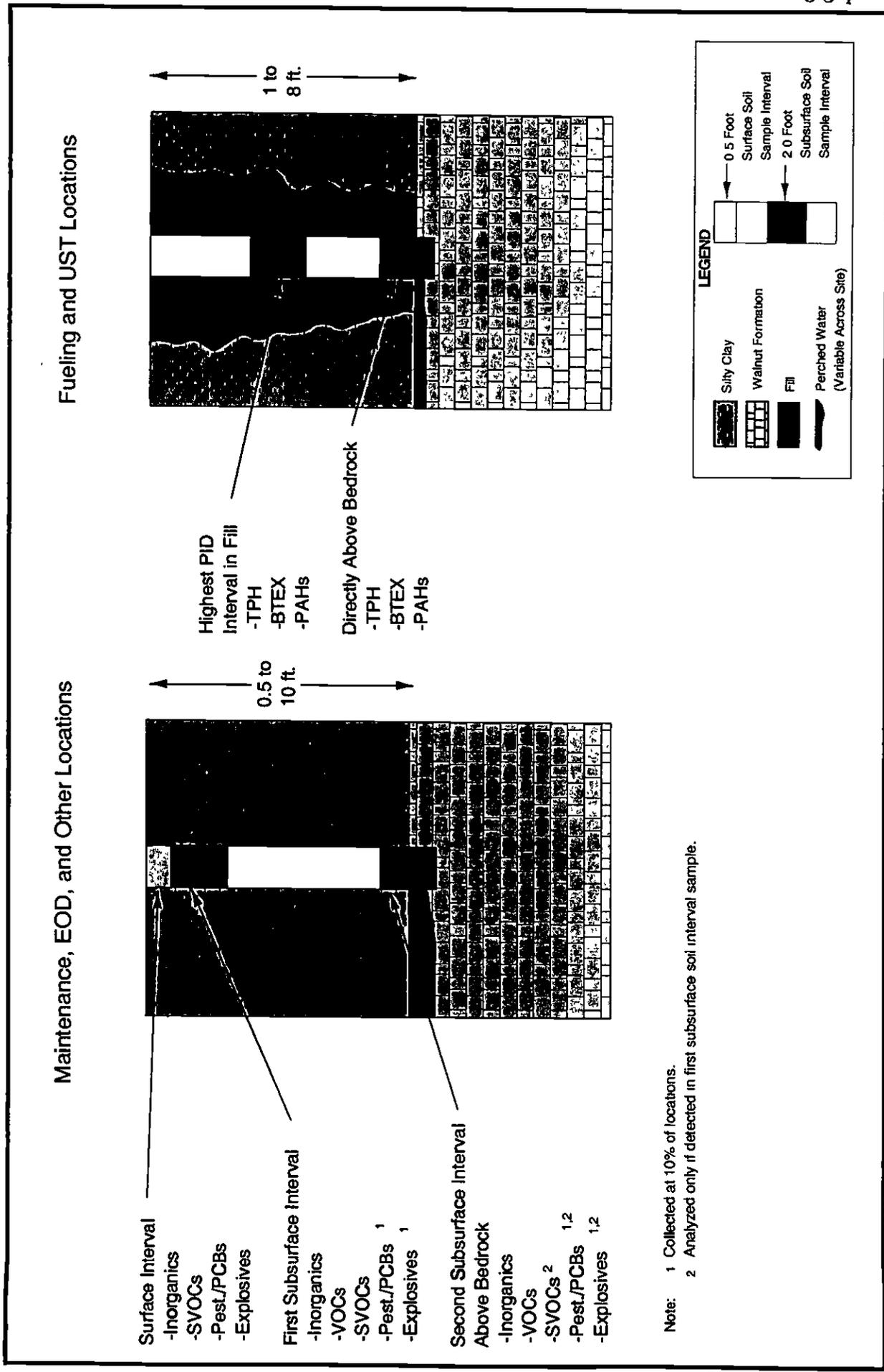


Creation Date 12/01/1987
 Rev Date 07/16/1999
 Project Manager B. Duffner
 Prepared By W. Mitchell
 Project No P-3109

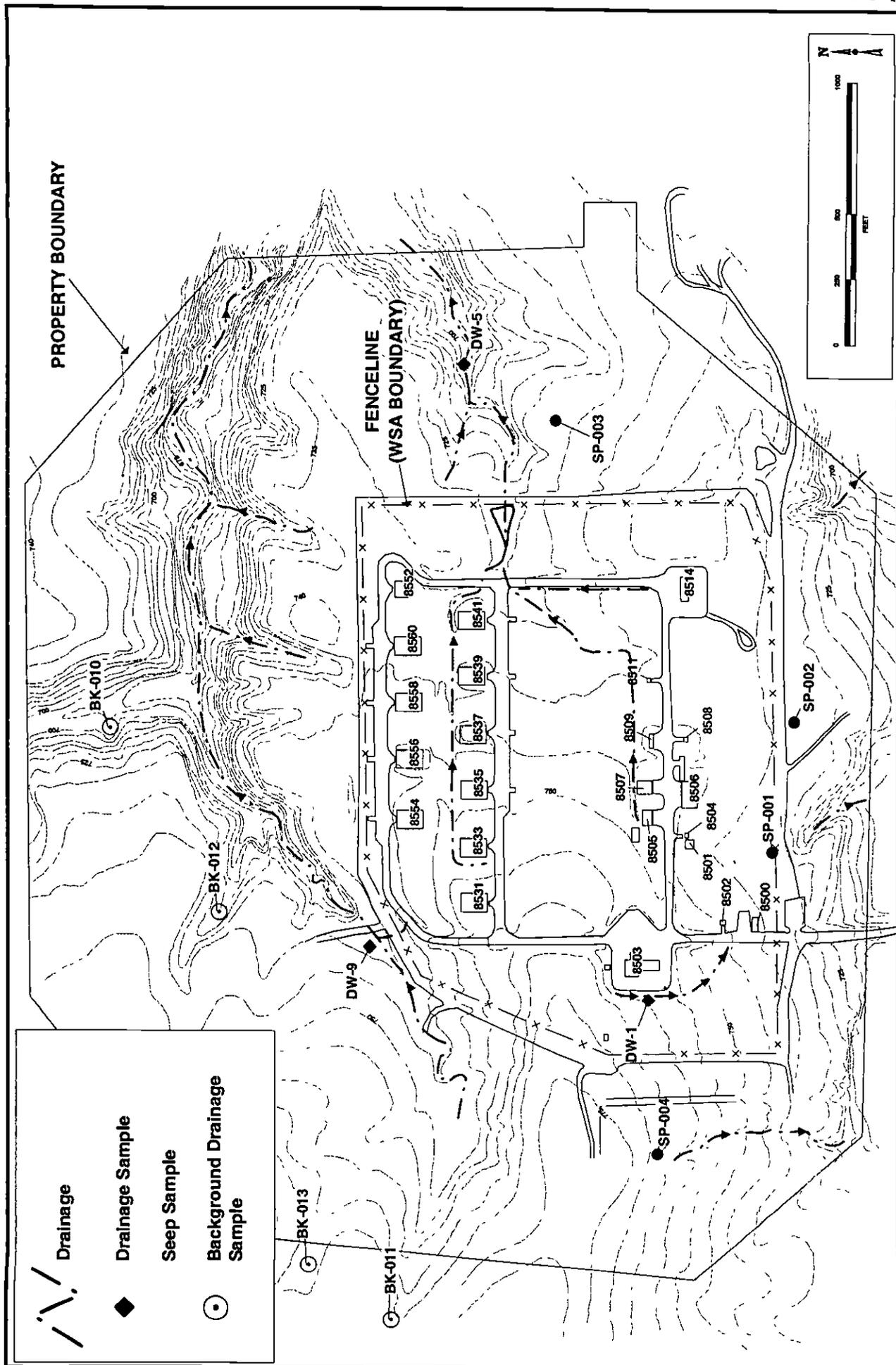
Figure 2-3 -- Background Soil Sample Locations



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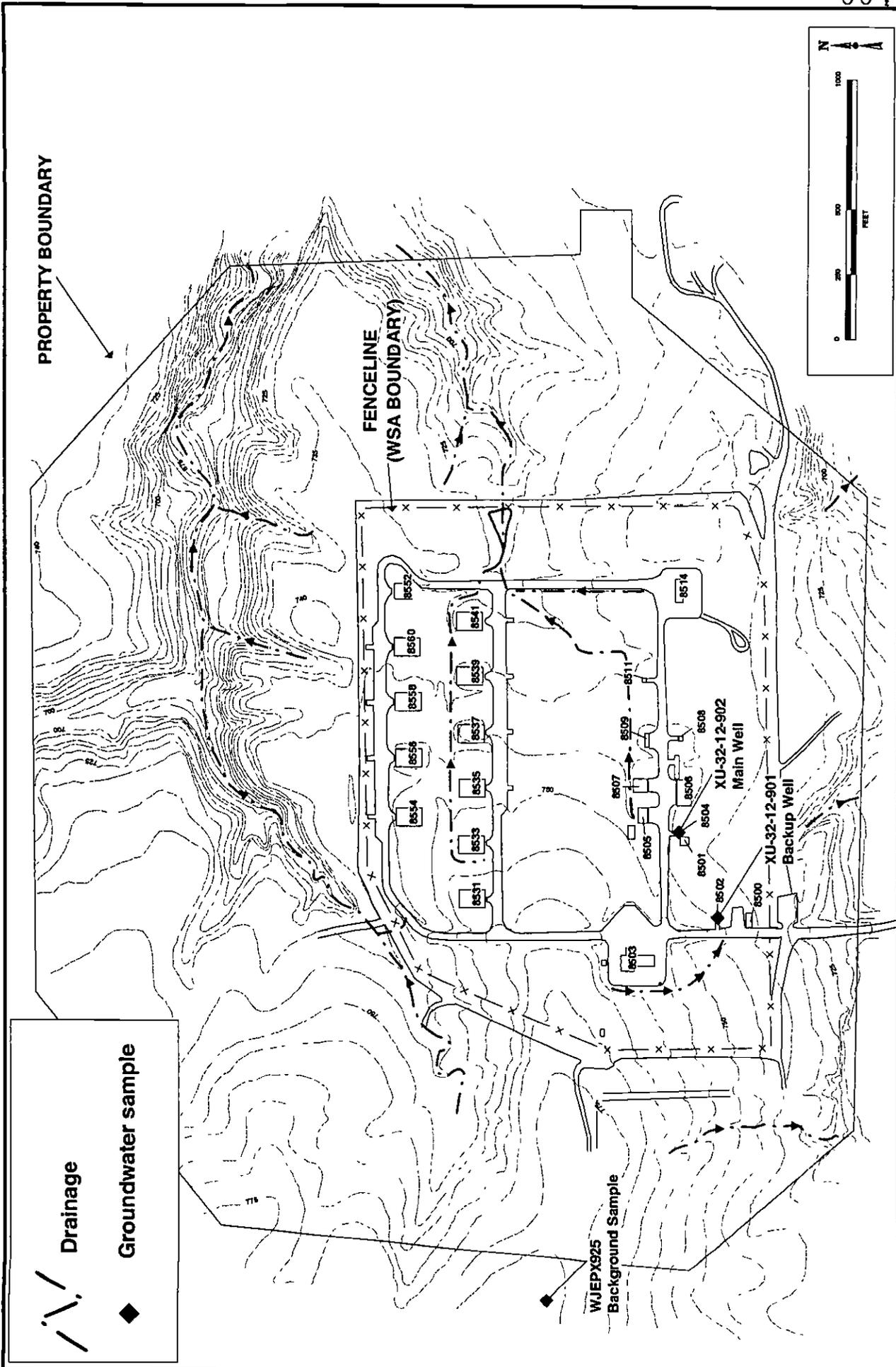
Note: 1 Collected at 10% of locations.
 2 Analyzed only if detected in first subsurface soil interval sample.



Creation Date April 1998
 Rev. Date 05/10/1999
 Project Manager B Duffner
 Prepared By W Mitchell
 Project No P-3109

Figure 2-6 -- Drainageway and Seep Surface Water Sample Locations

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 Rev Date 07/16/1999
 Project Manager B Duffner
 Prepared By W Mitchell
 Project No P-3109

Figure 2-7 -- Groundwater Sample Locations

3.0 SUMMARY OF RFI RESULTS

Nine separate potential source areas were investigated during the RFI (see Figure 2-1):

- Areas A-1 and A-2 which is made up of outdoor material storage and maintenance areas;
- Area A-3 which includes SWMU 59 (less-than-90-day storage area and surrounding unpaved surfaces);
- Area A-5 disturbed surface area southwest of the control fence,
- the EOD range;
- bunker floor drain outlets;
- five removed underground storage tank locations (including three tank locations regulated by the TNRCC PSTD);
- areas beneath transformers;
- a leachfield; and
- Area A-4 vehicle fueling areas (regulated by the TNRCC PSTD).

In addition to these potential source areas, samples were collected to directly characterize three potential contaminant migration pathways. To accomplish this task, samples were collected from:

- drainageways;
- seeps; and
- Paluxy Aquifer groundwater.

The following sections summarize the RFI results for these source areas and environmental media. These results are summarized with respect to requirements for closure as identified in 30 TAC §335 Subchapter S, *Risk Reduction Standards*. Based on these standards, the conclusions are provided in two steps as described below.

- Section 3.1 provides assessment of whether contaminant concentrations at each area (or location) are above or below background or, if applicable, whether the contaminant exceedance over background is attributable to an unpermitted release. Areas where the RFI results indicate that no unpermitted release of solid wastes have occurred are identified. Areas where no unpermitted release occurred are not subject to the closure requirements of 30 TAC §335.551 and are generally excluded from further consideration in this closure report.
- Section 3.2 includes an assessment of the closure requirements for those areas (or locations) where unpermitted releases have resulted in contaminant concentrations above background based on the RFI results. The assessment involves the determination of the applicable requirements of RRSN2 (i.e., Deed Certifications for areas with contamination less than the RRSN2 CULs or removal actions for areas with contamination greater than the RRSN2 CULs).

3.1 SUMMARY OF RESULTS WITH RESPECT TO RRSN1

A total of 464 soil, sediment, surface water, groundwater, and quality control samples were collected during the initial RFI characterization effort. Thirty of these samples were collected to establish site-specific background conditions. An additional 200 soil samples were collected as part of a supplemental characterization effort to verify anomalous detections and further delineate the extent of contamination.

As part of the initial data assessment under the TNRCC Risk Reduction Standards, site sample results were compared to background levels as determined using the Tolerance Interval method (USEPA, 1989c, 1992a). As indicated above in Section 2.1, background $UTL_{95,95}$ was not established for organic compounds. Background for organic compounds was assumed to be undetected. To assess whether exceedances over background were attributable to an unpermitted site discharge, a number of factors were considered. These included:

- contamination introduced during sample collection, shipment, or analysis;
- contamination attributable to anthropogenic sources (i.e., contamination from the operation of vehicles that is transported to the investigation areas via stormwater runoff); and
- the relative frequency, magnitude, and distribution of exceedances over background in combination with the potential for a contaminant source.

Contamination introduced during sample collection, shipment, or analysis was assessed through the collection and analysis of a series of field and laboratory blanks. Contaminants identified in these blank samples included bis(2-ethylhexyl)phthalate, methylene chloride, chloroform, tetrachloroethene, and toluene. As a result, unless otherwise noted, these contaminants are not considered to be attributable to the site. The assessment of these nonsite-related contaminants is discussed on an area basis in Sections 3.2, 3.3, 3.4, 3.5, and 5.1.1 of the RFI report (TEC, 1999).

Contamination attributable to anthropogenic sources included surficial and ubiquitous low-concentration PAHs (acenaphthene, anthracene, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(g,h,i)perylene, chrysene, fluoranthene, fluorene, phenanthrene, and pyrene) identified adjacent to existing paved surfaces or on unpaved surfaces apparently used by vehicles. To confirm this possibility, several additional samples, were analyzed for SVOCs to confirm and delineate the extent of PAHs. The results from this investigation demonstrated that PAH concentrations decrease to below the reporting limit as samples are collected progressively further from the roadways and pavement. The results also demonstrate that PAHs are limited to surface soil located within 15 feet of roadways and parking areas. Samples collected 30 feet from the edge of the pavement had no detectable levels of PAHs. In support of this conclusion, PAH analytical results were compared to anthropogenic background levels of PAHs reported in the literature. PAH concentrations detected at A-1, A-3, and the drainageways (except DW-3) are generally comparable to those documented for rural and agricultural soils. PAH concentrations that are more consistent with those reported for urban soils were detected in locations adjacent to expected high vehicle-use areas

(e.g., parking, loading/unloading). Furthermore, literature sources indicate that the principal sources of PAHs along roadways are due to vehicular exhausts and surface runoff of emissions and that the majority of PAH deposition occurs within 15 feet of roadways (ATSDR, 1995 and USDI, 1987). These results are discussed by area below.

Finally, consideration was given to the relative frequency, magnitude, and distribution of contaminant concentrations that exceed background concentrations. In a number of cases, an analyte was reported at concentrations slightly greater than (i.e., less than 3 times) background. In many cases, no apparent source for the exceedance could be documented. Random exceedances of this nature were attributed to natural variability in background conditions that were not represented in the background level determination or normal site use. For example, as discussed in Section 2.2.1, low-level antimony concentrations were detected above background. However, the frequency and magnitude of the exceedance was low and the analyte distribution in soil revealed no evidence of a source-related pattern. Exceedances of this nature were not attributed to an unpermitted discharge from the site.

Based on these considerations, an assessment of each investigation area with respect to background and the potential presence of a related unpermitted release was provided in the RFI report (TEC, 1999). This assessment is presented below.

Area A-1

Ten inorganic analytes, methylene chloride, bis(2-ethylhexyl) phthalate and PAHs were detected at concentrations above background in 84 soil samples.

Although cadmium and antimony most often exceeded the background $UTL_{95,95}$, the difference between the maximum reported value and the background $UTL_{95,95}$ was not great. The maximum reported cadmium and antimony values of 1.4 mg/kg and 2.0 mg/kg were less than three times their respective background $UTL_{95,95}$ values. As indicated in Figure 3-1, the distribution of these analytes reveals no evidence of a source-related pattern. Nickel was initially identified at a concentration of 24 times background, but supplemental sampling failed to verify any exceedance over background (see Figure 3-2). The initial nickel report is attributed to either a small amount of contamination removed during verification sampling or laboratory error.

Methylene chloride and bis(2-ethylhexyl)phthalate are assumed to be field sampling- or laboratory-related contaminants and not attributable to the site.

PAHs were detected at one location, A1-019. These contaminants are discussed in Section 3.2.1 of the RFI Report (TEC, 1999). Area A-1 PAHs were demonstrated to be attributable to vehicle-related pollutants transported to the investigation areas via roadway runoff (see Figure 3-3).

The RFI assessment indicates no Area A-1 contaminants present at concentrations greater than background that are attributable to an unpermitted site release. Although a number of inorganic analytes were reported at concentrations greater than background,

the number of analytes, their concentration, and their distribution fail to indicate that the exceedances are attributable to an unauthorized discharge. In support of this assessment, available site history does not indicate that a relationship between assumed historic area use and those analytes reported above background. Therefore, Area A-1 is not subject to the closure requirements of 30 TAC §335.

Area A-2

Six inorganic analytes were detected at concentrations above background in the 19 area soil samples. All inorganic concentration exceedances were less than twice background. As indicated in Figure 3-4, the distribution of these analytes reveals no evidence of a source-related pattern. Toluene, the only organic compound detected, was attributed to laboratory contamination.

The RFI assessment indicates no Area A-2 contaminants at concentrations greater than background that are attributable to an unpermitted site release. Although a number of inorganic analytes were reported at concentrations greater than background, the number of analytes, their concentration, and their distribution fail to indicate that the exceedances are attributable to an unauthorized discharge. In support of this assessment, available site history does not indicate that a relationship between assumed historic area use and those analytes reported above background. Therefore, Area A-2 is not subject to the closure requirements of 30 TAC §335.

Area A-3 (SWMU 59 and Building 8503) and Drainageway DW-1

Area A-3 and DW-1 are discussed together due to their close proximity and the relationship between the contaminants identified. A total of 131 samples were collected from Area A-3 and DW-1.

Five of the 10 inorganics were detected at concentrations above background in Area A-3 in at least 25 percent of the surface samples. The most common inorganic analytes with elevated concentrations in surface samples were arsenic, cadmium, copper, lead, and zinc. Cadmium and lead were reported at concentrations more than five times background. Mercury was detected in one sample at more than 200 times background. The presence of mercury above background was verified at this location, but at a lower concentration (see Figure 3-6). Antimony was initially detected at concentrations above background; however, additional sampling indicated that these results were influenced by the sampling through the concrete pad and were not representative of actual site conditions (see Figure 3-7). Area A-3 locations with inorganic exceedances were generally within 5 to 10 feet of the concrete pad (see Figure 3-5).

The inorganic exceedances in Area A-3 generally matched those in DW-1. In DW-1, cadmium and arsenic were most often detected at elevated concentrations (see Figure 3-26). The maximum cadmium and arsenic values are approximately four and three times greater than their respective background UTL_{95,95} values. In Area A-3 and Drainageway DW-1, contamination was generally limited to the surficial soils (0 to 6 inches). Beyond the perimeter of DW-1, the topography immediately rises

approximately 5 feet. Two soil samples were collected within this outer perimeter. Inorganic analytes were detected above background in these outer perimeter samples. The concentrations, frequency of detection, and distribution indicate that the inorganic contamination at Area A-3 and DW-1 exceeds background and is attributable to an unpermitted release.

PAH compounds (acenaphthene, anthracene, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(g,h,i)perylene, chrysene, fluoranthene, fluorene, phenanthrene, and pyrene) were detected in both Area A-3 and drainageway DW-1 (See Figure 3-8). The concentrations and distribution of these contaminants are discussed in detail in Sections 3.2.3, 3.3.1, and 5.1.1 of the RFI report (TEC, 1999). Area A-3 and DW-1 PAHs were demonstrated to be attributable to vehicle-related pollutants transported to the investigation areas via roadway runoff.

Four VOCs (excluding those attributable to field and/or laboratory contamination) were detected in Area A-3 and DW-1 upper subsurface and lower subsurface samples. TCE was present at the greatest concentration (0.0560 mg/kg) in sample A3-009-03. As shown in Figure 3-5, VOCs were located adjacent to the Waste Accumulation Area. The results indicate that VOC contamination has migrated under the concrete pad to a limited extent.

The results of the RFI indicate that the perimeter of the concrete pad in association with SWMU 59 contains inorganic and VOC contaminants that exceed background and are attributable to an unpermitted release from the site. The area containing inorganic analytes with concentrations greater than background extends approximately 25 feet out from the perimeter of the concrete pad. The depth of the contamination generally extends from the surface to a depth of 0.5 feet bgs. The area containing VOC with concentrations greater than background is limited to the southwest corner of the concrete pad and extends approximately 25 feet out from the perimeter of the concrete pad. In addition, the VOC-contaminated area extends down DW-1 approximately 60 feet from the southwest corner of the concrete pad to sample location DW1-008. The depth of VOC contamination extends from 0.5 feet bgs to bedrock (approximately 10 feet bgs).

Area A-4

Area A-4 is a former service road and diesel fueling station. Contamination associated with a potential release to this area is therefore considered under 30 TAC §334. Nine surface and subsurface soil samples were collected. The samples contained total recoverable petroleum hydrocarbons (TRPHs), toluene, and PAHs. TRPHs ranged from 26.1 to 227 µg/g (see Figure 3-20). The TRPHs are used only for characterization purposes and are not incorporated into regulatory management decisions under 30 TAC §334. Toluene was reported at less than 0.03 mg/kg and, as discussed above, is not considered attributable to the site at those levels. PAHs detected included benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, and indeno(1,2,3-cd)pyrene at maximum concentrations of 0.028 mg/kg, 0.038 mg/kg, 0.043 mg/kg, 0.024 mg/kg, and 0.090 mg/kg, respectively. The samples were collected directly on the dirt service road. These levels are within the range of those determined

to be associated with vehicle-related pollutants transported to the investigation areas via runoff. Therefore, it is assumed that no release had occurred to this area. In addition, the levels are below PSTD CULs. No further action will be required for this area in association with the 30 TAC §334 regulations.

Area A-5

Eleven soil samples were collected from Area A-5. Contaminants of concern included inorganics, VOCs, SVOCs, pesticides/PCBs, and explosive compounds.

Six inorganic analytes were detected in Area A-5 samples at concentrations greater than the background $UTL_{95,95}$. These included antimony, cadmium, copper, molybdenum, selenium, and zinc. As shown on Figure 3-9, only subsurface soil samples contained analytes with concentrations greater than the background $UTL_{95,95}$. Cadmium was most frequently detected at elevated concentrations. All exceedances were less than 2.4 times greater than background. The distribution of these analytes reveals no evidence of a source-related pattern.

With the exception of methylene chloride, no organic compounds were detected in Area A-5 soil samples.

The RFI assessment indicates no Area A-5 contaminants at concentrations greater than background that are attributable to an unpermitted release. Although a number of inorganic analytes were reported at concentrations greater than background, the number of analytes, their concentration, and their distribution fail to indicate that the exceedances are attributable to an unauthorized discharge. In support of this assessment, available site history does not indicate that a relationship between assumed historic area use and those analytes reported above background. Therefore, Area A-5 is not subject to the closure requirements of 30 TAC §335.

EOD Range

Fifty soil samples collected from the EOD Range were analyzed for inorganics and explosive compounds.

Nine inorganics were detected in 15 samples at concentrations greater than the background $UTL_{95,95}$ (see Figure 3-10). The maximum concentration of seven of the nine analytes was less than 1.5 times background. The maximum concentration of selenium and silver was less than 4.5 times background. Thallium was initially detected in only one subsurface sample at a concentration of 4.1 mg/kg, four times background. Verification samples failed to confirm the presence of this analyte above background. The initial thallium report is attributed to either a small amount of contamination removed during verification sampling or laboratory error. As indicated in Figures 3-10 and 3-11, the distribution of these analytes reveals no evidence of a source-related pattern.

Explosives were detected in one of the 31 soil samples collected during the initial characterization effort. Verification samples failed to confirm the presence of this analyte

(see Figure 3-12). The initial explosive compound report is attributed to either a small amount of contamination removed during verification sampling or laboratory error.

The RFI assessment indicates no Area A-5 contaminants at concentrations greater than background that are attributable to an unpermitted release. Therefore, EOD Range is not subject to the closure requirements of 30 TAC §335.

Bunker Drain Areas

A total of 113 soil samples were collected from the bunker drain investigation area. Samples were analyzed for inorganics and explosives.

Thirteen analytes were present at concentrations greater than the background UTL_{95,95} (see Figure 3-13). Four inorganic analytes, cadmium, copper, lead, and zinc, were reported at concentrations elevated above the background UTL_{95,95} in more than 50 percent of the surface samples. Cadmium and lead concentrations were the highest relative to the background UTL_{95,95}. Cadmium and lead were detected at more than eight times and 11 times background, respectively. The highest concentration of copper was more than 100 times the background level.

A series of supplemental samples were collected to verify initial inorganic results and determine the extent of contamination with respect to background. The supplemental samples extended out from the floor drain, the suspected point source for the contamination. Supplemental sample results for mercury, copper, cadmium, lead, and zinc are shown in Figures 3-14, 3-15, 3-16, 3-17, and 3-18, respectively. The supplemental sample results for mercury, copper, lead, and zinc indicated that the inorganic contamination above background was generally limited to the surface samples collected immediately adjacent to the bunker drain (within 2 feet of the wall). Concentrations from samples collected 15 feet from the wall typically decreased to below background. Cadmium concentrations remained high in all supplemental samples; however, indicating that the entire area in front of all bunker drains contains cadmium at concentrations above background. The extent of this contamination is defined by the road surrounding the bunkers (see Figure 3-16). Results from Areas A-1 and A-2 and Drainageways DW-2, DW-5, and DW-7 confirm that this contamination does not extend beyond the roadways (See Figure 3-28).

Explosive compounds were not detected in any of the surface or subsurface bunker drain samples.

The results of the RFI indicate that the inorganic contamination in front of all bunker drains exceeds background and is attributable to an unpermitted release. The extent of this exceedance is defined by the roadways in front of each bunker. No contaminants were detected in the area between the two rows of bunkers (DW-2).

Electrical Transformers

A total of 31 samples were collected from 16 transformer sample locations (see Figure 3-21). All transformer investigation samples were analyzed for pesticides/PCBs. No PCBs were detected in any of the samples. One sample contained 0.0110 mg/kg of 4,4-DDE. The DDE is not considered to be associated with an unpermitted release.

The RFI indicates no electrical transformer-related contaminants at concentrations greater than background that are attributable to an unpermitted release. Therefore, electrical transformer areas are not subject to the closure requirements of 30 TAC §335.

Leachfield

Six initial samples were collected from three locations in and downgradient from the leachfield (see Figure 3-22). Antimony and cadmium were the only inorganic analytes detected in the leachfield at concentrations greater than the background UTL_{95,95}. Two PAHs (2-methylnaphthalene and naphthalene) were detected inside the leachfield wall at the bedrock floor and in two lower subsurface samples directly downgradient from the leachfield at concentrations greater than background. Contamination was not present in one sample located 25 feet downgradient from the leachfield.

The two additional samples were collected from the subsurface at LCH-002 and south of LCH-002 to verify the presence of the low level inorganics and PAH concentrations initially reported. These two verification samples had no detectable levels of antimony or cadmium above background (see Figures 3-23 and 3-24, respectively). Therefore, the original detects are assumed to have been either analytical anomalies or existing contamination that was removed during sampling. The two additional samples also had no detectable levels of either PAH originally detected in the leachfield samples (see Figure 3-25). The original detects are therefore assumed to have been either analytical anomalies or existing contamination that was removed during sampling.

This assessment indicates no leachfield-related contaminants at concentrations greater than background that are attributable to an unpermitted release. The leachate field is considered a "leachate collection system" as identified in 30 TAC §335 (b). In order to attain the requirements of RRSN1 it was determined that the tank wall would have to be removed.

Removed UST Locations

The removed USTs contained two different products. USTs associated with Bldgs. 8503, 8500, and 8507 contained fuel oil. Contamination associated with a release from these removed tanks is therefore considered under 30 TAC §335. USTs associated with Bldgs. 8514 and 8505 contained diesel. Contamination associated with a release from these removed tanks is therefore considered under 30 TAC §334, PSTD Regulations.

SVOCs were detected in soils associated with USTs previously located near Bldgs. 8503, 8500, and 8507 (see Figure 3-19). Contamination at removed USTs near Bldg. 8503 was limited to one surface soil sample 15 feet from the concrete pad surrounding

Bldg. 8503. The sample was positioned to characterize a potential release from the connecting pipe. Contaminants identified included benzo(a)anthracene, benzo(a)pyrene, and benzo(b)fluoranthene. These PAHs were identified at concentrations of 0.012, 0.042, and 0.013 mg/kg, respectively. These levels are below those determined to be associated with vehicle-related pollutants transported to the investigation areas via runoff. Therefore, the area associated with the removed UST near Bldg. 8503 is not subject to the closure requirements of 30 TAC §335

PAH contamination at a removed UST near Bldg. 8500 was reported in surface and subsurface soil samples positioned to characterize the removed tank and connecting pipe. The results of this investigation indicate that the PAH contamination exceeds background and is attributable to an unpermitted release. The extent was determined during a subsequent removal action (see Section 5.0).

PAH contamination at a removed UST near Bldg. 8507 was reported in subsurface soil samples positioned to characterize both the removed tank and the pipe. The tank was located directly adjacent to the building wall; therefore, no pipe-related samples were collected. The results of this investigation indicate that the PAH contamination exceeds background and is attributable to an unpermitted release. The extent was determined during a subsequent removal action (see Section 5.0).

The removed UST near Bldg. 8514 is assessed with respect to 30 TAC §334 PSTD regulations. This removed tank had been registered with TNRCC (PST #91568). Contamination at this UST was limited to one surface soil sample five feet from a dirt service road used by vehicles. The lower subsurface sample did not contain PAHs. Contaminants identified in the surface soil sample were limited to benzo(a)pyrene at a concentration of 0.014 mg/kg. This level is within the range of those determined to be associated with vehicle-related pollutants transported to the investigation areas via runoff. Therefore, it is assumed that no release had occurred from the removed UST near Bldg. 8514. No further action will be required for this area in association with the 30 TAC §334 regulations.

The removed UST near Bldg. 8505 is assessed with respect to 30 TAC §334 PSTD regulations. This tank had not been registered with TNRCC. PAH contamination at this tank was reported in surface and subsurface soil samples positioned to characterize both the removed tank and the connecting pipes. The results of the RFI indicate that the PAH contamination exceeds background and is attributable to an unpermitted release. The extent was determined during a subsequent removal action (see Section 5.0).

Drainageway DW-2

Three sediment samples were collected from within DW-2 (see Figure 3-28). No inorganics were reported at concentrations greater than background. Methylene chloride and toluene were the only organic analytes detected. Both are considered to be associated with field and/or laboratory contamination

The RFI results therefore indicate no DW-2 contaminants at concentrations greater than background that are attributable to the site. DW-2 therefore is not subject to the closure requirements of 30 TAC §335.

Drainageway DW-3

The prominent feature in the area is a ditch that forms at a pipe connected to Bldg. 8505 floor drains (see Figure 3-29). At its origin, the ditch is approximately 0.5 feet deep and four feet wide. The ditch transitions into a 10-foot-wide swale in the vicinity of sample location DW3-118. Downgradient, the ditch opens and becomes unconfined between DW3-133 and DW3-003. Also investigated during the RFI were upland areas extending as much as 30 feet to the north and south of the ditch. The soil horizon in the area is limited by bedrock 1 to 3 feet bgs.

Indications of vehicle traffic are evident on both the north and south sides of the ditch. Vehicle tracks noted during the field investigation are represented by eroded areas visible on the aerial photograph of the site taken while the site was active (see Figure 1-3). The two historic sources of potential contamination were therefore present at the site; the pipe connected to Bldg. 8505 floor drains, and vehicular traffic.

A total of 63 surface and subsurface soil samples were collected from DW-3. Twenty-eight samples were collected within the ditch itself. The remaining samples were collected from the adjacent upland. Samples were analyzed for inorganics, SVOCs, VOCs, Pesticides/PCBs, and explosives. No pesticides/PCBs or explosives were detected. Toluene was the only VOC and is considered to be associated with field and/or laboratory contamination.

Detected analytes above background in surface samples included mercury and zinc in the samples closest to the pipe (DW3-001) and magnesium and selenium at the downgradient DW3-002 location. Zinc was detected at 2.4 times background. The remaining exceedances were less than 1.2 times background.

Sixteen PAHs were found in both surface and subsurface soil samples at DW-3. The sample with the greatest concentration of PAHs was outside of the ditch (DW3-103); however, supplemental samples (location DW3-106) failed to verify the high concentrations. Excluding the unverified PAH concentration at DW3-103, the DW-3 PAH concentrations are similar to those found in areas considered to be impacted by vehicle-related pollutants. As an example, benzo(a)anthracene (a common contaminant in areas impacted by vehicle pollutants) was reported at a maximum concentration of 2.8 in samples collected within the ditch and 6.1 in samples collected outside of the ditch. The maximum benzo(a)anthracene concentration in Area A-3 is 4.8 mg/kg. Area A-3 PAHs are considered to be attributable to vehicle-related pollutants. Within the ditch, however, the distribution of PAH concentration suggests a relation to a point source discharge, in that concentrations decrease with distance from the pipe. A notable decrease in ditch PAH concentrations is evident between locations DW3-117 and DW3-128 (see Figure 3-29). As shown in Table 6-1 of the RFI Report (TEC, 1999), PAH concentrations decrease significantly between DW3-118 and DW3-127.

Based on the results of the RFI, it is therefore assumed that zinc and PAH concentrations within the DW-3 ditch extending from the pipe discharge to the midpoint between DW3-118 and DW3-127 exceed background and are attributable to an unpermitted release. Although the PAHs in soils located beyond the top of the ditch bank and within the ditch downgradient from DW3-127 exceed background, they are considered attributable to vehicles that historically utilized that area. Areas to the north and south of the ditch are therefore not subject to the closure requirements of 30 TAC §335.

Drainageway DW-4

Drainageway DW-4 is located directly adjacent to a roadway. Nine sediment samples were collected from within DW-4 (see Figures 3-28 and 3-30). Five inorganics were reported at concentrations greater than background. The lead concentration was the highest relative to the background UTL_{95,95}. Sample DW4-001-01 contained lead at a concentration of 71.6 mg/kg, approximately 2.7 times the background. The remaining analytes were less than 1.7 times background.

The sample collected at the head of the drainageway near Bldg. 8514 (DW4-001-01) contained 13 SVOCs. Verification samples demonstrated that the PAH contamination was localized within 5 to 10 feet of the roadway and is therefore most likely associated with vehicle-related pollutants.

Toluene was the only organic compound detected and is attributed to field and/or laboratory contamination.

The RFI results therefore indicate no DW-4 contaminants at concentrations greater than background that are attributable to an unpermitted release. Although a number of inorganic analytes were reported at concentrations greater than background, the number of analytes, their concentration, and their distribution fail to indicate that the exceedances are attributable to an unauthorized discharge. In support of this assessment, available site history does not indicate that a relationship between assumed historic area use and those analytes reported above background. DW-4 therefore is not subject to the closure requirements of 30 TAC §335.

Drainageway DW-5

Five sediment and one surface water samples were collected from within DW-5 (see Figure 3-28). No inorganics were reported at concentrations greater than background. Methylene chloride and toluene were the only organic analytes detected. Both are considered to be associated with field and/or laboratory contamination.

The RFI results therefore indicate no DW-5 contaminants at concentrations greater than background that are attributable to the site. DW-5 therefore is not subject to the closure requirements of 30 TAC §335

Drainageway DW-6

Two sediment samples were collected from the top of each DW-6 ravine (see Figure 3-28). No inorganics were reported at concentrations greater than background. Toluene was the only organic analyte detected. The compound is considered to be associated with field and/or laboratory contamination.

The RFI results therefore indicate no DW-6 contaminants at concentrations greater than background that are attributable to the site. DW-6 therefore is not subject to the closure requirements of 30 TAC §335.

Drainageway DW-7

Two sediment samples were collected from within DW-7 (see Figure 3-28). No inorganics were reported at concentrations greater than background. Methylene chloride and toluene were the only organic analytes detected. Both are considered to be associated with field and/or laboratory contamination.

The RFI results therefore indicate no DW-7 contaminants at concentrations greater than background that are attributable to the site. DW-7 therefore is not subject to the closure requirements of 30 TAC §335.

Drainageway DW-8

Two sediment samples were collected from within DW-8 (see Figure 3-28). Magnesium was the only inorganic reported at a concentration greater than background. The analyte was detected at a concentration 1.1 times greater than background. Given the low magnitude of the exceedances and the fact that no source of magnesium contamination was found, the exceedance is not considered attributable to the site.

The RFI results therefore indicate no DW-8 contaminants at concentrations greater than background that are attributable to the site. DW-8 therefore is not subject to the closure requirements of 30 TAC §335.

Drainageway DW-9

Two sediment samples and one surface water sample were collected from within DW-9 (see Figure 3-28). No analytes were detected above the background UTL_{95,95} in the sample collected directly downgradient from the EOD range (DW9-001-01). The sample collected further downgradient contained a number of inorganic analytes at concentrations above the background UTL_{95,95}. The downgradient sample was collected within an area previously investigated and remediated. It is concluded that the increased concentrations are attributable to residuals remaining from the soil and debris removal.

The RFI results therefore indicate that the only analytes present at concentrations greater than background in DW-9 are associated with a previously remediated area that

has been closed by TNRCC. DW-9 therefore is not subject to the closure requirements of 30 TAC §335.

Seep Locations

Four sediment and 10 surface water samples were collected from four seep locations. One inorganic analyte was detected at a concentration greater than background at one seep location. Zinc was detected at a concentration 1.3 times background. Copper and nickel were reported in one surface water sample at concentrations 1.9 and 1.3 times background, respectively. Given the low magnitude of the exceedances and the fact that no source of zinc, copper, or nickel contamination was found, the exceedances are not considered attributable to the site.

The RFI results therefore indicate no seep contaminants at concentrations greater than background that are attributable the site. All seep areas therefore are not subject to the closure requirements of 30 TAC §335.

Groundwater

Groundwater samples were collected from three Paluxy Formation wells at the site (see Figure 3-31 of the RFI Report (TEC, 1999)). These wells included two of the previously existing onsite water supply wells and one upgradient monitoring well (WJEPX925) installed during a previous investigation. No SVOCs, VOCs, pesticide/PCBs, or explosive compounds were detected in the onsite wells. Twelve inorganic analytes were detected; seven were at concentrations above those reported for the background sample. Iron, magnesium, manganese, and potassium were no more than twice the background. Sodium, copper, and zinc were approximately three, four, and seven times the background, respectively. As previously discussed, these exceedances are attributed to the onsite well steel casing material or natural variability in groundwater quality.

The RFI results therefore indicate no groundwater contaminants at concentrations greater than background that are attributable to the site. The site groundwater thus currently meets the closure requirements of RRSN1

3.2 SUMMARY OF RESULTS WITH RESPECT TO RRSN2

This section provides an assessment of the closure requirements for those areas (or locations) where unpermitted releases have resulted in contaminant concentrations above background. The assessment involves the determination of the applicable requirements to meet RRSN2 (i.e., Deed Certifications for areas with contamination less than the RRSN2 CULs or removal actions for areas with contamination greater than the RRSN2 CULs). The areas (or locations) where contamination exists above background, as described in Section 3.1, are:

- Area A-3 (SWMU 59 and Building 8503) and drainageway DW-1;
- bunker drain areas;

- removed UST locations;
- Drainageway DW-3; and
- leachfield.

To determine the applicable closure requirements for the areas identified, an assessment of whether the contamination present exceeded respective CULs was performed individually for each area. The assessment was performed, as described in Section 5 of the RFI Report (TEC, 1999), using a two-step process:

- CULs are compared to the maximum detected contaminant concentrations. When the maximum detected concentration did not exceed the CUL, it was concluded that the respective contaminant did not exceed the CUL, and therefore, the RRSN2 requirements could be met with a Deed Certification. For contaminants whose maximum detected concentration exceeded the CUL, a second evaluation step was conducted.
- Exposure point concentration and/or single location outlier concentrations were identified for the respective contaminants as described in the Risk Evaluation. The exposure point concentration (or single location concentration) was then compared to the respective CUL. For exposure point concentrations that did not exceed the CUL, it was concluded that the RRSN2 requirements could be met with a Deed Certification. For exposure point concentrations that did exceed the CUL, it was concluded that additional removal actions would be necessary to meet the RRSN2 cleanup requirements. In this latter case, the amount of soil removed will be determined in the field through confirmation sampling and comparison of the sampling results with the CULs.

A summary of the closure requirements for each of the areas identified above is provided below.

Area A-3 (SWMU 59 and Building 8503) and Drainageway DW-1

As indicated in Section 3.1, inorganic and VOC contamination exceeds background and most likely is attributable to an unpermitted release from the site.

Analysis of analyte concentrations greater than background was performed in Section 5.1 of the RFI Report (TEC, 1999). Two analytes were found to exceed both background and the RRSN2 CULs. These included:

- mercury in the vicinity of sample location A3-006 (see Figure 3-6); and
- iron at sample location A3-011.

Limited amounts of iron-based materials were seen on the site during the investigation. Therefore, the iron exceedance is not considered representative of actual site contamination. The VOC contaminants were determined to be present at concentrations less than the RRSN2 CULs.

The majority of the area of concern contained contaminants with concentrations less than the CULs and can therefore be closed under RRSN2 with the appropriate deed notice. However, removal of mercury-contaminated soil in the vicinity of A3-006 was deemed necessary.

Bunker Drain Areas

As indicated in Section 3.1, inorganic and VOC contamination exceeded background and most likely is attributable to an unpermitted release from the site.

Analysis of analyte concentrations greater than background was performed in Section 5.1 of the RFI Report (TEC, 1999). Three analytes at six locations were found to exceed both background and the RRSN2 CULs. These included:

- mercury at sample location BD-002 and BD-018;
- copper at sample location BD-005; and
- cadmium at sample locations BD-130, BD-137, and BD-138.

The majority of the bunker drain areas of concern contained contaminants with concentrations less than the CULs and can therefore be closed under RRSN2 with the appropriate deed notice. However, the removal of mercury, copper, and cadmium contaminated soil at those locations identified above was deemed necessary.

Removed UST Locations

As indicated in Section 2.2, PAH contamination exceeding background at removed USTs located near Bldgs. 8500, 8507, and 8505 most likely is attributable to an unpermitted release from the site. The contamination from removed USTs associated with Bldgs. 8500 and 8507 is regulated under 30 TAC §335.

Analysis of analyte concentrations greater than background was performed in Section 5.1 of the RFI Report (TEC, 1999). Four analytes at removed USTs located near Bldgs. 8500 and 8507 were found to exceed both background and the RRSN2 CULs. These included:

- benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, and
- dibenzo(a,h.)anthracene at the removed USTs located near Bldg. 8500; and
- benzo(a)pyrene at the removed USTs located near Bldg. 8507.

Removal of PAH-contaminated soil at the removed UST locations associated with Bldgs 8500 and 8507 was therefore necessary in order to close areas under RRSN2.

As indicated in Section 3.1, removal of PAH-contaminated soil at the removed UST locations associated with Bldg. 8505 was necessary in order to close areas under PSTD regulations.

Drainageway DW-3

As indicated in Section 2.2, PAH contamination in the ditch exceeds background and most likely is attributable to an unpermitted release.

Analysis of analyte concentrations greater than background was performed in Section 5.1 of the RFI Report (TEC, 1999). This analysis was performed on EPC developed for the entire area of concern. Seven analytes were found to exceed both background and the RRSN2 CULs.

Removal of PAH-contaminated soil within the DW-3 ditch was deemed necessary in order to close areas under RRSN2. As described in Section 3.1, the ditch area requiring removal extended from the pipe discharge to the midpoint between DW3-118 and DW3-127. The width of the required removal area generally extends from the top of the south bank to the top of the north bank.

Leachfield

As indicated in Section 3.1, the RFI failed to identify an unpermitted release from the leachfield. The leachfield is considered a "leachate collection system" as defined by 30 TAC §335. As such it was determined that one wall of the tank at a minimum must be removed in order to close the area under RRSN1.

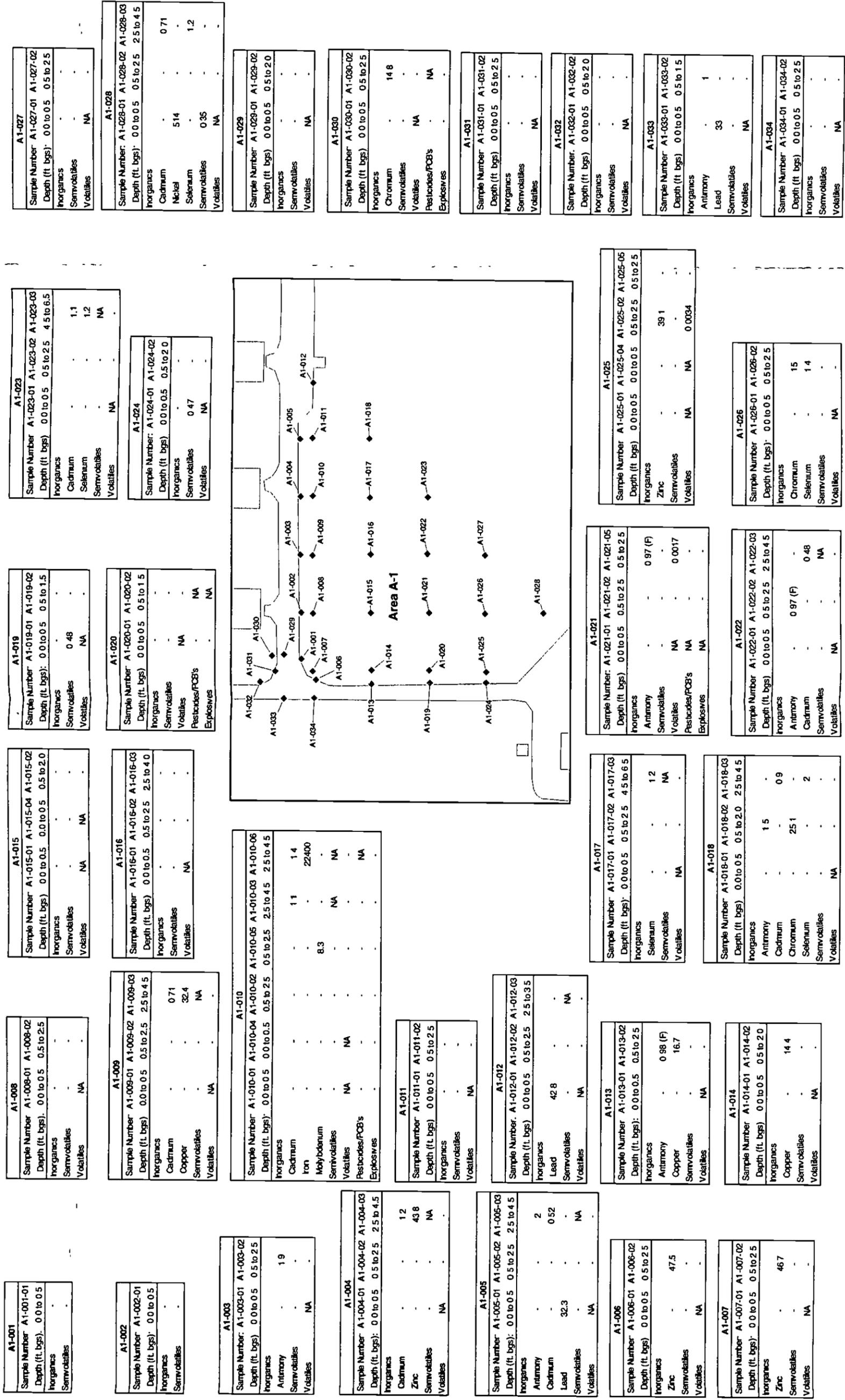


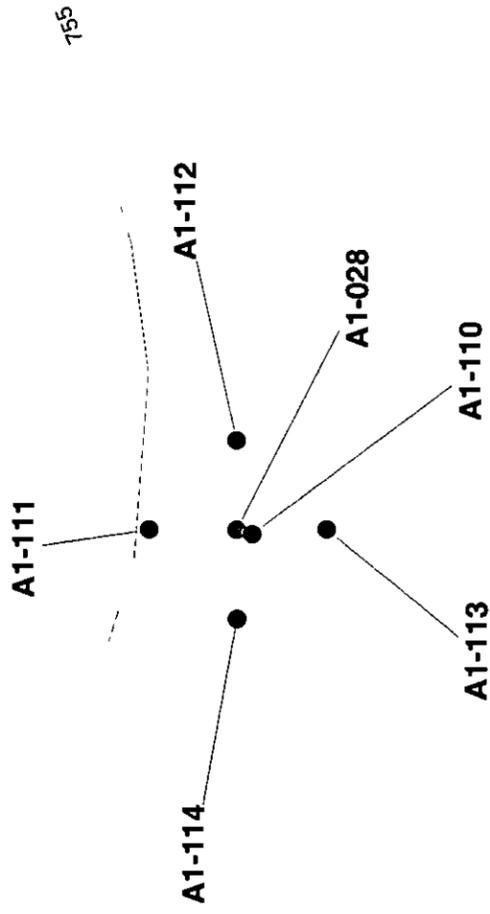
Figure 3-1
Soil Contaminant Distribution at the Outdoor Material Storage and Maintenance Area A-1



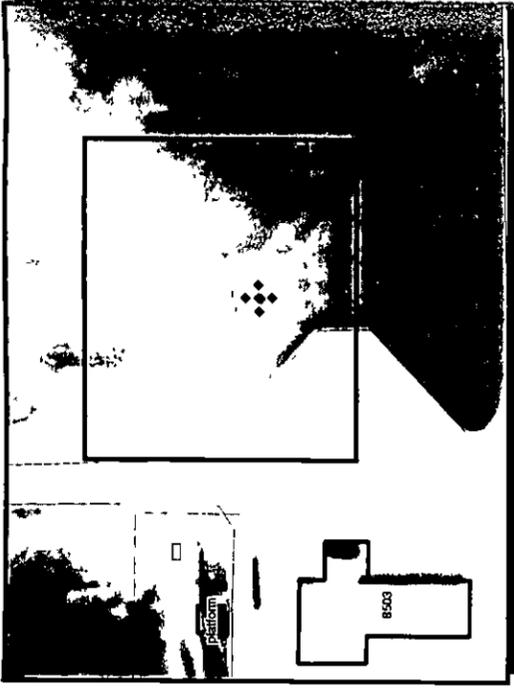
* Analyzed but not detected above background UTL_{95.5}
* Only values detected above the background UTL_{95.5} are included. All detected values provided in Section 3.0 data tables.
* All concentrations reported in mg/kg
* Total values provided for SVOCs, VOCs, explosive compounds, and PAHs. Individual detected constituents provided in Section 3.0 data tables.

661 93

760



Approximate Scale 1 inch = 21 feet



**Nickel Concentration
Relative to Background UTL^{95,95}**

- Less than background
- Detected at concentration less than 100 times background

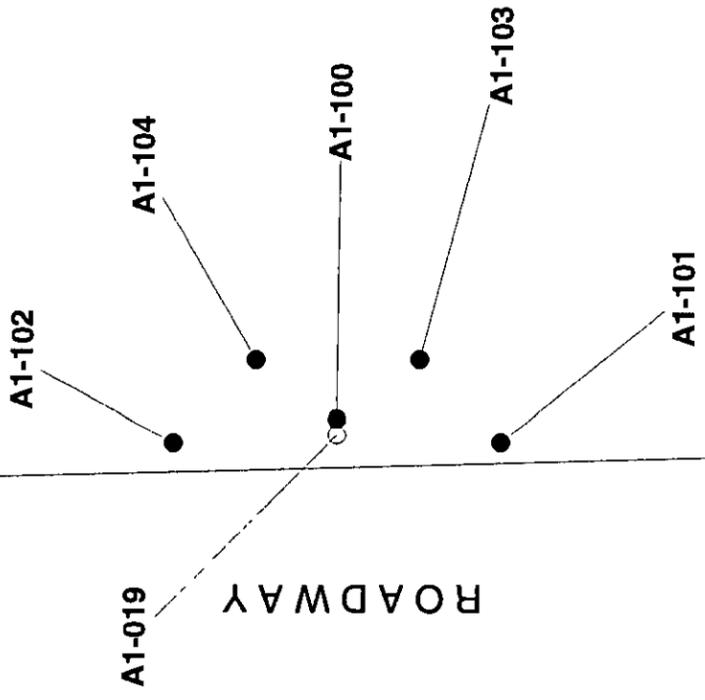
**Figure 3-2
Surface Soil Nickel
Levels in the Vicinity of
Location A1-028**



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760



**PAH Concentration
Relative to Background**

- Less than background
- Detected at concentration less than 10 times background

**Figure 3-3
Surface Soil PAH
Levels in the Vicinity
of Location A1-019**



Approximate Scale 1 inch = 22 feet



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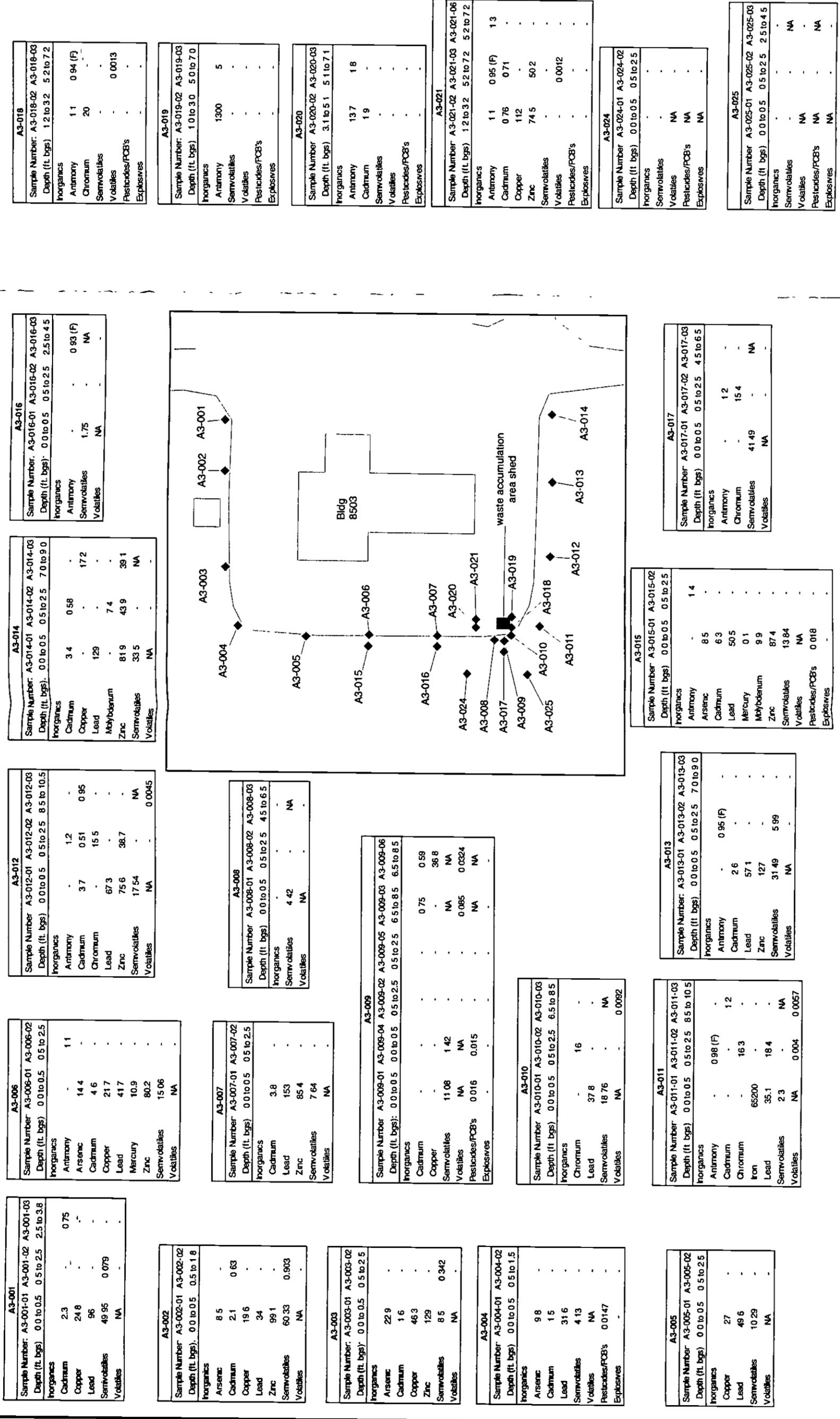
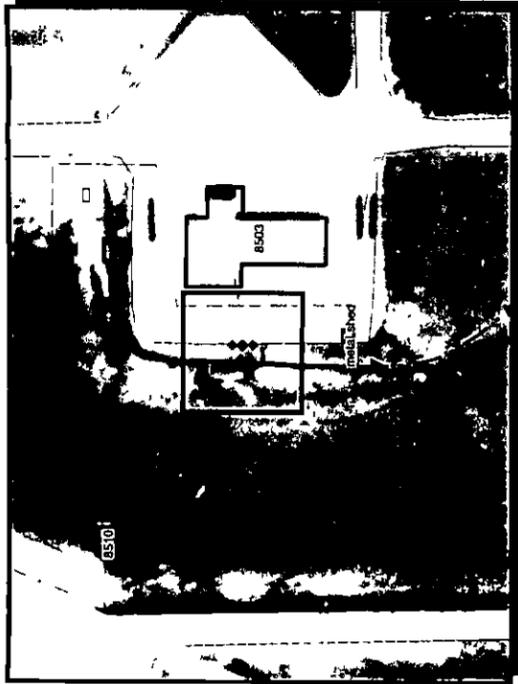


Figure 3-5
Soil Contaminant Distribution at the Waste Accumulation Area (SWMU 59) and Bldg. 8503 Area A-3

- Analyzed but not detected above background UTL_{95%}
 * Only values detected above the background UTL_{95%} are included All detected values provided in Section 3.0 data tables
 * All concentrations reported in mg/kg
 * Total values provided for SVOCs, VOCs, explosive compounds, and PAHs Individual detected constituents provided in Section 3.0 data tables



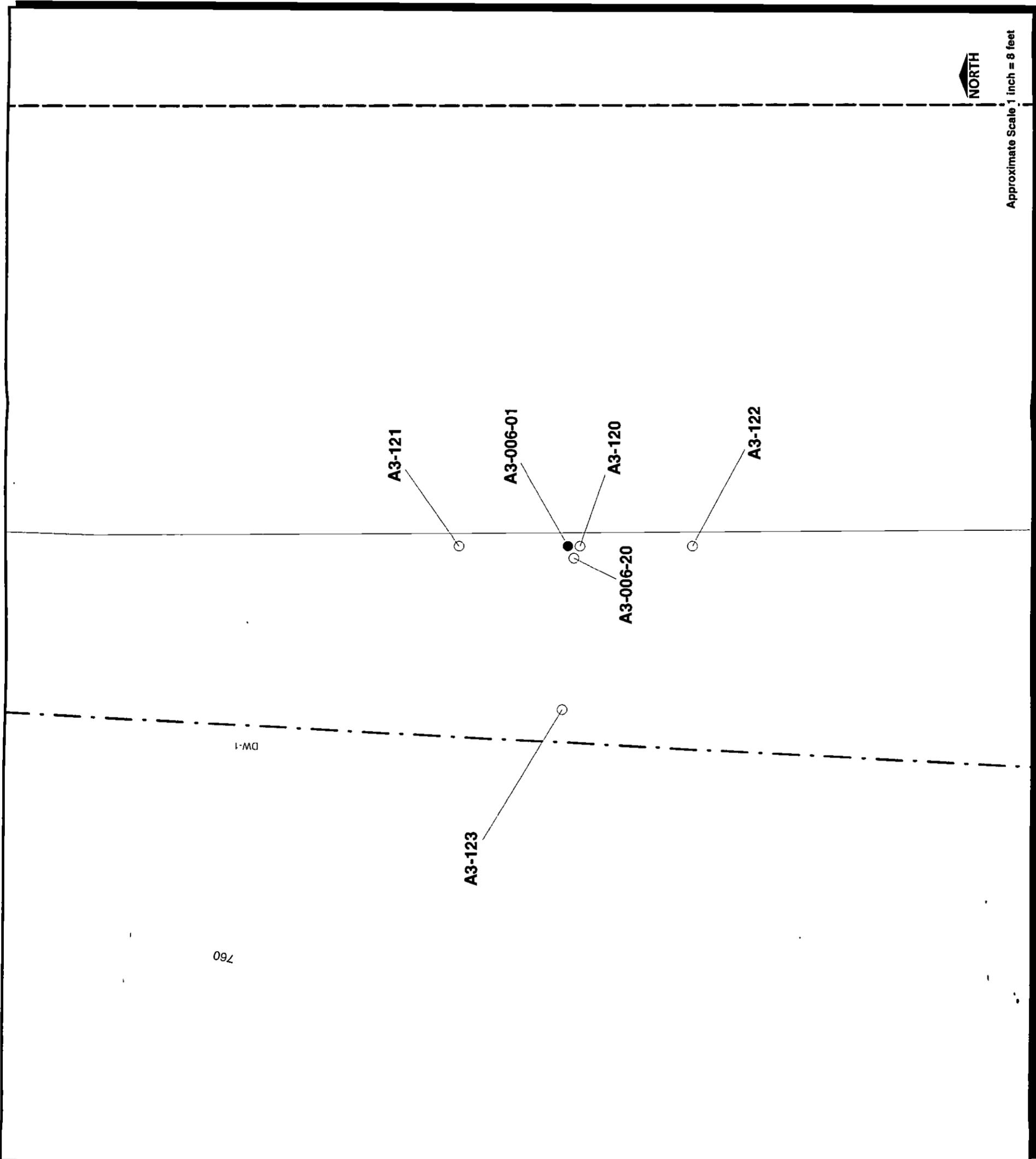
**Mercury Concentration
Relative to Background UTL_{95,95}**

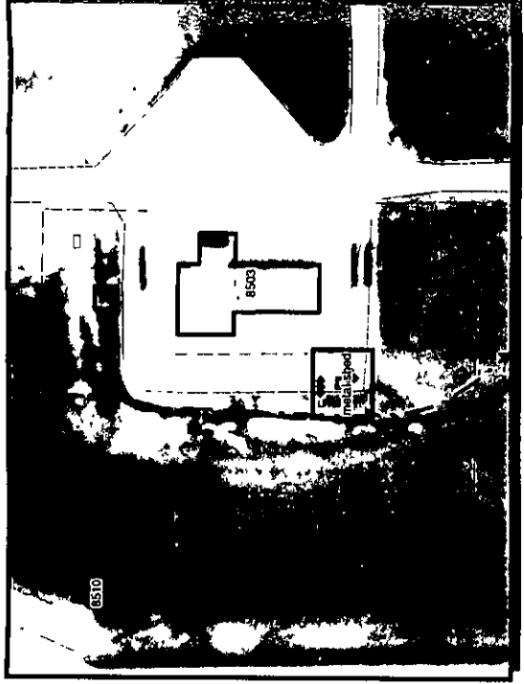
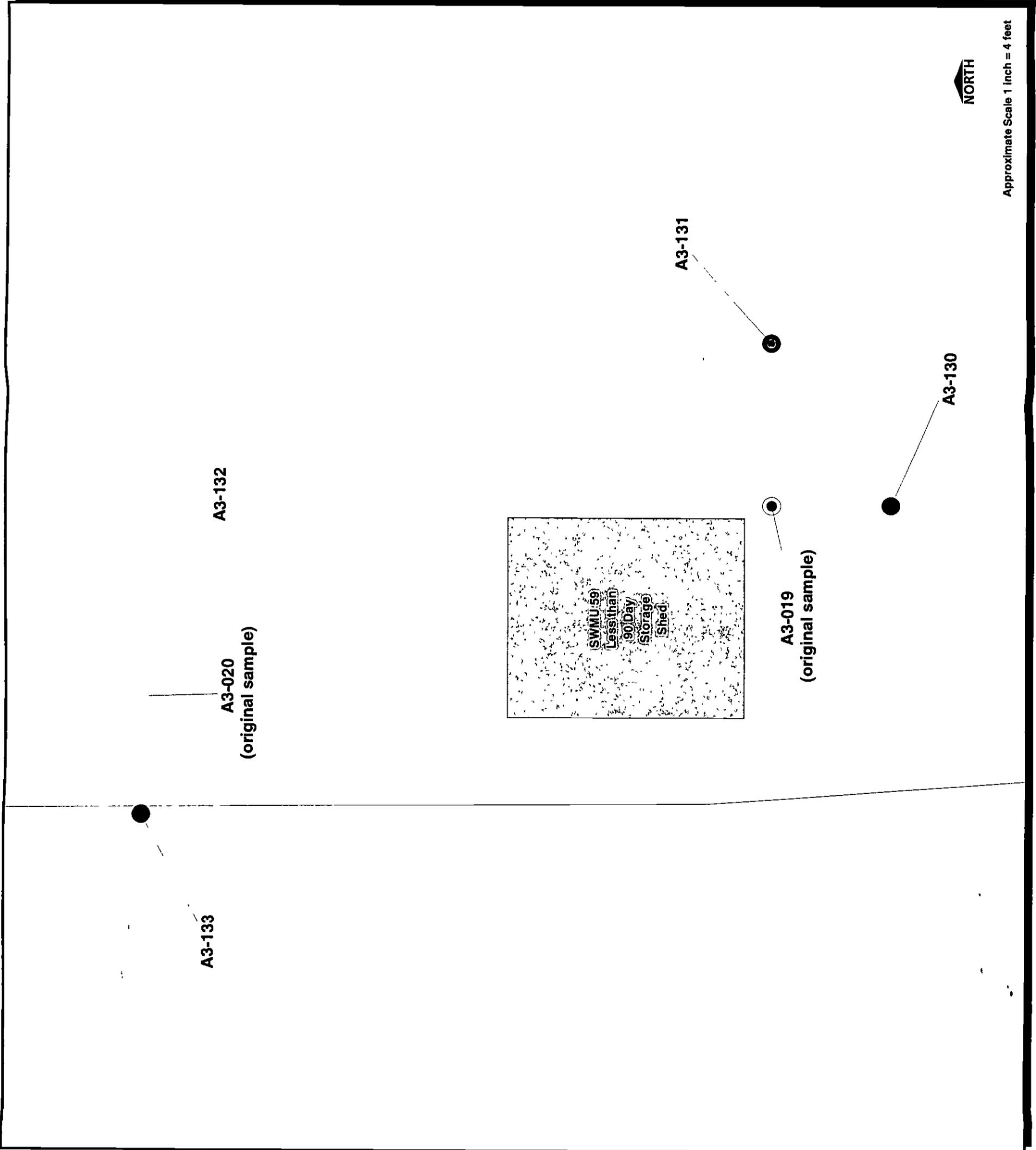
- Detected at concentration less than 10 times background
- Detected at concentration greater than 100 times background

**Figure 3-6
Surface Soil Mercury
Levels in the Vicinity of
Location A3-006**



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 Prepared By D. Bedarf
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**Antimony Concentration
Relative to Background UTL_{95,95}**

- Less than background
- Not detected; detection limit above background
- Detected at concentration less than 10 times background
- Detected at concentration less than 100 times background
- Detected at concentration greater than 100 times background

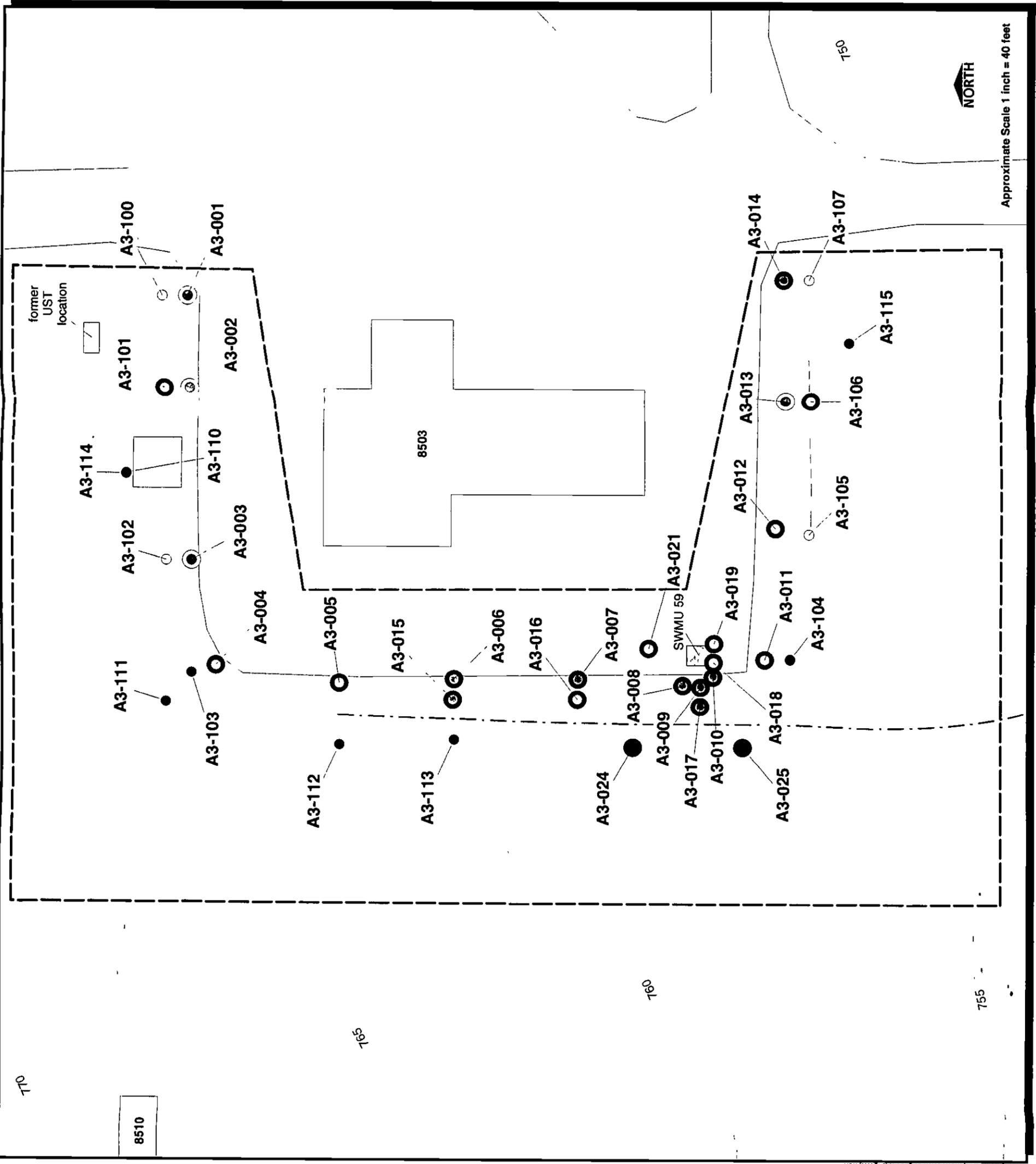
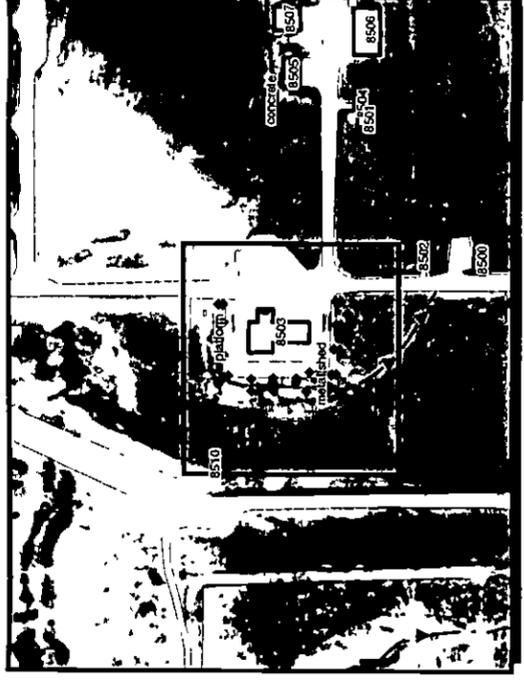
Inner color indicates Upper Subsurface (0.5-2.5 ft. bgs)
Outer color indicates Lower Subsurface (>2.5 ft. bgs)

**Figure 3-7
Subsurface Soil Antimony
Levels Beneath Concrete Pad
in the Vicinity of SWMU 59**



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Prepared By D. Bedarf
Project No. P-3109

Approximate Scale 1 inch = 4 feet



**PAH Concentration
Relative to Background**

- Less than background
- Detected at concentration less than 10 times background
- Detected at concentration less than 100 times background

Inner color indicates Surface
Outer color indicates Upper Subsurface (0.5-2.5 ft. bgs)

**Figure 3-8
Surface and Upper Subsurface
Soil PAH Levels in the Vicinity
of Bldg. 8503 and SWMU 59**



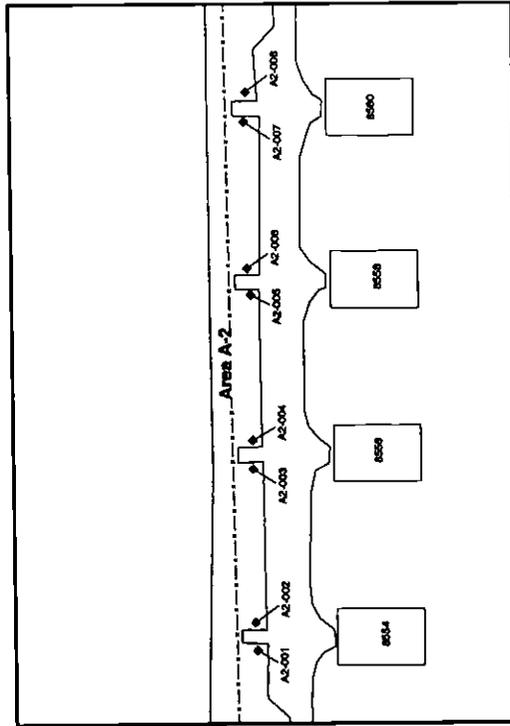
Creation Date 12/14/1998
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Project Manager B. Duffner
Prepared By D. Bedard
Project No P-3109

A2-001	
Sample Number	A2-001-01 A2-001-02
Depth (ft. bgs)	0.0 to 0.5 0.5 to 1.2
Inorganics	-
Semivolatiles	-
Volatiles	NA

A2-002	
Sample Number	A2-002-01 A2-002-02
Depth (ft. bgs)	0.0 to 0.5 0.5 to 1.0
Inorganics	-
Antimony	1.4
Molybdenum	8.7
Semivolatiles	-
Volatiles	NA

A2-003	
Sample Number	A2-003-01 A2-003-04 A2-003-02
Depth (ft. bgs)	0.0 to 0.5 0.0 to 0.5 0.5 to 1.5
Inorganics	-
Arsenic	8.3
Semivolatiles	-
Volatiles	NA

A2-005	
Sample Number	A2-005-01 A2-005-02
Depth (ft. bgs)	0.0 to 0.5 0.5 to 2.5
Inorganics	-
Zinc	71.8
Semivolatiles	-
Volatiles	NA



A2-004	
Sample Number	A2-004-01 A2-004-02 A2-004-05
Depth (ft. bgs)	0.0 to 0.5 0.5 to 1.5 0.5 to 1.5
Inorganics	-
Semivolatiles	NA
Volatiles	0.001

A2-007	
Sample Number	A2-007-01 A2-007-02
Depth (ft. bgs)	0.0 to 0.5 0.5 to 1.5
Inorganics	-
Zinc	70
Semivolatiles	-
Volatiles	NA

A2-008	
Sample Number	A2-008-01 A2-008-02
Depth (ft. bgs)	0.0 to 0.5 0.5 to 1.5
Inorganics	-
Lead	27.3
Semivolatiles	-
Volatiles	NA
Pesticides/PCBs	-
Explosives	-

A2-006	
Sample Number	A2-006-01 A2-006-02 A2-006-05
Depth (ft. bgs)	0.0 to 0.5 0.5 to 2.5 0.5 to 2.5
Inorganics	-
Antimony	1
Copper	16
Semivolatiles	-
Volatiles	NA

- = Analyzed but not detected above background $UT_{95,95}$
- Only values detected above the background $UT_{95,95}$ are included. All detected values provided in Section 3.0 data tables
- All concentrations reported in mg/kg
- Total values provided for SVOCs, VOCs, explosive compounds, and PAHs. Individual detected constituents provided in Section 3.0 data tables

661 95

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 Project Manager B. Duffner
 Prepared By D. Bedard
 Project No P-3109

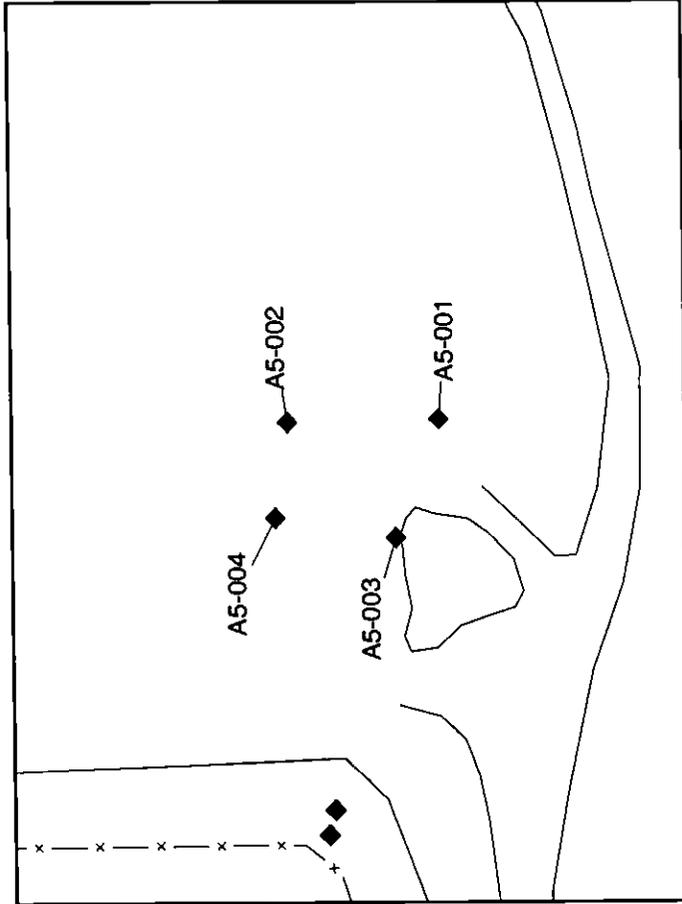
Figure 3-4 Soil Contaminant Distribution at the Outdoor Materiel Storage and Maintenance Area A-2

A5-004	
Sample Number:	A5-004-01 A5-004-02
Depth (ft. bgs):	0.0 to 0.5 0.5 to 1.7
Inorganics	-
Antimony	1.2
Semivolatiles	-
Volatiles	NA
Pesticides/PCBs	-
Explosives	-

A5-003	
Sample Number:	A5-003-01 A5-003-02 A5-003-03 A5-003-04 A5-003-05
Depth (ft. bgs):	0.0 to 0.5 0.5 to 2.5 0.5 to 2.5 2.5 to 4.5 2.5 to 4.5
Inorganics	-
Antimony	2.5
Cadmium	0.6
Copper	34.6
Semivolatiles	-
Volatiles	NA
Pesticides/PCBs	NA
Explosives	NA

A5-001	
Sample Number:	A5-001-01 A5-001-02 A5-001-03
Depth (ft. bgs):	0.0 to 0.5 0.5 to 2.5 2.5 to 4.5
Inorganics	-
Cadmium	1
Molybdenum	7.3
Selenium	1.2
Zinc	55.7
Semivolatiles	-
Volatiles	NA
Pesticides/PCBs	NA
Explosives	NA

A5-002	
Sample Number:	A5-002-01 A5-002-02
Depth (ft. bgs):	0.0 to 0.5 0.5 to 2.5
Inorganics	-
Semivolatiles	-
Volatiles	NA
Pesticides/PCBs	-
Explosives	-



- Analyzed but not detected above background $UTL_{95.95}$
- Only values detected above the background $UTL_{95.95}$ are included. All detected values provided in Section 3.0 data tables
- All concentrations reported in mg/kg
- Total values provided for SVOCs, VOCs, explosive compounds, and PAHs. Individual detected constituents provided in Section 3.0 data tables

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 Rev Date 07/23/1999
 Project Manager B. Duffner
 Prepared By D. Bednar
 Project No P-3109

Figure 3-9 -- Soil Contaminant Distribution at the Disturbed Surface Area A-5

EOD-001	
Sample Number:	EOD-001-01 EOD-001-02
Depth (ft. bgs):	0.0 to 0.5 0.5 to 2.0
Inorganics	-
Explosives	-

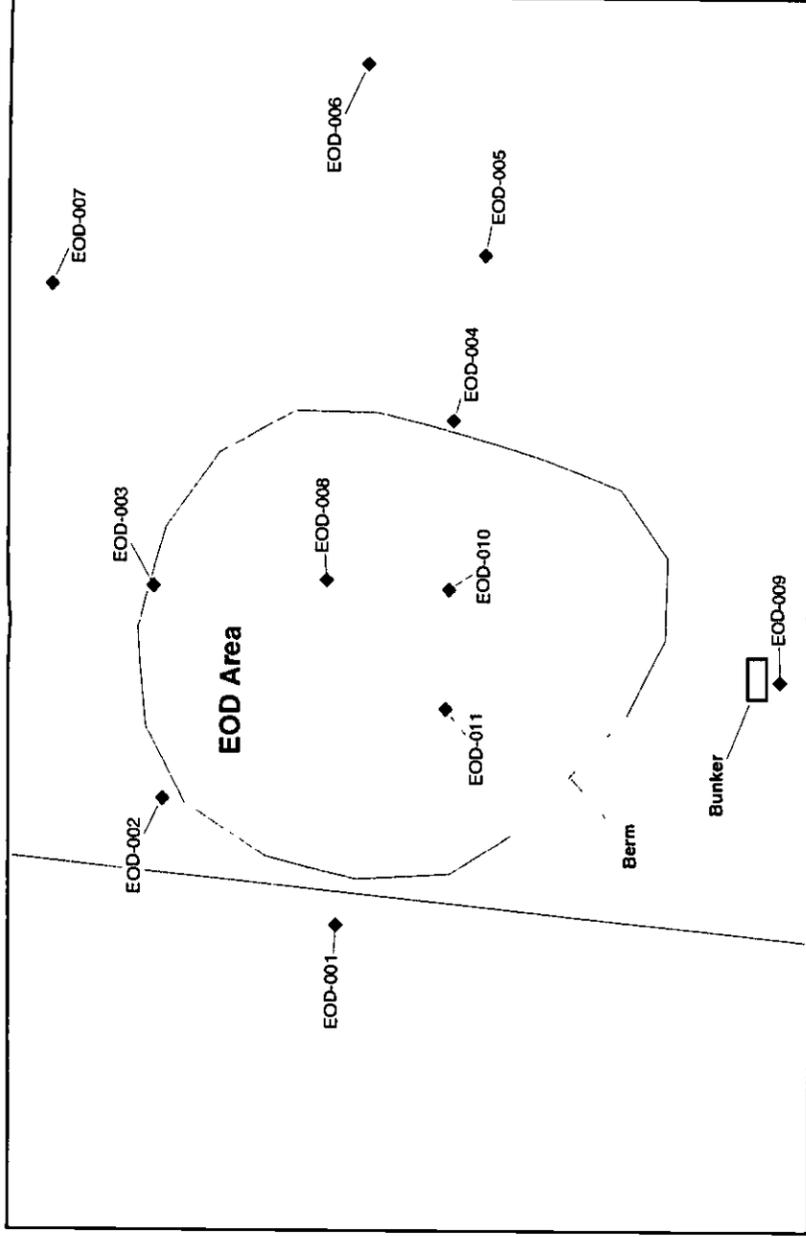
EOD-002	
Sample Number:	EOD-002-01 EOD-002-02
Depth (ft. bgs):	0.0 to 0.5 0.5 to 2.5
Inorganics	-
Copper	20.6
Silver	0.73
Explosives	-

EOD-003	
Sample Number:	EOD-003-01 EOD-003-02 EOD-003-03
Depth (ft. bgs):	0.0 to 0.5 0.5 to 2.5 6.5 to 8.0
Inorganics	-
Silver	0.67 1.9
Zinc	-
Explosives	54.4

EOD-004	
Sample Number:	EOD-004-01 EOD-004-02 EOD-004-03
Depth (ft. bgs):	0.0 to 0.5 0.5 to 2.5 4.5 to 5.0
Inorganics	-
Arsenic	10.6
Vanadium	69.6
Zinc	-
Explosives	44.7

EOD-005	
Sample Number:	EOD-005-01 EOD-005-02 EOD-005-03
Depth (ft. bgs):	0.0 to 0.5 0.5 to 2.5 4.5 to 6.0
Inorganics	-
Explosives	-

EOD-007	
Sample Number:	EOD-007-01 EOD-007-02
Depth (ft. bgs):	0.0 to 0.5 0.5 to 2.5
Inorganics	-
Explosives	-



EOD-009	
Sample Number:	EOD-009-01 EOD-009-04 EOD-009-02
Depth (ft. bgs):	0.0 to 0.5 0.0 to 0.5 0.5 to 2.0
Inorganics	-
Antimony	-
Selenium	2.2
Thallium	5
Explosives	4.1

EOD-010	
Sample Number:	EOD-010-01 EOD-010-02 EOD-010-05 EOD-010-03 EOD-010-06
Depth (ft. bgs):	0.0 to 0.5 0.5 to 2.5 0.5 to 2.5 4.5 to 6.5 4.5 to 6.5
Inorganics	-
Antimony	1
Zinc	0.98 (F)
Explosives	38.6

EOD-008	
Sample Number:	EOD-008-01 EOD-008-02 A1-008-03
Depth (ft. bgs):	0.0 to 0.5 0.5 to 2.5 2.5 to 4.5
Inorganics	-
Explosives	-

EOD-006	
Sample Number:	EOD-006-01 EOD-006-02
Depth (ft. bgs):	0.0 to 0.5 0.5 to 2.5
Inorganics	-
Cadmium	0.65
Copper	14.8
Silver	1.5
Explosives	28.23

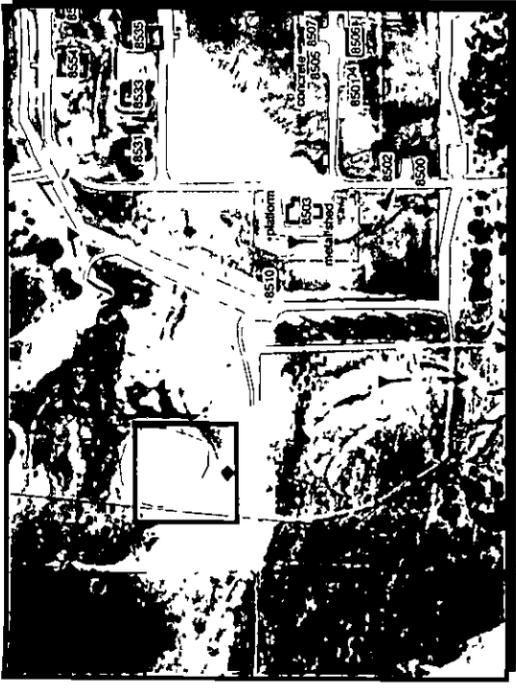
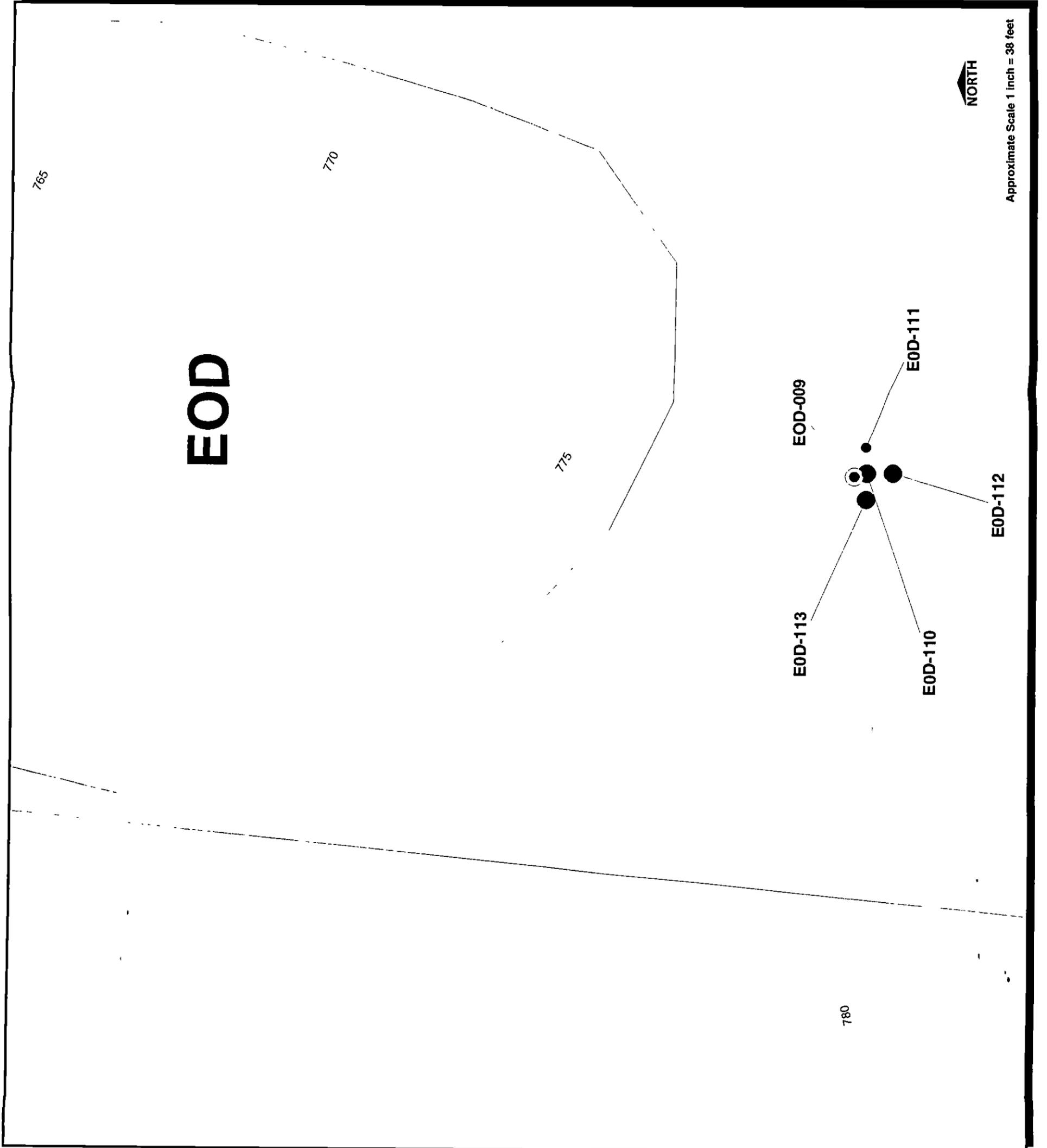
EOD-011	
Sample Number:	EOD-011-01 EOD-011-02 EOD-011-03
Depth (ft. bgs):	0.0 to 0.5 0.5 to 2.5 5.5 to 7.5
Inorganics	-
Antimony	1
Cadmium	-
Zinc	0.48
Explosives	65.1

Creation Date 02/01/1999
 Rev Date 07/16/1999
 Project Manager B Duffner
 Prepared By D Bedard
 Project No P-3109



= Analyzed but not detected above background UTL_{95.95}
 • Only values detected above the background UTL_{95.95} are included. All detected values provided in Section 3.0 data tables
 • All concentrations reported in mg/kg
 • Total values provided for SVOCs, VOCs, explosive compounds, and PAHs. Individual detected constituents provided in Section 3.0 data tables

Figure 3-10
 Soil Contaminant Distribution
 at the EOD Range



**Thallium Concentration
Relative to Background UTL_{95,95}**

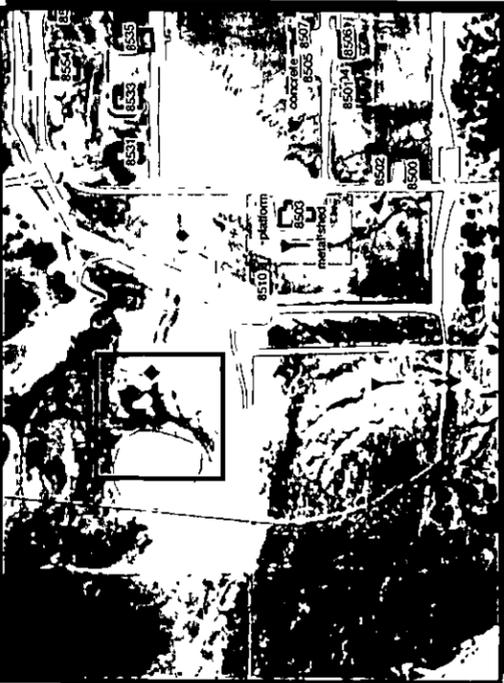
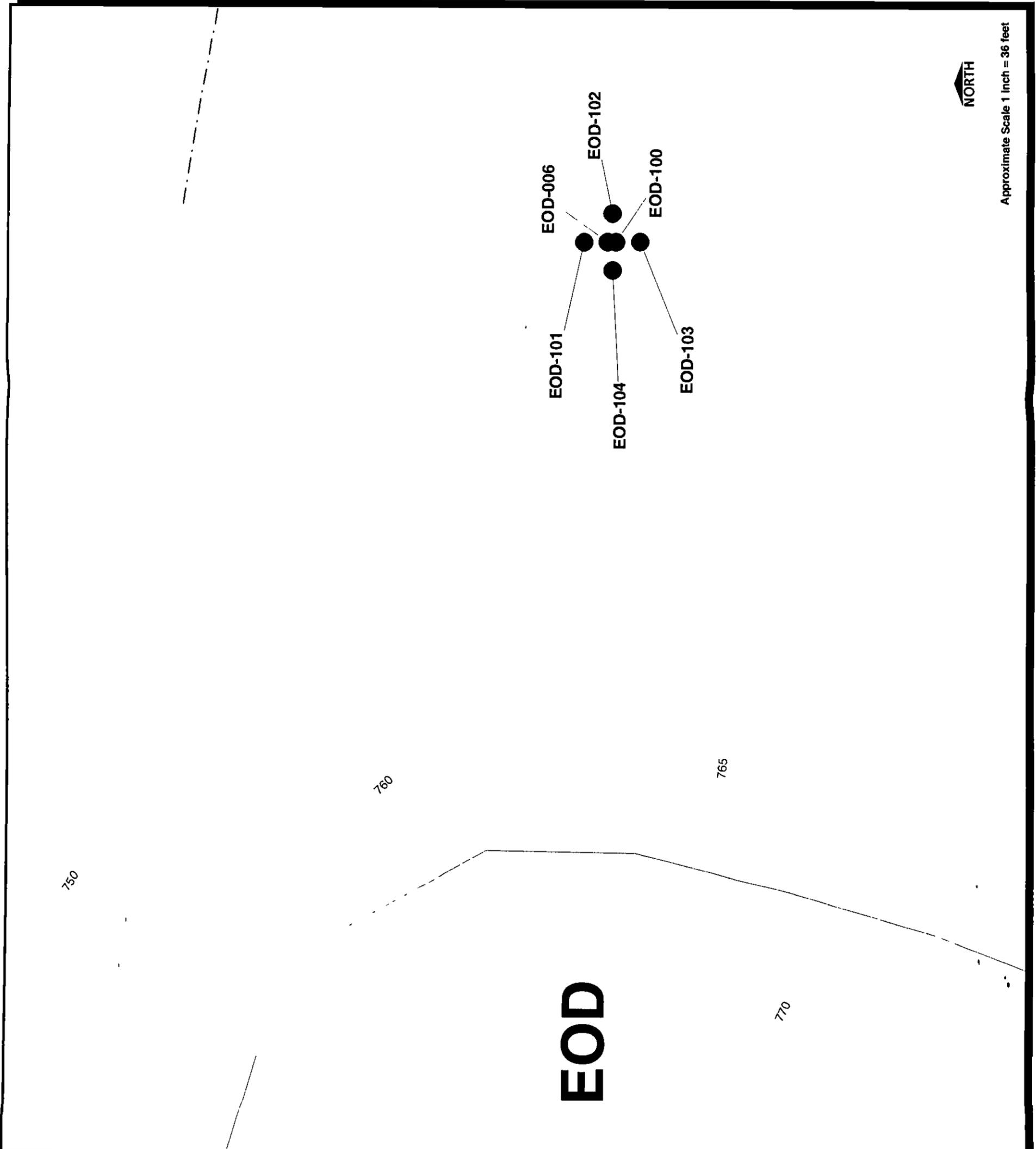
- Less than background
- Detected at concentration less than 10 times background

Inner color indicates Surface
Outer color indicates Upper Subsurface (0.5-2.5 ft. bgs)

**Figure 3-11
Surface and Subsurface Soil
Thallium Levels in the
Vicinity of EOD-009**



Creation Date 12/14/1998
Rev. Date 05/05/1999
Project Manager B. Duffner
Prepared By D. Bedarf
Project No. P-3109



Dinitrotoluene Concentration Relative to Background

- Less than background
- Detected at concentration greater than 100 times background

Inner color indicates Surface
Outer color indicates Upper Subsurface (0.5-2.5 ft. bgs)

Figure 3-12
Surface and Subsurface Soil
Dinitrotoluene Levels
in the Vicinity of
Location EOD-006



Creation Date 12/14/1998
Rev Date 05/05/1999
Project Manager B. Duffner
Prepared By D. Bedarf
Project No P-3109

BD-001	
Sample Number: BD-001-01	BD-001-02
Depth (ft. bgs): 0.0 to 0.5 0.5 to 2.5	
Inorganics	
Lead	47.4
Mercury	0.057 (F)
Explosives	-

BD-002	
Sample Number: BD-002-01	BD-002-02
Depth (ft. bgs): 0.0 to 0.5 0.5 to 2.5	
Inorganics	
Cadmium	8
Lead	30.8
Mercury	0.2
Zinc	48.2
Explosives	-

BD-003	
Sample Number: BD-003-01	BD-003-02
Depth (ft. bgs): 0.0 to 0.5 0.5 to 2.5 4.5 to 6.0	
Inorganics	
Chromium	15.4
Iron	-
Lead	24500
Mercury	-
Nickel	-
Zinc	23.5
Explosives	40.9
	NA

BD-004	
Sample Number: BD-004-01	BD-004-02
Depth (ft. bgs): 0.0 to 0.5 0.5 to 2.5 4.5 to 6.5	
Inorganics	
Arsenic	12
Cadmium	9.7
Copper	355
Zinc	50.2
Explosives	NA

BD-005	
Sample Number: BD-005-01	BD-005-02
Depth (ft. bgs): 0.0 to 0.5 0.5 to 2.5 2.5 to 4.5	
Inorganics	
Cadmium	0.88
Chromium	39
Copper	166
Lead	49.5
Zinc	97.7
Explosives	NA

BD-006	
Sample Number: BD-006-01	BD-006-02
Depth (ft. bgs): 0.0 to 0.5 0.5 to 2.5 2.5 to 4.0	
Inorganics	
Lead	19.8
Mercury	0.072 (F)
Zinc	112
Explosives	NA

BD-007	
Sample Number: BD-007-01	BD-007-02
Depth (ft. bgs): 0.0 to 0.5 0.5 to 2.5 2.5 to 3.5	
Inorganics	
Cadmium	1.3
Chromium	-
Lead	65.9
Zinc	347
Explosives	NA

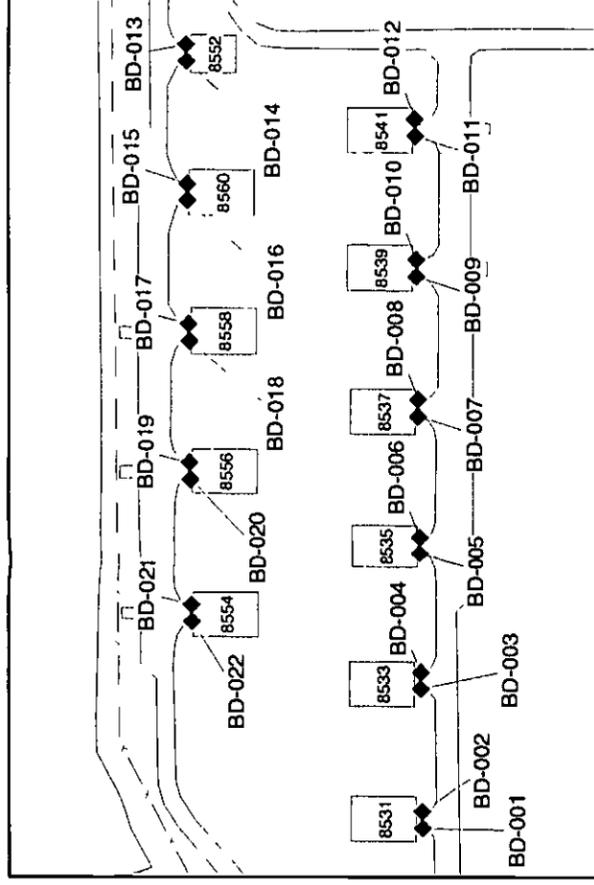
BD-008	
Sample Number: BD-008-01	BD-008-02
Depth (ft. bgs): 0.0 to 0.5 0.5 to 2.5 2.5 to 4.5	
Inorganics	
Cadmium	1.8
Chromium	2.2
Copper	91.4
Lead	29
Zinc	224
Explosives	61.5
	NA

BD-009	
Sample Number: BD-009-01	BD-009-02
Depth (ft. bgs): 0.0 to 0.5 0.5 to 2.0	
Inorganics	
Lead	44
Mercury	0.056 (F)
Zinc	134
Explosives	-

BD-010	
Sample Number: BD-010-01	BD-010-02
Depth (ft. bgs): 0.0 to 0.5 0.0 to 0.5 0.5 to 2.5 0.5 to 2.5	
Inorganics	
Arsenic	8.8
Cadmium	2.6
Cobalt	4.5
Copper	11.5
Iron	20.7
Lead	36700
Manganese	29.2
Nickel	79.3
Zinc	603
Explosives	25
	142

BD-011	
Sample Number: BD-011-01	BD-011-02
Depth (ft. bgs): 0.0 to 0.5 0.5 to 2.0	
Inorganics	
Cadmium	0.79
Chromium	16.1
Copper	40.6
Lead	60.5
Zinc	250
Explosives	55

BD-012	
Sample Number: BD-012-01	BD-012-02
Depth (ft. bgs): 0.0 to 0.5 0.5 to 2.5	
Inorganics	
Cadmium	2.4
Chromium	25.3
Cobalt	11.4
Copper	39.1
Iron	48700
Lead	45.3
Nickel	27.5
Selenium	-
Zinc	160
Explosives	71.1



BD-013	
Sample Number: BD-013-01	BD-013-02
Depth (ft. bgs): 0.0 to 0.5 0.5 to 1.2	
Inorganics	
Cadmium	2.5
Chromium	11
Copper	15.2
Lead	30.4
Zinc	69.4
Explosives	45.3

BD-014	
Sample Number: BD-014-01	BD-014-02
Depth (ft. bgs): 0.0 to 0.5 0.5 to 1.5	
Inorganics	
Cadmium	4.5
Copper	26.7
Lead	62.3
Zinc	101
Explosives	21.2

BD-015	
Sample Number: BD-015-01	BD-015-02
Depth (ft. bgs): 0.0 to 0.5 0.5 to 2.5	
Inorganics	
Cadmium	-
Lead	80
Zinc	201
Explosives	0.61

BD-016	
Sample Number: BD-016-01	BD-016-02
Depth (ft. bgs): 0.0 to 0.5 0.5 to 2.5	
Inorganics	
Cadmium	1.5
Copper	30.1
Lead	67.9
Mercury	0.14
Zinc	179
Explosives	NA

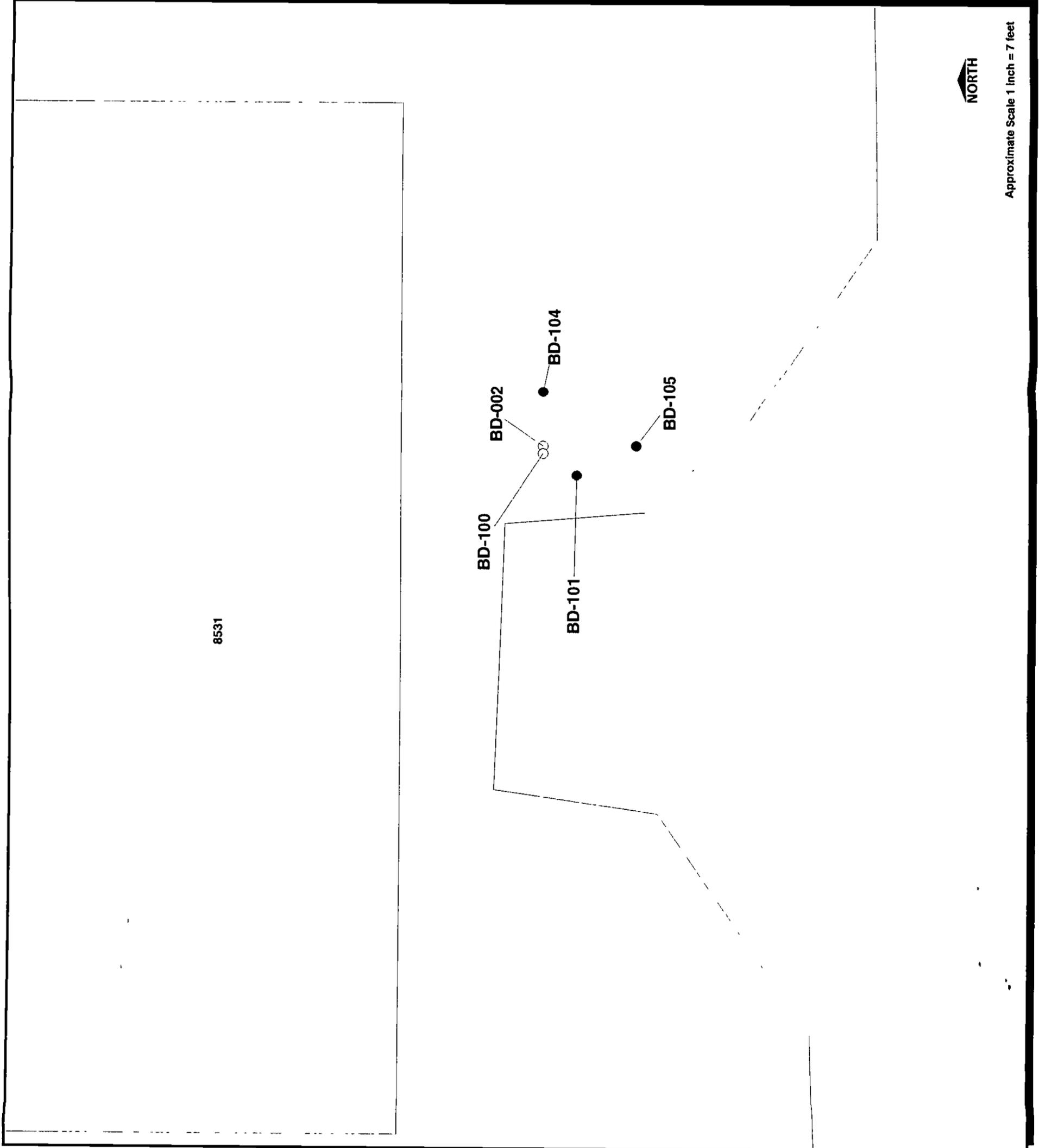
BD-019	
Sample Number: BD-019-01	BD-019-02
Depth (ft. bgs): 0.0 to 0.5 0.5 to 2.5	
Inorganics	
Cadmium	3.7
Chromium	0.79
Cobalt	15.8
Copper	10.1
Iron	32.5
Lead	37500
Nickel	43
Zinc	22.2
Explosives	187

BD-020	
Sample Number: BD-020-01	BD-020-02
Depth (ft. bgs): 0.0 to 0.5 0.0 to 0.5 0.5 to 2.0 0.5 to 2.0	
Inorganics	
Cadmium	NA
Lead	63.5
Zinc	143
Explosives	NA
	0.88
	58.6
	0.69

BD-021	
Sample Number: BD-021-01	BD-021-02
Depth (ft. bgs): 0.0 to 0.5 0.5 to 2.0	
Inorganics	
Cadmium	1.3
Copper	43.8
Lead	79.5
Zinc	285
Explosives	0.7

BD-022	
Sample Number: BD-022-01	BD-022-02
Depth (ft. bgs): 0.0 to 0.5 0.5 to 2.0	
Inorganics	
Cadmium	-
Copper	19.5
Lead	32.2
Zinc	149
Explosives	242

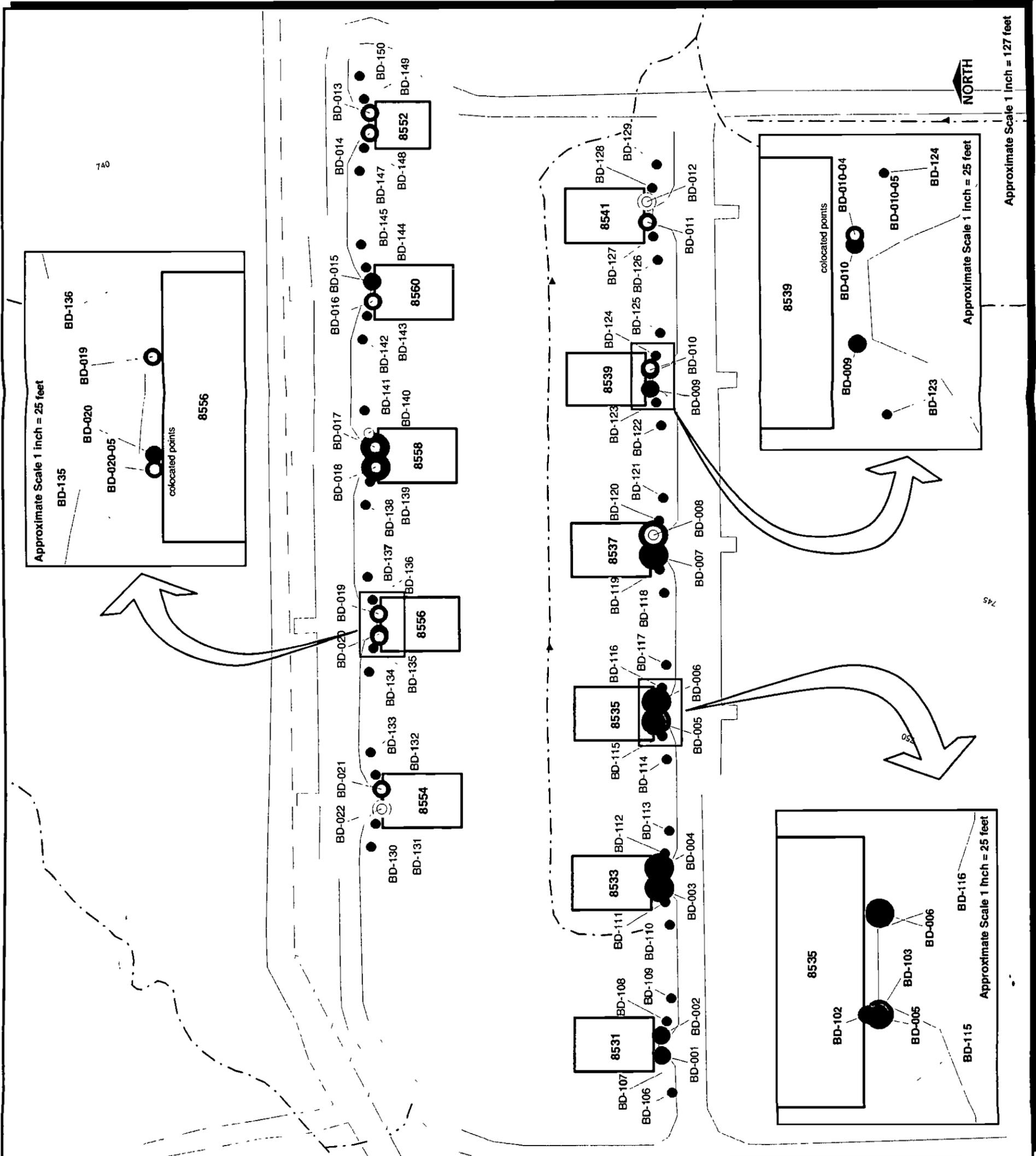
Figure 3-13
 Soil Contaminant Distribution at the
 Bunker Floor Drain Outlets



**Mercury Concentration
Relative to Background UTL_{95,95}**

- Less than background
- Detected at concentration less than 10 times background
- Detected at concentration less than 100 times background

**Figure 3-14
Surface Soil Mercury
Levels Adjacent to
Bunker Bldg. 8531**



Copper Concentration Relative to Background UTL_{95,95}

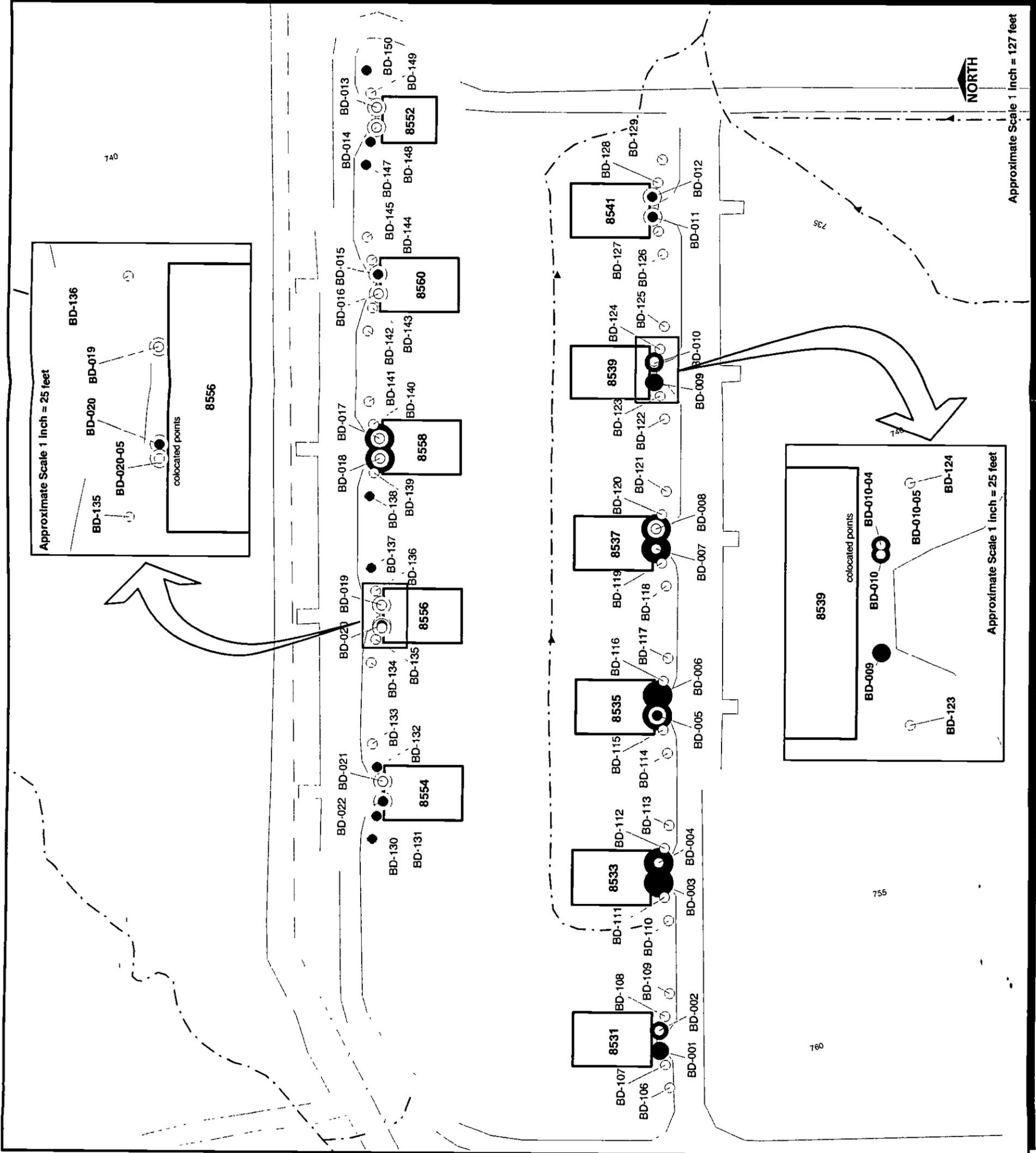
- Less than background
- Detected at concentration less than 10 times background
- Detected at concentration less than 100 times background

Inner color indicates Surface
Middle color indicates Upper Subsurface (0.5-2.5 ft. bgs)
Outer color indicates Lower Subsurface (>2.5 ft. bgs)

Figure 3-15
Surface and Subsurface
Soil Copper Lev Is
Adjacent to Bunker Buildings



Creation Date 12/14/1998
Rev Date 05/11/1999
Project Manager B. Duffner
Prepared By D. Bedart
Project No P-3109



Cadmium Concentration Relative to Background UTL^{95,95}

- Less than background
- Detected at concentration less than 10 times background
- Detected at concentration less than 100 times background

Inner color indicates Surface

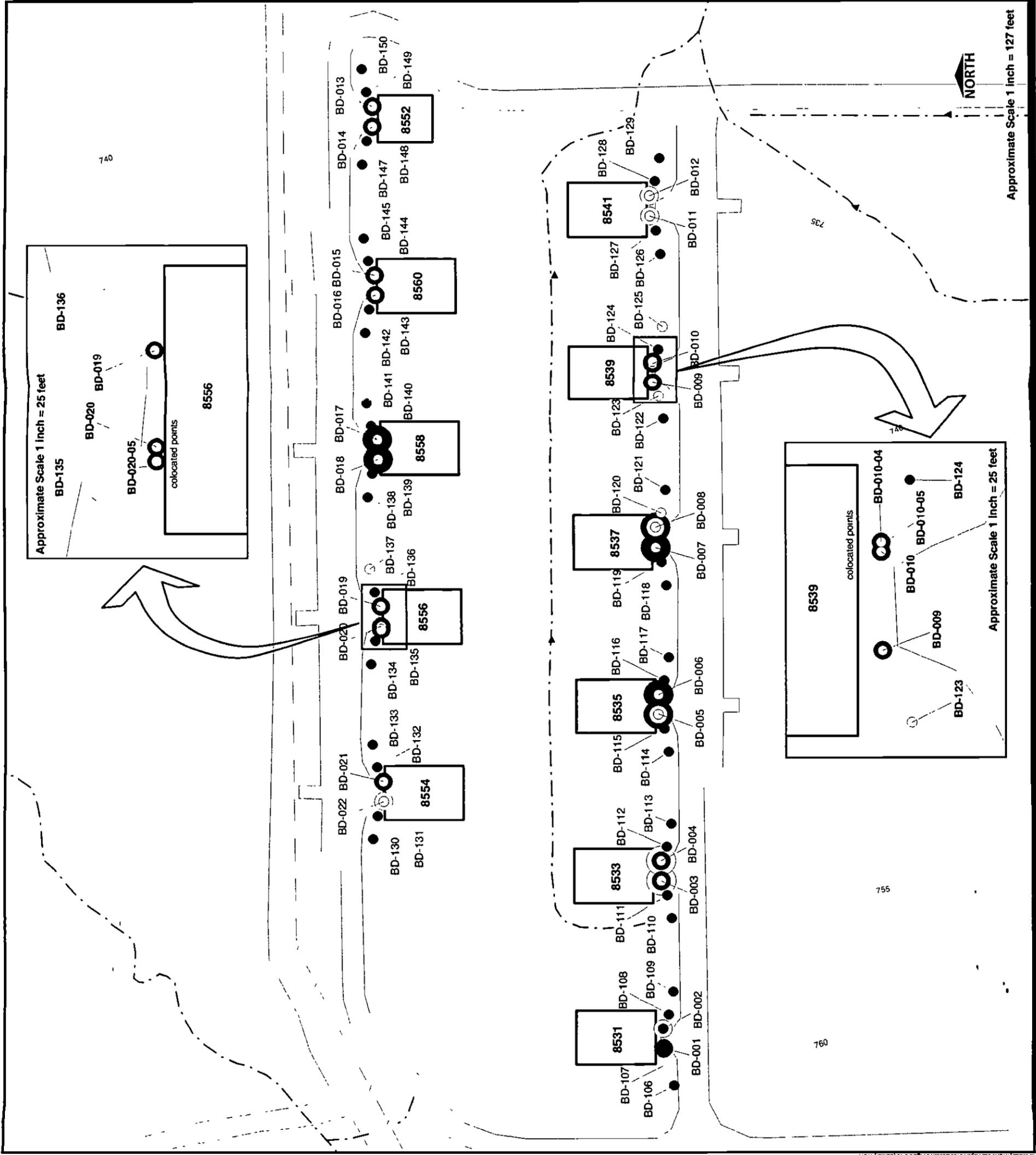
Middle color indicates Upper Subsurface (0.5-2.5 ft. bgs)

Outer color indicates Lower Subsurface (>2.5 ft. bgs)

Figure 3-16 Surface and Subsurface Soil Cadmium Levels Adjacent to Bunker Buildings



Creation Date 12/14/1998
 Rev Date 05/17/1999
 Project Manager B. Duffner
 Prepared By D. Bedard
 Project No P-3109



Zinc Concentration Relative to Background UTL^{95,95}

- Less than background
- Detected at concentration less than 10 times background
- Detected at concentration less than 100 times background

Inner color indicates Surface
 Middle color indicates Upper Subsurface (0.5-2.5 ft. bgs)
 Outer color indicates Lower Subsurface (>2.5 ft. bgs)

Figure 3-18 Surface and Subsurface Soil Zinc Levels Adjacent to Bunker Buildings

The Environmental Company, Inc.
 Creation Date 12/14/1998
 Rev Date 05/26/1999
 Project Manager B. Duffner
 Prepared By D. Bedard
 Project No P-3109

Approximate Scale 1 inch = 127 feet

Approximate Scale 1 inch = 25 feet

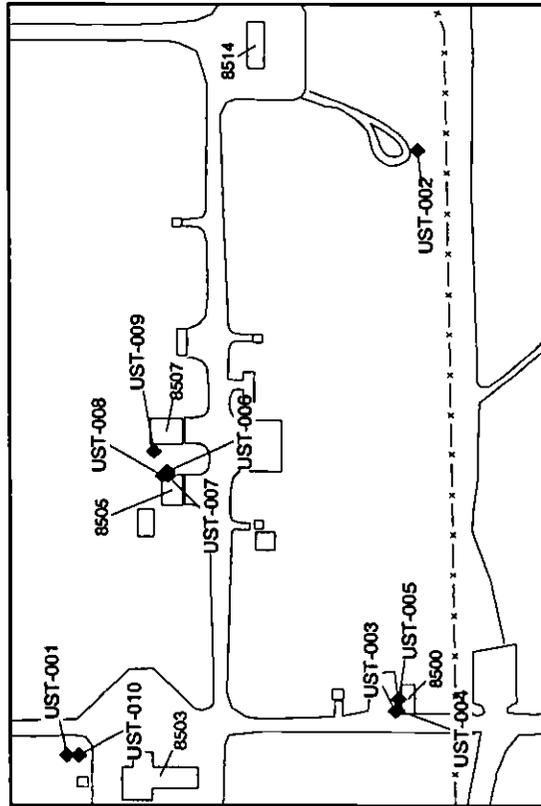
UST-001	
Sample Number: UST-001-01	-
Depth (ft. bgs): 0.0 to 2.0	-
TPH	-
BTEX	-
PAH	-

UST-002	
Sample Number: UST-002-01 UST-002-02	-
Depth (ft. bgs): 0.0 to 2.0 8.0 to 8.0	-
TPH	-
BTEX	-
PAH	0.041

UST-003	
Sample Number: UST-003-01	-
Depth (ft. bgs): 0.0 to 1.0	-
TPH	-
BTEX	0.00095
PAH	7.94

UST-004	
Sample Number: UST-004-01	-
Depth (ft. bgs): 5.0 to 7.0	-
TPH	-
BTEX	-
PAH	20.63

UST-005	
Sample Number: UST-005-01	-
Depth (ft. bgs): 5.0 to 7.0	-
TPH	24.65
BTEX	-
PAH	-



UST-006	
Sample Number: UST-006-01	-
Depth (ft. bgs): 6.0 to 6.0	-
TPH	-
BTEX	-
PAH	0.939

UST-007	
Sample Number: UST-007-01 UST-007-04	-
Depth (ft. bgs): 0.0 to 2.0 0.0 to 2.0	-
TPH	-
BTEX	-
PAH	2.538 0.302

UST-008	
Sample Number: UST-008-01	-
Depth (ft. bgs): 0.0 to 2.0	-
TPH	-
BTEX	-
PAH	9.53

UST-009	
Sample Number: UST-009-01 UST-009-02	-
Depth (ft. bgs): 2.0 to 4.0 4.0 to 6.0	-
TPH	-
BTEX	-
PAH	0.215 0.76

UST-010	
Sample Number: UST-010-01	-
Depth (ft. bgs): 0.0 to 2.0	-
TPH	-
BTEX	-
PAH	0.067

- = Analyzed but not detected above background $UTL_{95,95}$
- Only values detected above the background $UTL_{95,95}$ are included. All detected values provided in Section 3.0 data tables
- All concentrations reported in mg/kg
- Total values provided for SVOCs, VOCs, explosive compounds, and PAHs. Individual detected constituents provided in Section 3.0 data tables

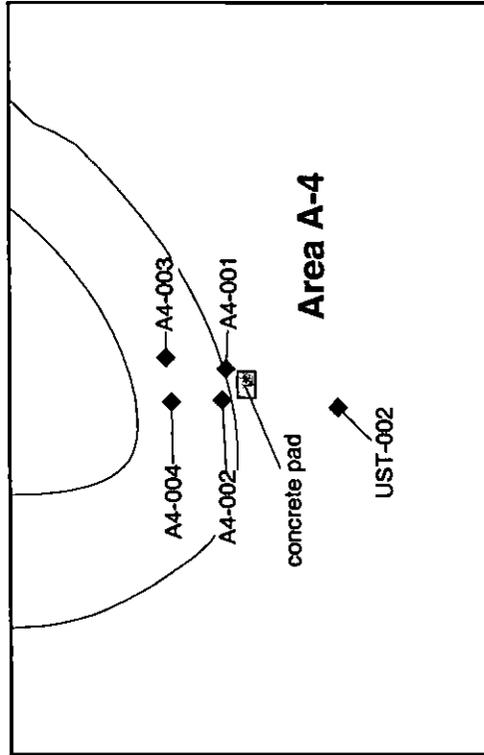
Creation Date 02/01/1999
 Rev Date 07/23/1999
 Project Manager B. Duffner
 Prepared By D. Bedarf
 Project No P-3109

Figure 3-19 -- Soil Contaminant Distribution at the Former UST Locations



A4-001	
Sample Number: A4-001-01	A4-001-02
Depth (ft. bgs): 0.0 to 0.5 0.5 to 1.5	
TPH	-
BTEX	-
Toluene	0.012
PAH	-
Benzo(a)anthracene	0.027
Benzo(a)pyrene	0.038
Benzo(b)fluoranthrene	0.041
Benzo(k)fluoranthrene	0.022
Indeno(1,2,3-cd)pyrene	0.090

A4-002	
Sample Number: A4-002-01	A4-002-02
Depth (ft. bgs): 0.0 to 0.5 0.5 to 1.5	
TPH	-
BTEX	-
Toluene	0.03
PAH	-
Benzo(a)anthracene	0.019
Benzo(a)pyrene	0.027
Benzo(b)fluoranthrene	0.030
Benzo(k)fluoranthrene	0.017
Indeno(1,2,3-cd)pyrene	0.048



A4-003	
Sample Number: A4-003-01	A4-003-04
Depth (ft. bgs): 0.0 to 0.5 0.0 to 0.5 0.5 to 2.0	
TPH	-
BTEX	-
Toluene	0.011
PAH	0.0063
Benzo(a)anthracene	0.013
Benzo(a)pyrene	0.018
Benzo(b)fluoranthrene	0.018
Benzo(k)fluoranthrene	0.015

A4-004	
Sample Number: A4-004-01	A4-004-02
Depth (ft. bgs): 0.0 to 0.5 0.5 to 1.5	
TPH	-
BTEX	-
Toluene	0.014
PAH	-
Benzo(a)anthracene	0.028
Benzo(a)pyrene	0.038
Benzo(b)fluoranthrene	0.043
Benzo(k)fluoranthrene	0.024
Indeno(1,2,3-cd)pyrene	0.042

- Analyzed but not detected above background $UTL_{bg,as}$
- Only values detected above the background $UTL_{bg,as}$ are included. All detected values provided in Section 3.0 data tables
- All concentrations reported in mg/kg
- Total values provided for SVOCs, VOCs, explosive compounds, and PAHs. Individual detected constituents provided in Section 3.0 data tables

664 111

Figure 3-20 -- Soil Contaminant Distribution at Vehicle Fueling Area A-4

TRF-001	
Sample Number:	TRF-001-01
Depth (ft. bgs):	0.0 to 0.5
Pesticides/PCBs	

TRF-002	
Sample Number:	TRF-002-01
Depth (ft. bgs):	0.0 to 0.5
Pesticides/PCBs	0.011 (F)

TRF-003	
Sample Number:	TRF-003-01 TRF-003-02
Depth (ft. bgs):	0.0 to 0.5 0.5 to 2.5
Pesticides/PCBs	

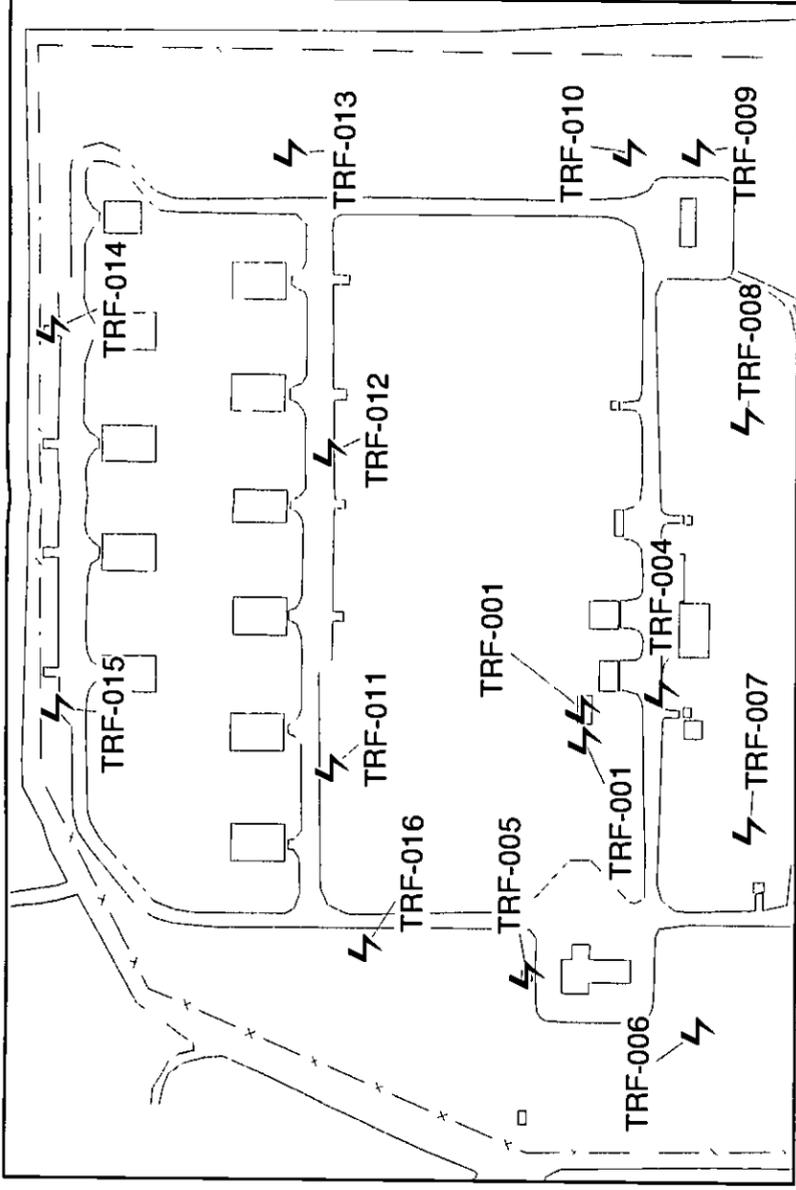
TRF-004	
Sample Number:	TRF-004-01 TRF-004-02
Depth (ft. bgs):	0.0 to 0.5 0.5 to 2.5
Pesticides/PCBs	

TRF-005	
Sample Number:	TRF-005-01 TRF-005-02
Depth (ft. bgs):	0.0 to 0.5 0.5 to 2.5
Pesticides/PCBs	

TRF-006	
Sample Number:	TRF-006-01 TRF-006-02
Depth (ft. bgs):	0.0 to 0.5 0.5 to 2.5
Pesticides/PCBs	

TRF-007	
Sample Number:	TRF-007-01 TRF-007-02
Depth (ft. bgs):	0.0 to 0.5 0.5 to 2.5
Pesticides/PCBs	

TRF-008	
Sample Number:	TRF-008-01 TRF-008-02
Depth (ft. bgs):	0.0 to 0.5 0.5 to 2.5
Pesticides/PCBs	



TRF-009	
Sample Number:	TRF-009-01 TRF-009-02 TRF-009-05
Depth (ft. bgs):	0.0 to 0.5 0.5 to 1.7 0.5 to 1.7
Pesticides/PCBs	

TRF-010	
Sample Number:	TRF-010-01 TRF-010-02
Depth (ft. bgs):	0.0 to 0.5 0.5 to 2.0
Pesticides/PCBs	

TRF-011	
Sample Number:	TRF-011-01 TRF-011-02
Depth (ft. bgs):	0.0 to 0.5 0.5 to 10.5
Pesticides/PCBs	

TRF-012	
Sample Number:	TRF-012-01 TRF-012-02
Depth (ft. bgs):	0.0 to 0.5 0.5 to 2.5
Pesticides/PCBs	

TRF-013	
Sample Number:	TRF-013-01 TRF-013-02
Depth (ft. bgs):	0.0 to 0.5 0.5 to 2.0
Pesticides/PCBs	

TRF-014	
Sample Number:	TRF-014-01 TRF-014-02
Depth (ft. bgs):	0.0 to 0.5 0.5 to 1.2
Pesticides/PCBs	

TRF-015	
Sample Number:	TRF-015-01 TRF-015-02
Depth (ft. bgs):	0.0 to 0.5 0.5 to 1.5
Pesticides/PCBs	

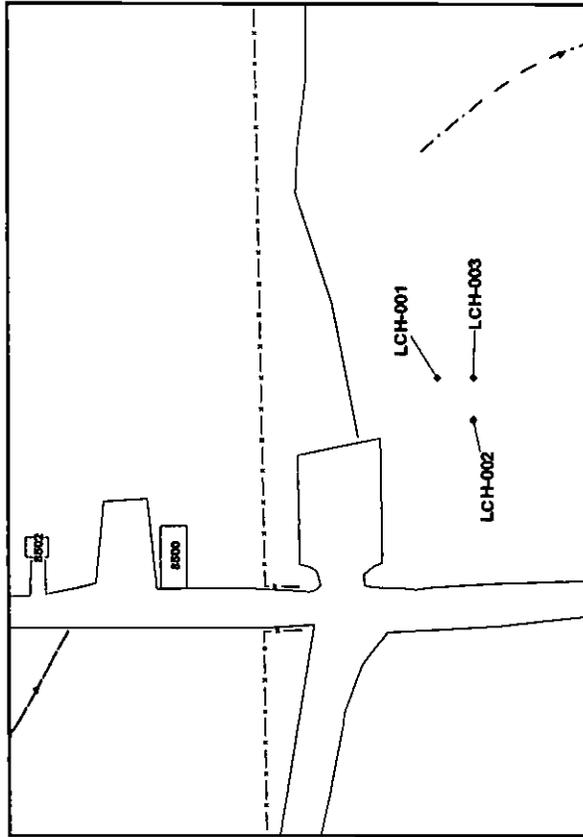
TRF-016	
Sample Number:	TRF-016-01 TRF-016-02
Depth (ft. bgs):	0.0 to 0.5 0.5 to 2.0
Pesticides/PCBs	



Creation Date 02/01/1999
 Rev Date 07/18/1999
 Project Manager B. Duffner
 Prepared By D. Bedarf
 Project No P-3109

- = Analyzed but not detected above background UTL_{95}
 * Only values detected above the background UTL_{95} are included. All detected values provided in Section 3.0 data tables.
 * All concentrations reported in mg/kg
 * Total values provided for SVOCs, VOCs, explosive compounds, and PAHs. Individual detected constituents provided in Section 3.0 data tables.

Figure 3-21
 Soil Contaminant Distribution at the
 Electrical Transformer Locations



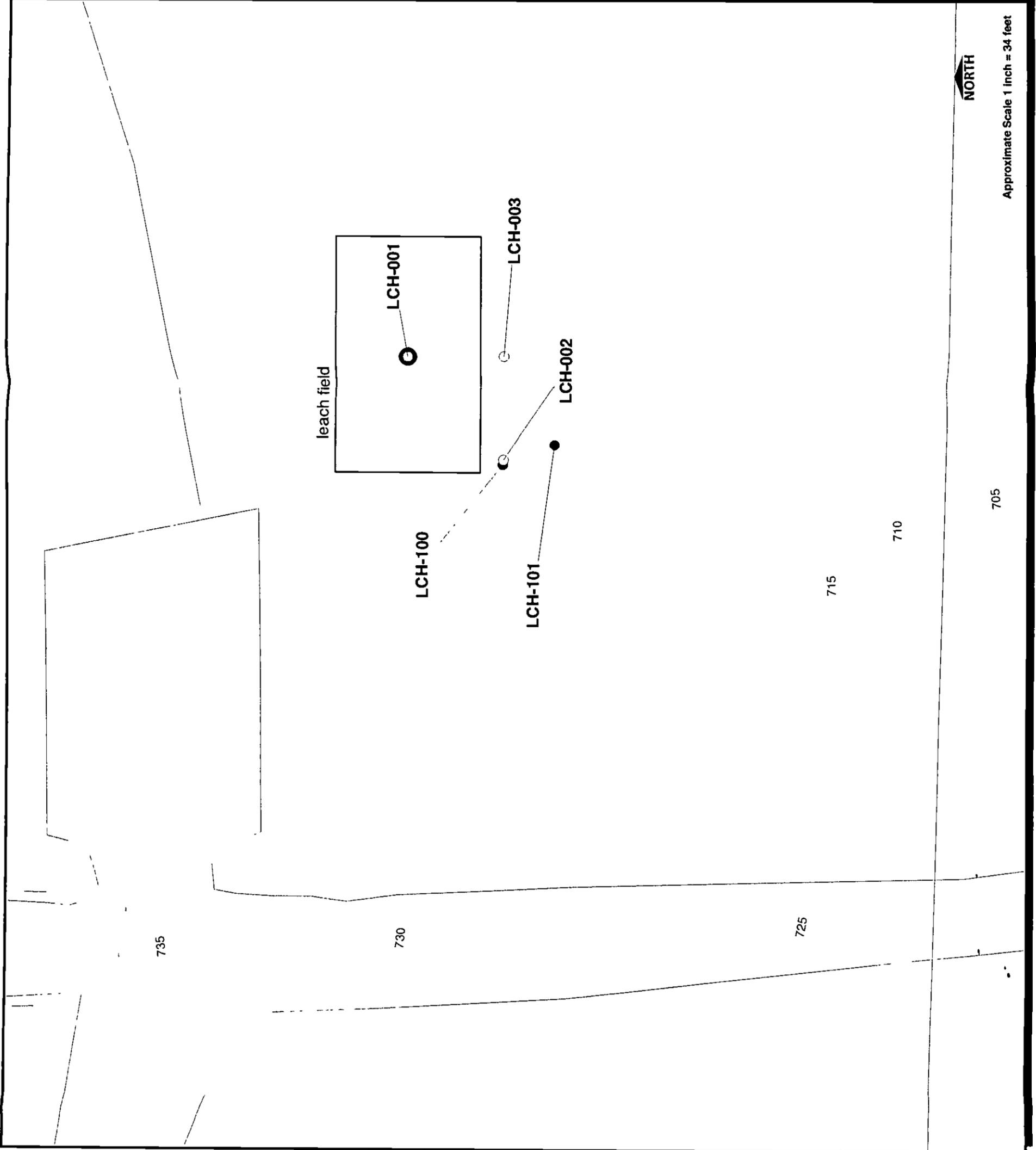
LCH-003	
Sample Number:	LCH-003-01 LCH-003-02
Depth (ft. bgs):	0.0 to 0.5 1.0 to 2.5
Inorganics	-
Antimony	0.93 (F)
Cadmium	0.57
Semivolatiles	0.35 (F)
Volatiles	0.0084
Pesticides/PCBs	-
Explosives	-

LCH-002	
Sample Number:	LCH-002-01 LCH-002-02 LCH-002-03
Depth (ft. bgs):	0.0 to 0.6 1.0 to 2.5 1.0 to 2.5
Inorganics	-
Antimony	1.3
Cadmium	0.66
Semivolatiles	2.52 (F) 2.05 (F) 3.85 (F)
Volatiles	0.0059 (F) 0.0056 (F) 0.0076
Pesticides/PCBs	-
Explosives	-

LCH-001	
Sample Number:	LCH-001-01
Depth (ft. bgs):	2.8 to 3.0
Inorganics	-
Semivolatiles	0.91 (F)
Volatiles	-
Pesticides/PCBs	-
Explosives	-

- = Analyzed but not detected above background UTL₉₅ as
- Only values detected above the background UTL₉₅ are included. All detected values provided in Section 3.0 data tables
- All concentrations reported in mg/kg
- Total values provided for SVOCs, VOCs, explosive compounds, and PAHs. Individual detected constituents provided in Section 3.0 data tables

Figure 3-22 -- Soil Contaminant Distribution in the Leach Field



**Antimony Concentration
Relative to Background UTL_{95,95}**

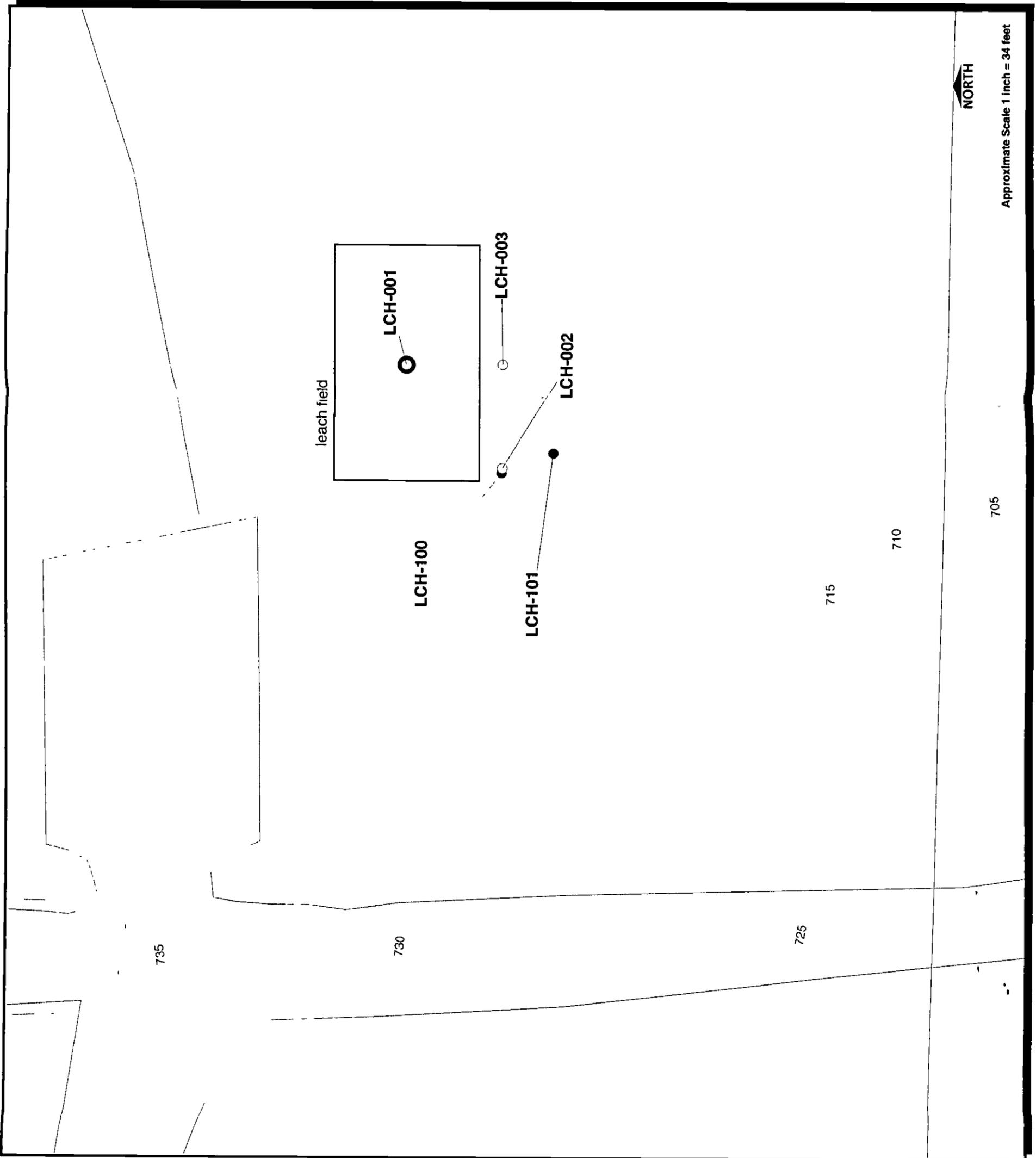
- Less than background
- Not detected; detection limit above background
- Detected at concentration less than 10 times background

Inner color indicates Upper Subsurface (0.5-2.5 ft. bgs)
Outer color indicates Lower Subsurface (>2.5 ft. bgs)

**Figure 3-23
Subsurface Soil Antimony
Levels in the Vicinity
of the Leach Field**



Creation Date 12/14/1998
Rev Date 05/05/1999
Project Manager B. Duffner
Prepared By D. Bedarf
Project No P-3109



**Cadmium Concentration
Relative to Background UTL_{95,95}**

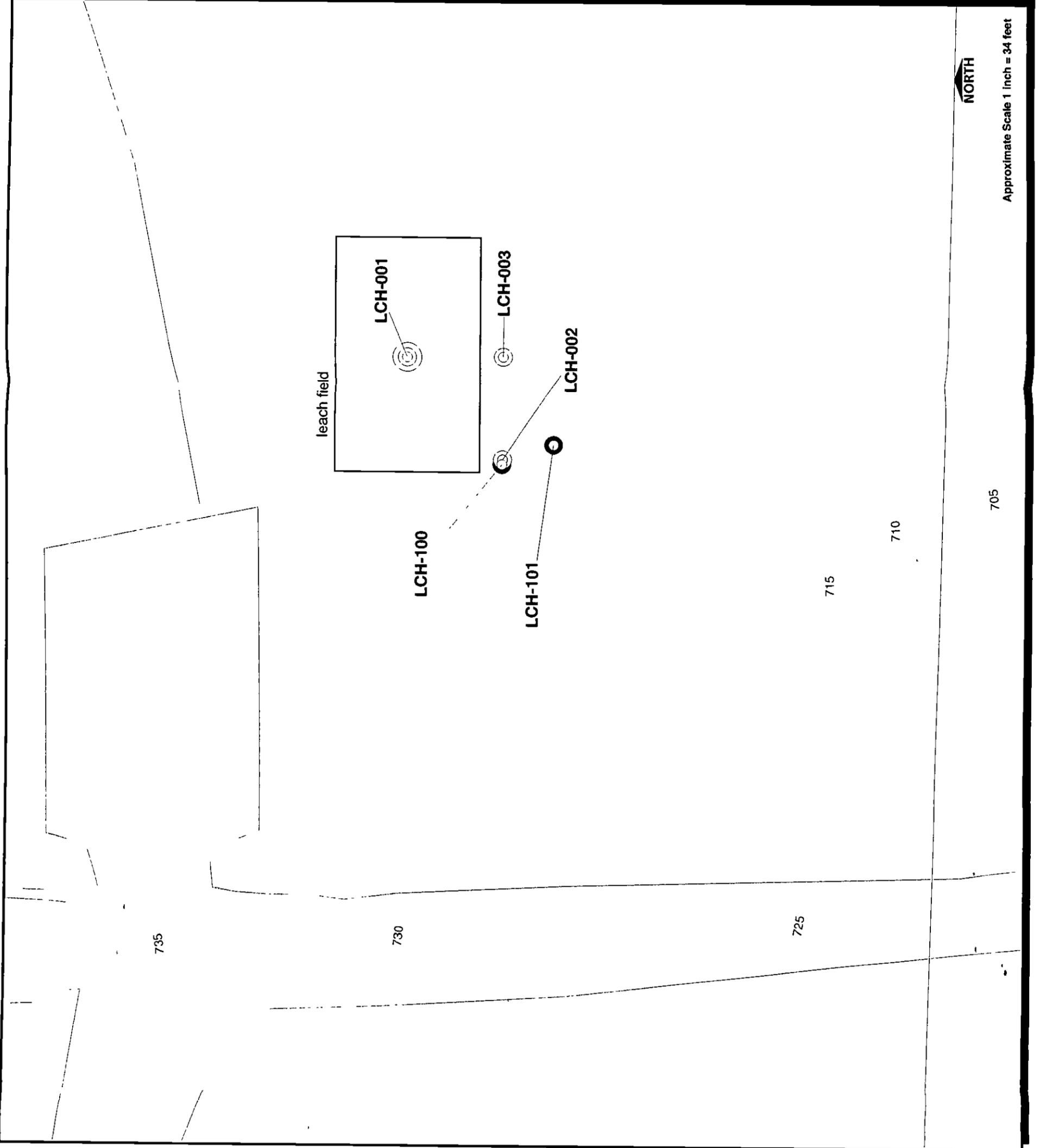
- Less than background
- Detected at concentration less than 10 times background

Inner color indicates Upper Subsurface (0.5-2.5 ft. bgs)
Outer color indicates Lower Subsurface (>2.5 ft. bgs)

**Figure 3-24
Subsurface Soil Cadmium
Levels in the Vicinity
of the Leach Field**



Creation Date 12/14/1998
Rev Date 05/05/1999
Project Manager B. Duffner
Prepared By D. Bedarf
Project No P-3109



2-Methylnaphthalene and Naphthalene Concentration Relative to Background

- Less than background
- Detected at concentration less than 10 times background

Inner color indicates Surface (0.0-0.5 ft. bgs)
 Middle color indicates Upper Subsurface (0.5-2.5 ft. bgs)
 Outer color indicates Lower Subsurface (>2.5 ft. bgs)

Figure 3-25
Subsurface Soil
2-Methylnaphthalene and
Naphthalene Levels in the
Vicinity of the Leach Field

DW1-005	
Sample Number: DW1-005-01	DW1-005-02
Depth (ft. bgs): 0.0 to 0.5 0.5 to 2.5	
Inorganics	
Cadmium	2.1
Zinc	114
Semivolatiles	5.1
Volatiles	0.0086
Pesticides/PCBs	0.032 (F)
Explosives	-

DW1-006	
Sample Number: DW1-006-01	DW1-006-02
Depth (ft. bgs): 0.0 to 0.5 0.5 to 2.5	
Inorganics	
Antimony	-
Arsenic	11
Cadmium	11.5
Chromium	-
Lead	-
Molybdenum	-
Zinc	72.2
Semivolatiles	2.14
Volatiles	0.021
Pesticides/PCBs	0.0058
Explosives	-

DW1-007	
Sample Number: DW1-007-01	DW1-007-02
Depth (ft. bgs): 0.0 to 0.5 0.5 to 2.5 8.0 to 10.0	
Inorganics	
Antimony	-
Arsenic	13.1
Cadmium	2.1
Chromium	19.8
Iron	-
Lead	-
Magnesium	2630
Zinc	75.4
Semivolatiles	0.51
Volatiles	-
Pesticides/PCBs	-
Explosives	-

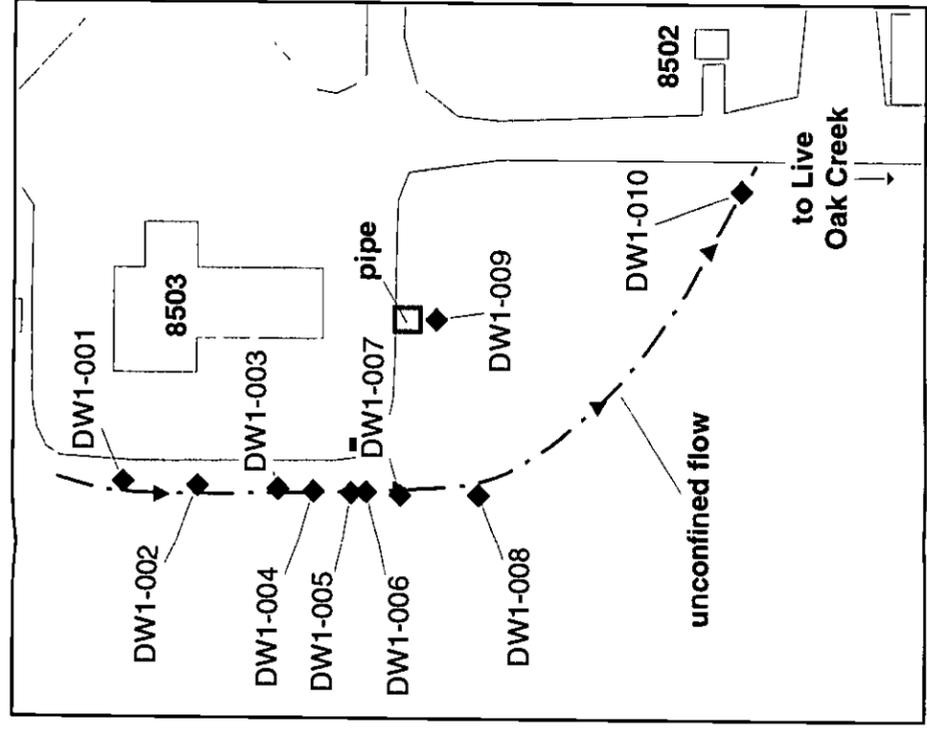
DW1-008	
Sample Number: DW1-008-01	DW1-008-02
Depth (ft. bgs): 0.0 to 0.5 0.5 to 2.5 6.5 to 8.5	
Inorganics	
Arsenic	11.7
Chromium	-
Magnesium	2810
Mercury	0.1
Zinc	73.3
Semivolatiles	4.58
Volatiles	0.0016 (F)
Pesticides/PCBs	0.0033 (F)
Explosives	-

DW1-001	
Sample Number: DW1-001-01	DW1-001-02
Depth (ft. bgs): 0.0 to 0.5 0.5 to 2.5	
Inorganics	
Arsenic	24.6
Cadmium	-
Copper	0.75
Zinc	23.2
Semivolatiles	18
Volatiles	74.9
Pesticides/PCBs	42.5
Explosives	1.62

DW1-002	
Sample Number: DW1-002-01	DW1-002-02
Depth (ft. bgs): 0.0 to 0.5 0.5 to 2.5	
Inorganics	
Cadmium	2.3
Chromium	0.9
Copper	19.6
Lead	26.4
Mercury	35.8
Zinc	0.12
Semivolatiles	85.5
Volatiles	82.8
Pesticides/PCBs	-
Explosives	-

DW1-003	
Sample Number: DW1-003-01	DW1-003-02
Depth (ft. bgs): 0.0 to 0.5 0.5 to 2.5 2.5 to 4.0	
Inorganics	
Antimony	-
Arsenic	8.6
Cadmium	4.9
Chromium	0.51
Copper	16.8
Lead	60.1
Mercury	31.2
Molybdenum	0.054 (F)
Zinc	14.7
Semivolatiles	98.1
Volatiles	4.89
Pesticides/PCBs	-
Explosives	-

DW1-004	
Sample Number: DW1-004-01	DW1-004-02
Depth (ft. bgs): 0.0 to 0.5 0.5 to 2.5 2.5 to 3.7	
Inorganics	
Arsenic	9.9
Cadmium	2.6
Chromium	0.88
Mercury	185
Molybdenum	32.9
Zinc	22
Semivolatiles	0.064 (F)
Volatiles	9.2
Pesticides/PCBs	51
Explosives	1.94



DW1-009	
Sample Number: DW1-009-01	DW1-009-02
Depth (ft. bgs): 0.0 to 0.5 0.5 to 2.5 6.5 to 8.5	
Inorganics	
Arsenic	8.2
Cadmium	1.9
Chromium	49.1
Lead	97.2
Zinc	72.9
Semivolatiles	3.787
Volatiles	0.0094
Pesticides/PCBs	0.0274
Explosives	-

DW1-010	
Sample Number: DW1-010-01	DW1-010-02
Depth (ft. bgs): 0.0 to 0.5 0.5 to 2.5 2.5 to 3.5	
Inorganics	
Iron	-
Magnesium	2640
Molybdenum	-
Semivolatiles	-
Volatiles	0.014
Pesticides/PCBs	-
Explosives	-

Figure 3-26
 Soil/Sediment Contaminant Distribution in
 Drainage Way DW-1

DW2-001	
Sample Number: DW2-001-01	
Depth (ft. bgs): 0.0 to 0.5	
Inorganics	-
Semivolatiles	-
Volatiles	0.0027 (F)
Pesticides/PCBs	-
Explosives: (ug/kg)	-

DW2-002	
Sample Number: DW2-002-01	
Depth (ft. bgs): 0.0 to 0.5	
Inorganics	-
Semivolatiles	-
Volatiles	0.0089
Pesticides/PCBs	-
Explosives	-

DW2-003	
Sample Number: DW2-003-01	
Depth (ft. bgs): 0.0 to 0.5	
Inorganics	-
Semivolatiles	-
Volatiles	-
Pesticides/PCBs	-
Explosives	-

DW3-001	
Sample Number: DW3-001-01	
Depth (ft. bgs): 0.0 to 0.5	
Inorganics	-
Mercury	0.061 (F)
Zinc	169
Semivolatiles	23.062
Volatiles	0.01
Pesticides/PCBs	0.031
Explosives	-

DW3-002	
Sample Number: DW3-002-01	
Depth (ft. bgs): 0.0 to 0.5	
Inorganics	-
Magnesium	2720
Selenium	1
Semivolatiles	-
Volatiles	0.0022
Pesticides/PCBs	-
Explosives	-

DW3-003	
Sample Number: DW3-003-01	
Depth (ft. bgs): 0.0 to 0.5	
Inorganics	-
Semivolatiles	-
Volatiles	-
Pesticides/PCBs	0.0035
Explosives	-

DW4-001	
Sample Number: DW4-001-01	
Depth (ft. bgs): 0.0 to 0.5	
Inorganics	-
Cadmium	1.4
Lead	71.6
Manganese	661
Zinc	80.2
Semivolatiles	15.84
Volatiles	0.0043
Pesticides/PCBs	0.0182
Explosives	-

DW4-002	
Sample Number: DW4-002-01	
Depth (ft. bgs): 0.0 to 0.5	
Inorganics	-
Lead	26.8
Selenium	1.6
Semivolatiles	-
Volatiles	0.0091
Pesticides/PCBs	-
Explosives	-

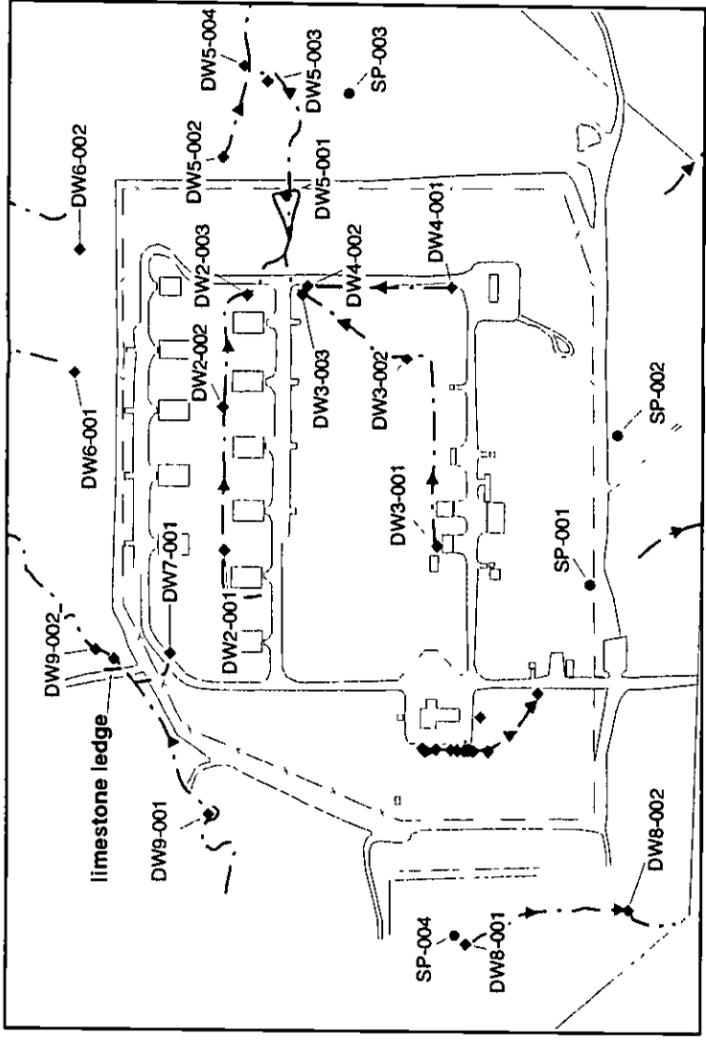
DW5-001	
Sample Number: DW5-001-01	
Depth (ft. bgs): 0.0 to 0.5	
Inorganics	-
Semivolatiles	-
Volatiles	0.002
Pesticides/PCBs	-
Explosives	-

DW5-002	
Sample Number: DW5-002-01	
Depth (ft. bgs): 0.0 to 0.5	
Inorganics	-
Semivolatiles	-
Volatiles	0.0026
Pesticides/PCBs	-
Explosives	-

DW5-003	
Sample Number: DW5-003-01	
Depth (ft. bgs): 0.0 to 0.5	
Inorganics	-
Semivolatiles	-
Volatiles	-
Pesticides/PCBs	-
Explosives	-

DW5-004	
Sample Number: DW5-004-01	
Depth (ft. bgs): 0.0 to 0.5	
Inorganics	-
Semivolatiles	-
Volatiles	-
Pesticides/PCBs	-
Explosives	-

SP-001	
Sample Number: SP-001-01	
Depth (ft. bgs): 0.0 to 0.5	
Inorganics	-
Zinc	90.1
Semivolatiles	-
Volatiles	93.7
Pesticides/PCBs	-
Explosives	-



DW6-001	
Sample Number: DW6-001-01	
Depth (ft. bgs): 0.0 to 0.5	
Inorganics	-
Semivolatiles	-
Volatiles	0.033
Pesticides/PCBs	-
Explosives	-

DW6-002	
Sample Number: DW6-002-01	
Depth (ft. bgs): 0.0 to 0.5	
Inorganics	-
Semivolatiles	-
Volatiles	-
Pesticides/PCBs	-
Explosives	-

DW7-001	
Sample Number: DW7-001-01	
Depth (ft. bgs): 0.0 to 0.5	
Inorganics	-
Semivolatiles	-
Volatiles	0.018
Pesticides/PCBs	-
Explosives	-

DW8-001	
Sample Number: DW8-001-01	
Depth (ft. bgs): 0.0 to 0.5	
Inorganics	-
Magnesium	2820
Explosives	-

DW8-002	
Sample Number: DW8-002-01	
Depth (ft. bgs): 0.0 to 0.5	
Inorganics	-
Magnesium	2680
Explosives	-

SP-004	
Sample Number: SP-004-01	
Depth (ft. bgs): 0.0 to 0.5	
Inorganics	-
Semivolatiles	-
Volatiles	-
Pesticides/PCBs	-
Explosives	-

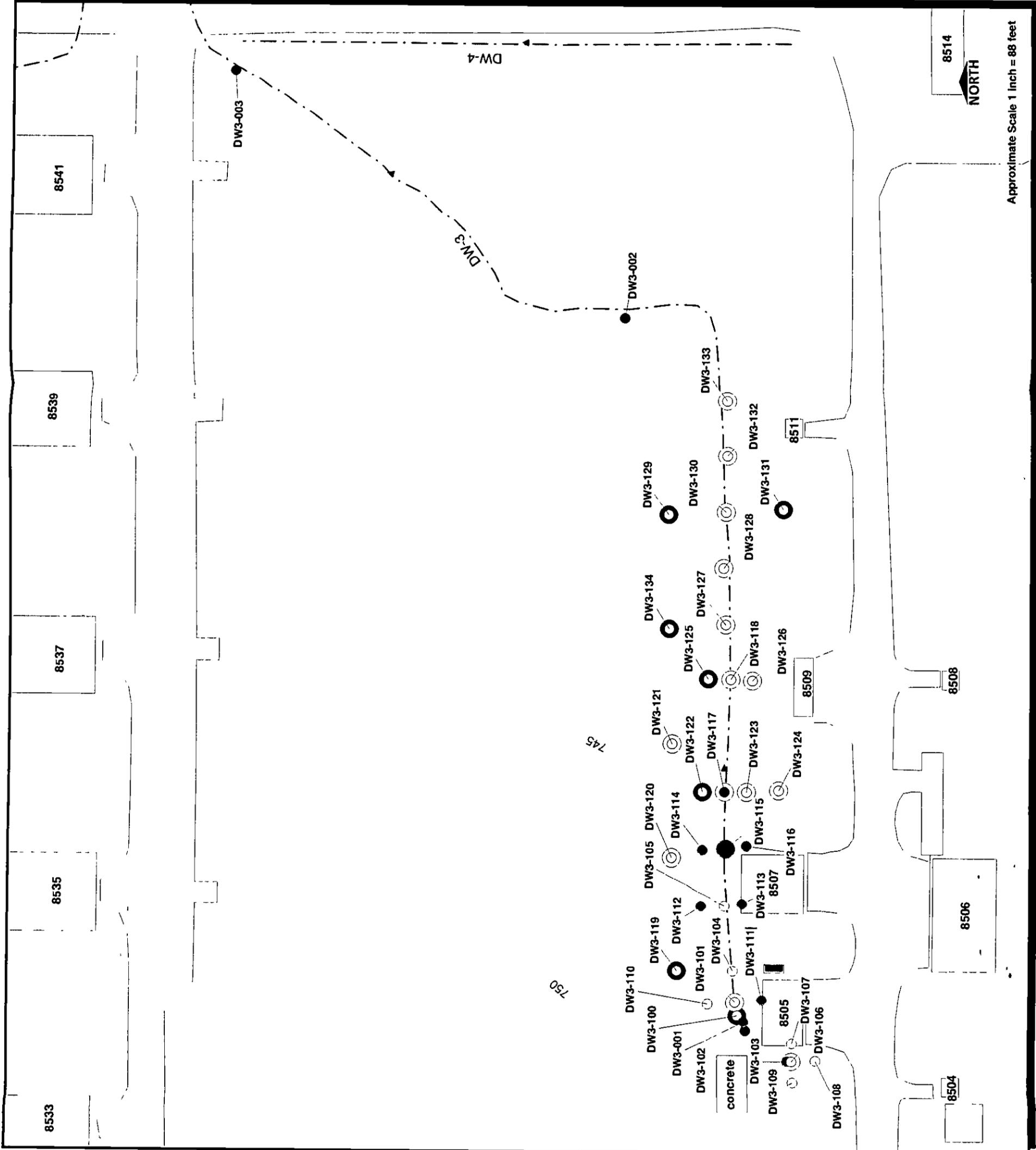
SP-003	
Sample Number: SP-003-01	
Depth (ft. bgs): 0.0 to 0.5	
Inorganics	-
Semivolatiles	-
Volatiles	-
Pesticides/PCBs	-
Explosives	-

SP-002	
Sample Number: SP-002-01	
Depth (ft. bgs): 0.0 to 0.5	
Inorganics	-
Semivolatiles	-
Volatiles	-
Pesticides/PCBs	-
Explosives	-

DW9-001	
Sample Number: DW9-001-01	
Depth (ft. bgs): 0.0 to 0.5	
Inorganics	-
Explosives	-

DW9-002	
Sample Number: DW9-002-01	
Depth (ft. bgs): 0.0 to 0.5	
Inorganics	-
Arsenic	10.5
Chromium	371
Cobalt	12.2
Copper	64.6
Iron	49100
Lead	106
Manganese	744
Molybdenum	15.3
Nickel	207
Semivolatiles	-
Volatiles	0.0042
Pesticides/PCBs	-
Explosives	-

Figure 3-28
 Sediment Contaminant Distribution in
 Drainageways DW-2 through DW-9 and Seeps



**PAH Concentration
Relative to Background**

- Less than background
- Detected at concentration less than 10 times background
- Detected at concentration less than 100 times background

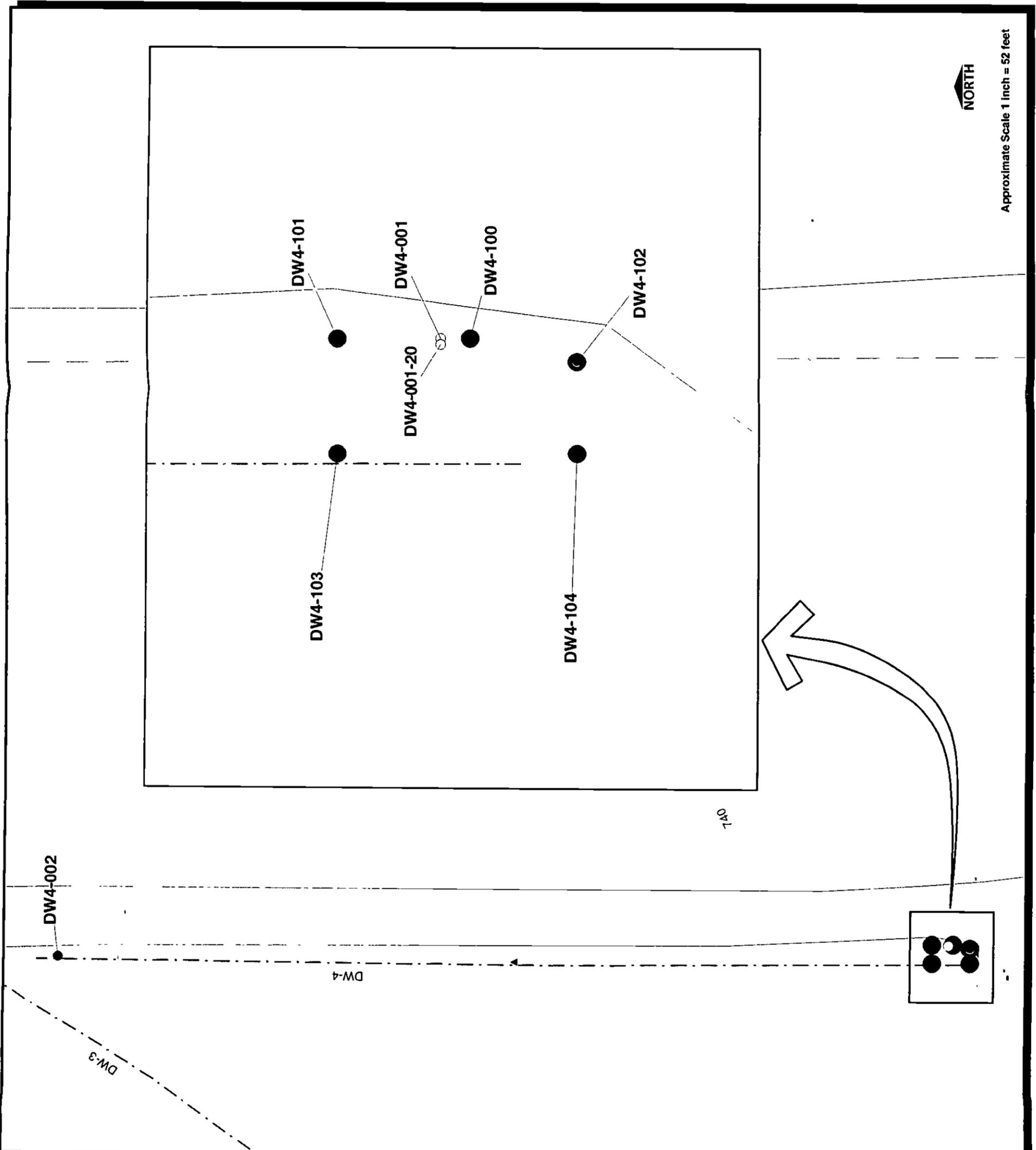
Inner color indicates Surface
Outer color indicates Upper Subsurface (0.5-2.5 ft. bgs)

**Figure 3-29
Surface and Subsurface
Soil PAH Levels
in Drainageway 3 (DW-3)**



Creation Date 12/14/1998
Rev Date 05/17/1999
Project Manager B. Duffner
Prepared By D. Beclart
Project No P-3109

Approximate Scale 1 inch = 88 feet



**PAH Concentration
Relative to Background**

- Less than background
- Detected at concentration less than 10 times background
- Detected at concentration less than 100 times background

Inner color indicates Surface
Outer color indicates Upper Subsurface (0.5-2.5 ft. bgs)

**Figure 3-30
Surface and Subsurface
Soil PAH Levels
in Drainage Way 4 (DW-4)**

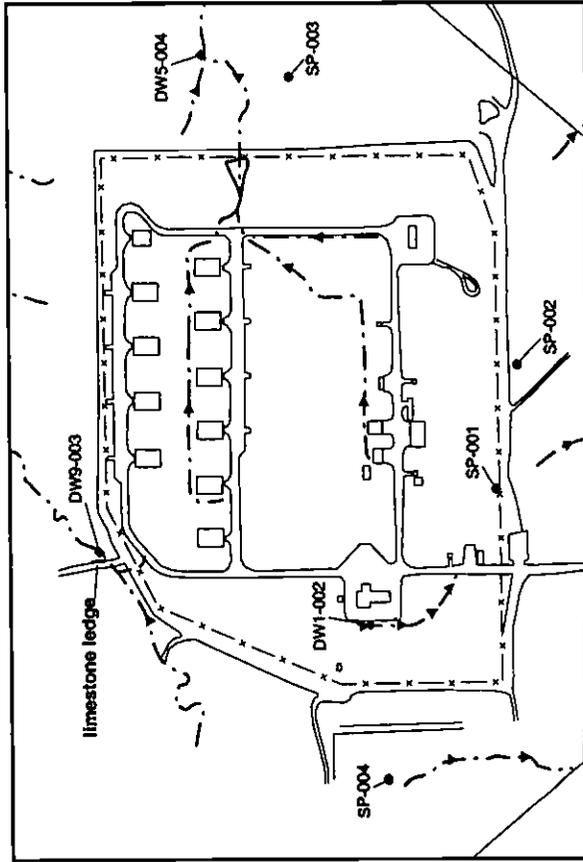


Creation Date 12/14/1998
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Project Manager B. Duffner
Prepared By D. Bedarf
Project No P-3109

DW1-002	
Sample Number:	DW1-002-10
Inorganics	9.8
Sodium	33.8
Semivolatiles	-
Volatiles	-
Pesticides/PCBs	-
Explosives	-

DW5-004	
Sample Number:	DW5-004-10
Inorganics	-
Semivolatiles	-
Volatiles	-
Pesticides/PCBs	-
Explosives	-

DW9-003	
Sample Number:	DW9-003-10
Inorganics	-
Semivolatiles	-
Volatiles	-
Pesticides/PCBs	-
Explosives	-



SP-001	
Sample Number:	SP-001-10
Inorganics	-
Semivolatiles	-
Volatiles	-
Pesticides/PCBs	-
Explosives	-

SP-002	
Sample Number:	SP-002-10 SP-001-12 DUP
Inorganics	-
Copper	0.013
Nickel	0.0064
Semivolatiles	-
Pesticides/PCBs	-
Explosives	-

SP-003	
Sample Number:	SP-003-10
Inorganics	-
Semivolatiles	0.0003
Volatiles	-
Pesticides/PCBs	-
Explosives	-

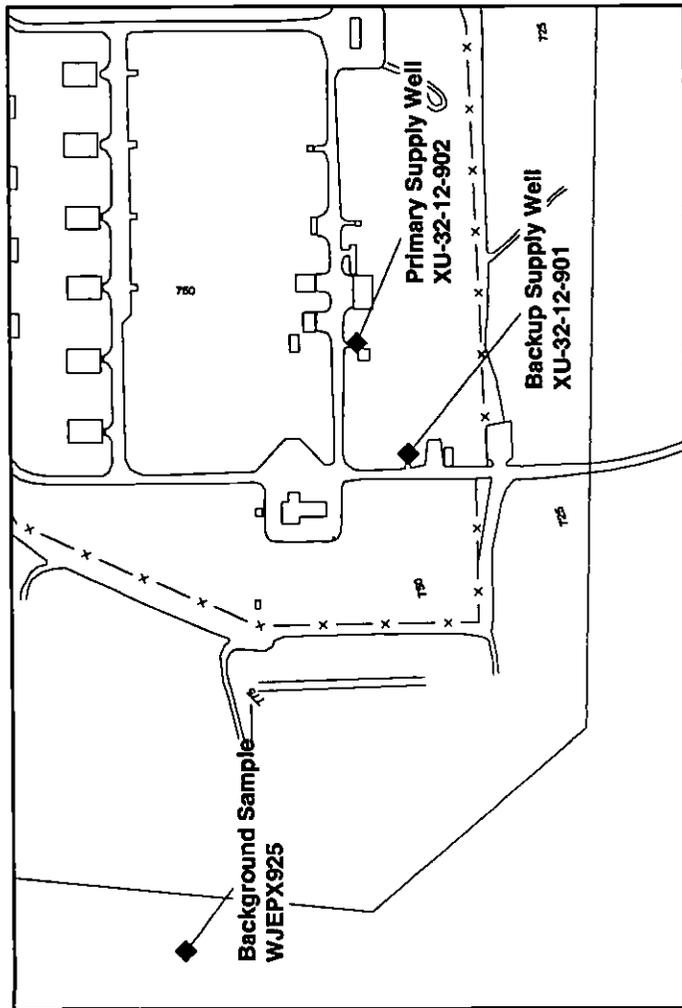
SP-004	
Sample Number:	SP-004-10
Inorganics	-
Semivolatiles	-
Volatiles	-
Pesticides/PCBs	-
Explosives	-

- Analyzed but not detected above background UTL₉₅ as
- Only values detected above the background UTL₉₅ are included. All detected values provided in Section 3.0 data tables
- All concentrations reported in mg/kg
- Total values provided for SVOCs, VOCs, explosive compounds, and PAHs. Individual detected constituents provided in Section 3.0 data tables

Figure 3-31 – Surface Water Contaminant Distribution in Drainageways and Seeps

Creation Date 02/01/1998
 Rev Date 07/23/1998
 Project Manager B. Duffner
 Prepared By D. Bedard
 Project No. P-3109





MW-925	
Sample Number:	MW-925-01
Inorganics	-
Aluminum	0.068
Barium	0.11
Calcium	76.2
Iron	0.48
Magnesium	11.3
Molybdenum	0.0046 (F)
Potassium	2.4
Sodium	11.2
Zinc	0.047 (F)
Semivolatiles	-
Volatiles	-
Pesticides/PCBs	-
Explosives	-

XU-32-12-902	
Sample Number:	XU-32-12-902-01 XU-32-12-902-02
Inorganics	-
Aluminum	0.07
Copper	0.014
Iron	1.2
Lead	0.0037 (F)
Magnesium	23.3
Manganese	0.025
Potassium	4.5
Sodium	31.2
Zinc	0.03
Semivolatiles	-
Volatiles	-
Pesticides/PCBs	-
Explosives	-

XU-32-12-901	
Sample Number:	XU-32-12-901-01
Inorganics	-
Aluminum	0.07
Magnesium	23.3
Manganese	0.022
Potassium	4.5
Sodium	30.7
Zinc	0.032
Semivolatiles	-
Volatiles	-
Pesticides/PCBs	-
Explosives	-

-- Analyzed but not detected above background $UTL_{95,25}$

• Only values detected above the background $UTL_{95,25}$ are included. All detected values provided in Section 3.0 data tables

• All concentrations reported in mg/kg

• Total values provided for SVOCs, VOCs, explosive compounds, and PAHs. Individual detected constituents provided in Section 3.0 data tables

Figure 3-32 -- Contaminant Distribution in Paluxy Aquifer Groundwater

Creation Date 02/01/1999
 Rev Date 07/23/1999
 Project Manager B. Duffner
 Prepared By D. Bedarf
 Project No P-3109

4.0 CLOSURE ACTIVITIES

This section describes activities completed in association with the closure of the Offsite WSA under the TNRCC Risk Reduction Regulations. Additional closure activities associated with UST locations subject to TNRCC PSTD regulations are also discussed.

Closure activities were completed in accordance with several project documents developed by TEC in association with the RFI. These documents included the Offsite WSA RFI Field Sampling Plan (TEC, 1996), Quality Assurance Project Plan (TEC, 1996b), and Final Characterization and Removal Action Work Plan (TEC, 1998).

Offsite WSA closure activities were completed in a phased approach. Each phase consisted of contaminated soil removal, which involved the excavation and transport of the soil to an approved disposal facility. After completion of each soil removal phase, confirmation sampling was performed to determine the closure status of the excavated area. Areas with soil COPC concentrations below the applicable CUL become eligible for closure under TNRCC Risk Reduction Standards. Areas with COPCs with concentrations above CULs were targeted for further evaluation or soil removal.

TEC used the following subcontractors to complete the closure activities:

- General Contractor: Unified Services of Texas (UST)
2110 Greenbriar Drive
Southlake, Texas 76092
- Contaminated Soil Disposal: Waste Management Industrial Services
1601 Waste Management Boulevard
Lewisville, Texas 75067
- Laboratory: Quanterra Environmental Services
4955 Yarrow Street
Arvada, Colorado 80002
- Surveyor: Gorrondona and Associates
6737 Brentwood Star Road
Suite 224
Fort Worth, Texas, 76112
- Fencing Contractor: All-Tex Rent-A-Fence
P.O. Box 938
Mansfield, Texas 76063
- Laboratory Data Validation: Environmental Data Quality (EDQ)
967 E. Swedesford Road, Suite 401
Exton, Pennsylvania 19341

The descriptions of closure activities are provided below. These include a chronology of the field work (Section 4.1), a discussion of the removal activities (Section 4.2), and a summary of confirmation sampling results.

4.1 CHRONOLOGY OF FIELD WORK

Offsite WSA closure activities consisted of two soil removal and confirmation sampling phases followed by site surveying and restoration activities. A chronological summary of these site closure field activities is provided below.

- July 26 through 30, 1999
 - Phase 1 initial soil removal
 - Phase 1A confirmation sampling
 - Leachfield demolition
- October 21, 1999
 - Phase 1B confirmation and PAH SPLP sampling
- December 6 through 8, 1999
 - Phase 2 soil removal
 - Phase 2 confirmation sampling
- February 16, 2000
 - Final sample location and area boundary survey
- March 3, 2000
 - Site restoration

4.2 SOIL REMOVAL AND CONFIRMATION SAMPLING METHODS

4.2.1 Waste Characterization

Prior to removal activities, a waste profile of the soil to be disposed offsite was completed. The waste determination was made using data generated during the RFI. The soil was determined to be non-hazardous. A copy of the waste profile, along with the disposal facility waste acceptance form, is provided in Appendix D.

4.2.2 Soil Excavation, Transportation, and Disposal

General excavation, transportation and disposal methods are provided below. Area-specific removal activities are further described in Section 5.0.

All soil removal activities were performed under the oversight of AFCEE contractor Universe Technologies, Inc, (UNITEC). Mr. Gary Miller of the USEPA was also present to observe the majority of the work completed during Phase 1. Mr. Alvin Brown of AFCEE was present during the field event to observe the work and sign disposal manifests. During Phase 2, Mr. Tim Sewell of TNRCC observed activities and conducted a site inspection.

Soil removal was performed using a combination of front end-loaders and track-hoe excavators. Soil removed during Phase 1 consisted primarily of top soil and weathered limestone. Soil was excavated to area-specific depths determined on the basis of RFI sampling results. Following analysis and evaluation of Phase 1A confirmation samples it

was determined that additional soil excavation was required both horizontally and vertically within DW-3 and the three former UST sites.

Given that the remaining soils to be removed consisted principally of fractured limestone bedrock, modified excavation methods were found to be required during Phase 2. An excavator equipped with a V-shaped excavation bucket (rock bucket) fitted with replaceable teeth was used in addition to the standard bucket excavator and front-end loader equipment used in Phase 1.

Within each removal phase, excavated soils were stockpiled within the disturbed areas. The soil was then loaded on trucks that were routed and staged on surfaces outside of the excavation area. Twenty-cubic-yard semi-tractor dump trailers were used to transport the excavated soils. Each load was covered by a tarpaulin to prevent loss of the material during transport. The soils were transported approximately five driving miles to the following facility for disposal:

Westside Recycling and Disposal Facility
12280 U.S. Highway 80 West
Aledo, Texas 76008
TNRCC Permit Number 1019A
Disposal Profile Number WS-9131

Each soil load was transported and disposed of with an appropriate manifest. Copies of the soil disposal manifests are provided in Appendix E. Table 4-1 presents a summary of the volume of soil removed from each area. Photographs showing the conditions observed in various areas may be found in Appendix F.

TEC personnel continuously monitored the excavation, loading, and shipping operations. Truck volumes were verified by estimating the filled volume of loaded trucks leaving the site, and by verifying the number of full front-end loader buckets used to load the trucks. Front-end loader bucket capacity was verified by examining the bucket nameplate, and checking the rough dimensions of the implement. It should be noted that volumes provided in this report are as measured by truck capacity, unless otherwise indicated.

Between Phase 1 and site restoration, temporary fences were installed around the perimeter of the deeper excavations. The objective of the fences was to prevent inadvertent or unauthorized access to excavation areas that posed a fall or entrapment risk to personnel or livestock. Fences were installed around UST-8500, UST-8505, UST-8507, and Bunker Building-8535.

4.2.3 Confirmation Sampling

Representative samples of soils remaining after each excavation phase were taken to determine whether the minimum removal objectives were realized. Minimum removal objectives were defined as the RRSN2 and PSTD site-specific CULs as identified in Table 2-10. Removals at a number of locations exceeded the minimum objectives and resulted in a reduction of contaminant levels to or below background as identified in

Table 3-1. Activity-specific sampling methods, followed by a discussion of the rationale used to select sample location and a summary of the numbers of samples collected, are described below.

4.2.3.1 Sampling Methods

Surface soil sampling, sample handling, sample custody, and equipment decontamination were performed in general accordance with the methods identified in the Offsite WSA Field Sampling Plan (TEC 1996a).

In-general, this consisted of collecting soil from 0 to 6 inches below ground surface (bgs) with a stainless steel trowel, homogenizing the soil in a stainless steel bowl and transferring the soil to pre-cleaned sample containers supplied by the contract laboratory. Sampling equipment that came into contact with the sampling areas or sample itself was field decontaminated as described in the Field Sampling Plan (TEC, 1996a).

After the Phase I soil removal, much of the exposed surfaces within DW-3, UST-8500, UST-8505, and UST-8507 consisted of limestone bedrock and in the case of UST locations, concrete was present in the bottom of the tank hold pit. Samples from these materials were collected using an electric Bosch® hammer drill. The drill implements were approximately 18 inches long and were field decontaminated between uses. The drill chuck assembly was also decontaminated to remove excess lubricant. Two to four drill holes typically were required to produce the sample volume, which was then collected and handled as specified in the RFI Field Sampling Plan (TEC, 1996a).

4.2.3.2 Selection of Sampling Locations

The sample locations were selected based on laboratory data from RFI sampling efforts, previous removal-phase confirmation sample results and field observations. In general, sampling locations were selected in order to document the complete removal of soil exceeding the RRSN2 CULs on soil exposed after excavation. During Phase 1B sampling, a number of samples were collected below the exposed surfaces in order to help identify the extent of excavation required in Phase 2. In the majority of these cases, the Phase 1B samples were collected in the same location as Phase 1A samples with concentrations above the CULs.

Removal areas fell into three categories:

- Areas with isolated surface soil metal CUL exceedances.
 - Mercury and cadmium surface soil contamination near Bunker Bldgs. 8531 (mercury), 8554 (cadmium), 8556 (cadmium), and 8558 (cadmium).
 - Mercury surface soil contamination in Area A-3.
- One area with surface and shallow subsurface soil PAH CUL exceedances
 - Drainageway DW-3.
- Areas with subsurface soil PAH CUL exceedances

- Former underground storage tank locations UST-8500, UST-8505, and UST-8507.

The sample location rationale used at each of these area types is discussed below.

Isolated Surface Contamination

Confirmation samples at areas with isolated surface soil metal CUL exceedance were located within the excavation zone and around the perimeter of the excavation. The initial Phase 1A confirmation sample results demonstrated attainment of the removal objectives. Additional soil excavation and confirmation sampling was therefore not required.

Surface and Shallow Subsurface Contamination

DW-3 Phase 1A confirmation samples were spaced approximately 50 feet apart along the centerline of the ditch. Additional confirmation samples spaced 75 to 100 feet apart were collected outside of the ditch to the north and south.

Phase 1A samples identified a number of locations along the ditch centerline with PAH concentrations elevated above the CUL after the Phase 1 removal. A second series of confirmation samples were collected along the centerline of the ditch in Phase 1B. These Phase 1B samples generally were collected from limestone bedrock below the approximately 6 inches of surface debris remaining after the Phase 1 removal. These samples were collected to determine the required depth of Phase 2 removal efforts. Following the Phase 2 removal, final surface confirmation samples were collected.

Subsurface Contamination Only

The former underground storage tank site confirmation samples were selected to assess contamination in the fuel line areas above and outside of the tank excavation, as well as any contamination within the excavated tank hole. The fuel line samples were positioned to detect contamination that might have migrated away from the building and tank hole, as well as within the tank line area itself. In most cases, four tank hold wall samples were collected to determine horizontal extent. In each UST pit, a concrete slab had been poured directly into the bottom of the pit. The concrete surface of each pit was scrapped clean during removal. No concrete samples were collected. There were no signs that any contamination had migrated beyond the concrete base. Confirmation sample numbers, removal area, and analyses performed are listed in Table 4-2

4.2.3.3 Sample Summary

A total of 103 confirmation samples were taken, in addition to 12 field duplicates. Five matrix spike/matrix spike duplicate samples were taken at the request of the laboratory. Three equipment blank samples were also collected. A summary of the samples taken in each area is provided in Table 4-2. Table 4-3 provides a summary of equipment blank results.

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Table 4-1. Soil Removal Summary

Area	Date	Number of Loads	Load Size (cubic yards)	Amount Removed (cubic yards)
DW-3	7/26/99	22	20	440
	7/27/99	11	20	220
	12/9/99	3	15	45
UST-8500	7/27/99	4	20	80
	7/28/99	2	20	40
	12/9/99	1	15	15
UST-8505	7/27/99	8	20	160
	12/8/99	2	15	30
	12/9/99	3	15	45
UST-8507	7/27/99	5	20	100
	12/8/99	2	15	30
	12/9/99	3	15	45
BD-8531	7/28/99	--	--	<20 ^a
BD-8535	7/28/99	--	--	>20 ^a
BD-8554	7/28/99	--	--	<60 ^a
BD-8556	7/28/99	--	--	<20 ^a
BD-8558	7/28/99	--	--	<20 ^a
A3	7/28/99	--	--	~20 ^a

^a Limited excavation done at these areas. A total of eight 20 cy loads were taken from these areas. Total soil removed was 120 cy.

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Table 4-2. Offsite Weapons Storage Area Removal Confirmation Sample Summary

Sample Type	No. of Samples	PAHs Soil SW8310	Cadmium SW6010	Mercury SW7471	Copper SW6010	SPLP SW1310
Area A3						
Phase 1A	7			7		
Duplicates	1			1		
Bunker Drains						
Phase 1A	26		15	6	5	
Duplicates	4		2	1	1	
Drainageway 3						
Phase 1A	19	19				
Phase 1B	9	9				9
Phase 2	2	2				
Duplicates ^a	2	2				
USTs						
Phase 1A	23	23				
Phase 1B	5	5				2
Phase 2	11	11				
Duplicates ^b	5	5				

^a Duplicate samples collected during Phase 1A sampling event

^b Duplicate samples collected during Phase 1A (3 samples) and Phase 2 (2 samples) sampling events

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5.0 AREA-SPECIFIC REMOVAL ACTIVITIES AND CONFIRMATION SAMPLING RESULTS

Removal activities and confirmatory sampling performed in support of site closure are described below. In addition, a description surveying and site restoration efforts are provided.

5.1 REMOVAL ACTIVITIES AND CONFIRMATORY SAMPLING

5.1.1 Drainageway DW-3

DW-3 follows an easterly course for approximately 400 feet before blending with the surrounding ground elevations (Figures 2-2 and 2-5). As discussed in Section 3.0, the RFI documented PAH contamination at the apparent source (drain from the power station), downgradient in the connecting drainageway (DW-3), and on the banks above the drainageway. PAH contamination to the north and south of the top of the bank was not associated with the unpermitted release from the power station.

The removal zone covered approximately 350 linear feet of the drainageway (see Figure 5-1). The western (upgradient) extent of the drainageway removal zone was determined based on the location of the top of the drainageway bank, while the eastern extent was set at the midpoint between sample locations DW3-118 and DW3-127. As discussed in Section 3.1 of this report, PAHs east of this midpoint were attributed to vehicle-related pollutants and not to an unpermitted release.

Although removal of soil from areas outside of the ditch was not required, contamination in the ditch and elevated PAHs outside the ditch were of similar concentrations. Therefore, the DW-3 soil removal zone was extended 20 to 50 feet north and 10 to 20 feet south of the ditch centerline as a conservative measure.

The widest section of the removal zone was north of Bldgs. 8505 and 8507 (see Figure 5-1). The removal zone was approximately 50 feet wide through this section. The southern portion of this section merged with the soil removal zone associated with UST-8505 and UST-8507. To the north, this section of the removal zone was extended to include two RFI sample locations (DW3-120 and DW3-121) that contained PAHs above background in both surface and subsurface samples (see Figure 3-29).

Removal Phase 1

Excavation work was initiated on July 26, 1999. The DW-3 excavation began by stripping approximately one foot of soil from the entire removal zone (see Figure 5-1). Following removal of the upper one foot, soil was removed to the top of bedrock within a 15-foot-wide section centered along the entire length of the ditch invert. Bedrock was encountered between 0.5 and 3.0 ft bgs.

A total of 660 cubic yards of soil were excavated during the Phase 1 effort. The excavated area encompassed approximately 13,040 square feet. The DW-3 Phase 1

soil removal was completed on July 27, 1999. Photos DW3-1, DW3-2, DW3-3, and DW3-4 present visual documentation of these removal activities (See Appendix F).

Confirmation Sampling Phase 1A

On July 28, 1999, 21 confirmation samples (including 2 duplicates) were collected from 19 locations at the surface within the DW-3 removal zone. As shown on Figure 5-1, one sample location was established upgradient of the ditch, 10 were within the ditch, and eight were to the north and south of the ditch.

All DW-3 Phase 1A samples were analyzed for PAHs and sample results are summarized in Table 5-1. Four locations (DW3-202, DW3-203, DW3-209, and DW3-218) within the ditch contained PAHs at concentrations greater than RRSN2 CULs after the Phase 1A removal (see Table 5-1). Duplicate samples collected at DW3-207 contained 83 and 35 $\mu\text{g}/\text{kg}$ of benzo(a)pyrene. The average of these values, 59 $\mu\text{g}/\text{kg}$ is below the RRSN2 CUL. PAH concentrations outside of the ditch were below RRSN2 CULs in all but three locations (DW3-208, DW3-210, and DW3-214). No further action was taken at the locations outside of the ditch since they were not associated with an unpermitted release.

The sample locations discussed above are depicted on Figure 5-1, however, the symbol indicating PAH concentration at DW3-202, DW3-203, DW3-209, and DW3-218 are not applicable, as the contaminated soil from these sample locations was removed in subsequent removal actions, as described in the discussion below of Phase II removal activities. The symbols on Figure 5-1 depict the PAH concentrations following the final soil removals, including those described below.

Confirmation Sampling Phase 1B

A second confirmation sampling field event was conducted on October 21, 1999 to further delineate remaining soil contamination in the ditch and to provide SPLP data for an assessment of the PAH RRSN2 CULs (SPLP results are summarized in Table 5-1 and discussed in Section 2.1.3). Nine confirmatory samples were collected within the ditch at eight previously sampled Phase 1A locations.

As indicated on Figure 5-1 and Table 5-1, Phase 1B confirmatory sample results from locations DW3-221/202 and DW3-223/209 indicate that the removal objectives had been met in these sections. PAHs at locations DW3-222/203 and DW3-227/218 remained elevated above the RRSN2 CULs. Please note, the symbols depicted on Figure 5-1 for these sample locations are not representative, as they show the PAH concentrations from samples collected at the same locations, after subsequent soil removals. Location DW3-222/202 was approximately 30 feet downgradient from the power station discharge pipe. DW3-227/218 was located at the most downgradient portion of the removal zone. These locations were further excavated and resampled, as described below.

Removal Phase 2

As discussed above, Phase 2 removal within DW3 required excavation of limestone bedrock at the two locations in DW3 with residual PAH concentrations above the RRSN2 CULs. The DW-3 Phase 2 removal was initiated on December 6, 1999 and was performed using a rock- bucket-equipped excavator. A total of 45 cubic yards were removed during the second phase. Approximately 15 cubic yards of soil and bedrock were removed from the eastern extent of DW-3. This material was excavated from a 25-foot-long and 15-foot-wide section centered on DW3-227/218. An additional 30 cubic yards of bedrock were removed from a 40-foot-long and 15-foot-wide section of the ditch centered on location DW3-222/203.

In order to satisfy requirements for closure, two additional samples (DW3-229-01 and DW3-230-01) were collected from the Phase 2 removal zones (see Figure 5-1). No PAHs were detected in these final confirmation samples (see Table 5-1).

5.1.2 UST-8500

Removal Phase 1

As indicated in Section 3.1, the RFI determined that the northwest corner of Building 8500 required excavation due to the presence of benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, and dibenzo(a,h)anthracene contaminated soils at levels above RRSN2 CULs. Excavation was initiated at UST-8500 on July 27, 1999. An 8-foot-wide, 11-foot-long, and 7-foot-deep pit excavated into the bedrock identified the former tank location. A concrete pad had been poured across the entire base of the bedrock pit. (Note: the dimensions of the tank pit as shown on Figure 5-2 are based on final Phase 2 excavation limits and are therefore larger than described above).

A total of 120 cubic yards of soil was removed from the tank pit and pipe run area as shown on Figure 5-2. The UST-8500 excavation was completed to a depth of 7 feet bgs within the tank pit and to approximately 4 feet bgs in the surrounding pipe run area. The removal zone was approximately 625 square feet (see photo UST8500-1 in Appendix F).

Confirmation Sampling Phase 1A

After completion of the excavation, 10 confirmation soil samples (including two duplicates) were collected at eight locations (see Table 5-2). As shown on Figure 5-2, the samples were collected from the tank pit side walls and the pipe run area along the north side of Building 8500. Soil samples were analyzed for PAHs.

The analytical results of the soil samples indicate that the north, east, and west walls of the UST tank pit (sample locations UST-210, UST-211, and UST-212) contained residual PAHs at concentrations above the RRSN2 CULs (see Table 5-2). In order to further determine the extent of contamination, additional sampling was conducted in Phase 1B.

Confirmation Sampling Phase 1B

On October 21, 1999, additional confirmation samples were collected to further delineate the extent of remaining contamination in the tank pit, and to obtain SPLP data for assessing PAH CULs (SPLP results are included on Table 5-2 and discussed in Section 2.1.3). Two samples (UST-224-01 and UST-225-01) were collected from the west and north tank pit walls adjacent to the Phase 1A sampling locations. The samples were collected 6 inches to 1 foot into the sidewalls to determine the extent of additional removal efforts. PAH values for both samples were below RRSN2 CULs (see Table 5-2).

Removal Phase 2

Based on Phase 1B sample results, one horizontal foot of the north, east, and west tank pit walls was targeted for removal (see Photo UST8500-2). Fifteen cubic yards of sidewall bedrock and soil were excavated and transported offsite for disposal.

On December 8, 1999, four samples (UST-231-01, UST-232-01, UST-233-04, and UST-234-01) including one duplicate were collected in order to verify that the removal objectives were attained. These samples were collected from the west, north, and east tank pit walls adjacent to the Phase 1A and 1B sample locations. PAHs were not detected in these final confirmation samples. Figure 5-2 shows that all remaining soils have PAH concentrations below the RRSN2 CULs.

5.1.3 UST-8505

Removal Phase 1

The UST at Bldg. 8505 is assessed under 30 TAC§334 PSTD regulations. Due to the presence of PAHs at concentrations greater than Plan B CULs, excavation was determined to be necessary. Removal activities were initiated on July 27, 1999. Similar to UST-8500, a 9-foot-wide, 16-foot-long and 8-foot-deep tank pit with a concrete base was identified. A total of 160 cubic yards of soil were removed from the UST-8505 tank pit and pipe run area. In the tank pit, soil was excavated to the concrete pad (see Photos UST8505-1 and UST8505-2 in Appendix F). The excavated area encompassed approximately 465 square feet (see Figure 5-3). (Note: The dimensions of the tank pit as shown on Figure 5-2 are based on final Phase 2 excavation limits and are therefore larger than described above).

Confirmation Sampling Phase 1A

After the soil removal activities, confirmation sampling was completed. Sample locations were positioned around the tank pit sidewalls and on the north and south sides of the pipe run (see Figure 5-3). Nine confirmation samples were collected, including one duplicate, from 8 locations. All soil samples were analyzed for PAHs. PAH concentrations remained elevated above the Plan B CULs on the north, east, and south tank pit walls at sample locations UST-217, UST-218, UST-220, and UST-221 (see Table 5-3). Figure 5-3 does not depict the PAH concentrations for these samples (UST-217, UST-218, UST-220, and UST-221) because the contaminated soil from these locations was removed during Phase 2, as discussed below. PAHs along the west wall

and pipe run area; locations UST-200, UST-201, UST-219, and UST-222, were below the CULs (see Table 5-3 and Figure 5-3).

Removal Phase 2

Based on field soil screening and Phase 1B confirmation data collected from UST-8500 and UST-8507, it was assumed that an additional six inches to one foot of tank sidewall needed to be removed in order to achieve compliance with the Plan B CULs. Seventy-five cubic yards of soil and limestone bedrock were removed from the north, east, and south side walls. Five confirmation samples (including one duplicate) were collected and submitted for PAH analysis. All sample results were less than the Plan B CULs (see Table 5-3). Figure 5-3 shows that all remaining soils have PAH concentrations below the Plan B CULs.

5.1.4 UST-8507

Removal Phase 1

As indicated in Section 3.2, benzo(a)pyrene was detected at concentrations greater than RRSN2 CULs, prompting excavation activities, initiated on July 27, 1999, at the former UST area west of Bldg. 8507. As with UST-8500 and UST-8505, the tank had been placed within a pit dug into the limestone. A concrete pad formed in the base of the pit. The tank pit was approximately 8-feet-wide, 12-feet-long, and 7-feet-deep. (Note: The dimensions of the tank pit as shown on Figure 5-2 are based on final Phase 2 excavation limits and are therefore larger than described above).

The area excavated included the tank pit and pipe run area between Bldg. 8507 and the tank pit (see Figure 5-4). A total of 100 cubic yards were removed from approximately 310 square feet during Phase 1. The tank pit soil was excavated to the concrete pad (7 feet bgs) and limestone sidewalls (see Photo UST8507-1 in Appendix F). Soils in the pipe run area were excavated to the top of the limestone (approximately 2 feet bgs) (see Photo UST8507-2 in Appendix F).

Confirmation Sampling Phase 1A

On July 29, 1999, seven confirmation soil samples were collected to determine whether the Phase 1 efforts achieved the removal objectives. Four samples were collected from the north, east, south, and west tank pit walls (see Figure 5-4 and Table 5-4). Two samples were collected along the pipe run between the tank pit and the building and one sample was collected along the north side of the pipe run. All soil samples were analyzed for PAHs.

As shown on Table 5-4, sample locations UST-205 and UST-206, from the east and south tank pit walls, contained PAHs above the RRSN2 CULs. Figure 5-4 shows the locations of sample locations UST-205 and UST-206, however, there is no indication on the figure of PAH concentrations because the soil from these sample locations was removed in subsequent removal actions, as described below in the discussion of Phase II removal activities.

Confirmation Sampling Phase 1B

Four additional confirmation samples were collected on October 21, 1999 in order to ensure that the pipe run contaminated area was defined. As depicted on Figure 5-4, these samples were positioned adjacent to the building and on the north and south sides of the pipe run and along the north side of the tank pit. Two of the four samples, UST-226 and UST-227, had detected PAHs above the RRSN2 CULs, indicating the need for excavation near the building and immediately to the north of the pipe run. Please note, on Figure 5-4, symbols for sample locations UST-226 and UST-227 are not indicative of the PAH concentrations because these locations were further excavated as described below.

Removal Phase 2

A second removal phase was initiated to remove all remaining contaminated soil along the pipe run area adjacent to the building and from the eastern and southern tank pit walls. Excavation activities were completed on December 9, 1999. Approximately 75 cubic yards of soil were removed. Approximately one foot of bedrock was removed from the pipe run area. In addition, one foot (horizontally) was removed from the east and south side walls. Final confirmation samples UST-235-01, UST-236-01, and UST-237-01 were collected from these Phase 2 removal zones. No PAHs were detected in these samples. Figure 5-4 shows that all remaining soils have PAH concentrations below the RRSN2 CULs.

5.1.5 Bunker Drain 8531

Removal Phase 1

Due to the presence of mercury above RRSN2 CULs during RFI (see Figure 3-14), the area adjacent to the eastern bunker drain was excavated to six inches bgs. Excavation activities took place on July 28, 1999. Approximately 20 cubic yards of soil were removed from BD-8531 area. The removal zone encompassed approximately 525 square feet (see Figure 5-5). Photos BD8531-1 and BD8531-2 present a visual documentation of the removal activities at BD-8531 (See Appendix F).

Confirmation Sampling Phase 1A

Following Phase 1 soil removal, seven soil samples (including one duplicate), were collected from six locations at the surface and analyzed for mercury. Four of the locations were within the removal zone. Two locations were established east and southeast of the removal zone (see Figure 5-5).

Mercury was not detected in any of the four samples collected within the removal zone. Only one of the two samples collected outside of the removal zone contained detectable mercury. The southeastern-most sample, BD-208-01, contained 0.12 mg/kg of mercury. Although this value is 0.01 mg/kg over the RRSN2 CUL, the reported concentration was qualified due to matrix interference and therefore may not accurately represent the mercury concentrations at this location. Mercury distribution at BD-8531 was defined during the RFI. As shown on Figure 3-14, results from samples BD-104-01 and BD-105-

01 document that mercury is not present at distances greater than 10 feet from the corner of the bunker door and driveway. Sample BD-208-01 was more than 25 feet from this point. Based on the RFI data and the qualified BD-208-01 sample result, the removal objective was achieved.

5.1.6 Bunker Drain 8535

Removal Phase 1

One RFI sample (BD-005-03) collected at BD-8535 contained copper at a concentration above the RRSN2 CUL (see Figure 3-13 and 3-15). The elevated concentration was detected at 2.5 to 4.0 feet bgs. This exceedance prompted the removal of approximately 20 cubic yards of soil adjacent to the western bunker drain.

The excavation at BD-8535 was completed on July 28, 1999, to a depth of approximately 4.0 feet bgs and encompassed an area of approximately 120 square feet. Approximately 20 cubic yards of soil was removed. Figure 5-6 depicts the removal zone. Photos BD8535-1 and BD8535-2 present a visual documentation of the removal activities conducted at the BD-8535 area (see Appendix F).

Confirmation Sampling Phase 1A

Following Phase 1 soil removal at BD-8535, six surface soil samples (including one duplicate) were collected from five locations in the bottom of the excavation within the removal zone. Results for these samples are presented in Table 5-6. Copper was reported below the background level (14.2 mg/kg as shown in Table 3-1) in all samples. Figure 5-5 shows that all remaining soil has no detectable mercury concentrations or the levels are below background.

5.1.7 Bunker Drain 8554

Removal Phase 1

Less than 20 cubic yards of soil were removed northwest of BD-8554 due to the presence of cadmium in RFI sample BD-130-01 at concentrations above the RRSN2 CUL (see Figures 3-13 and 3-16). The excavation was completed to a minimum of one foot bgs in a 15-foot by 15-foot area centered on RFI sample location BD-130. Figure 5-7 depicts the removal zone. Photos BD8554-1 and BD8554-2 present a visual documentation of the removal activities conducted at BD-8554 (See Appendix F).

Confirmation Sampling Phase 1A

Six soil samples (including one duplicate) were collected from five locations at BD-8554. The samples were analyzed for cadmium. Sample BD-214-01 was collected in the center of the removal zone and was co-located with the RFI sample containing elevated cadmium. Four additional samples were collected around the perimeter of the removal zone (see Figure 5-7). Cadmium concentrations in all samples were below the RRSN2 CUL (see Table 5-7), therefore closure objectives have been achieved. Figure 5-7

shows that all remaining soil cadmium concentrations are not detected, or are below the CUL.

Sample BD-210 was also analyzed for copper in error. Copper was not detected above the RRSN2 CULs at this location during the RFI. Copper was detected below the RRSN2 CULs in sample BD-210 at 4.1 mg/kg.

5.1.8 Bunker Drain 8556

Removal Phase 1

Less than 20 cubic yards of soil were removed from the area northeast of BD-8556 due to the presence of cadmium in RFI sample BD-137-01 at concentrations above the RRSN2 CUL (see Figures 3-13 and 3-16). The excavation was completed to a minimum of one foot bgs in a 15-foot by 15-foot area centered on RFI sample location BD-137. Figure 5-8 depicts the removal zone. Photos BD8556-1 and BD8556-2 show documentation of the removal activities conducted near BD-8556 (See Appendix F).

Confirmation Sampling Phase 1A

Six soil samples were collected (including one duplicate) from five locations at BD-8556. All samples were analyzed for cadmium. Sample BD-219-01 was collected in the center of the removal zone (see Figure 5-8). The four remaining samples were collected around the perimeter of the removal zone. Cadmium concentrations in all samples were below the RRSN2 CUL (see Table 5-8), therefore meeting closure objectives. Figure 5-8 shows that all remaining soils have cadmium concentrations below the RRSN2 CULs or are not detected.

5.1.9 Bunker Drain 8558

Removal Phase 1

Less than 20 cubic yards of soil were removed from the area northwest of BD-8558 due to the presence of cadmium in RFI sample BD-138-01 at concentrations above the RRSN2 CUL (see Figures 3-13 and 3-16). The excavation was completed to a minimum of one foot bgs in a 15-foot by 15-foot area centered on RFI sample location BD-138. Figure 5-9 depicts the removal zone. Photos BD8558-1 and BD8558-2 show documentation of the removal activities conducted at BD-8558 (See Appendix F).

Confirmation Sampling Phase 1A

After excavation activities were completed, five soil samples were collected from within the center of the removal zone and around its perimeter (see Figure 5-9). All soil samples were analyzed for cadmium. Cadmium concentrations in all samples were below the RRSN2 CUL (see Table 5-9), meeting closure objectives. Figure 5-9 shows that all remaining soils have no detectable cadmium concentrations or they are below the RRSN2 CULs.

5.1.10 Area A-3

Removal Phase 1

During the RFI, mercury contamination was identified at levels above the established RRSN2 CUL at area A-3. This occurred west of Building 8503 in Area A-3 at sample location A-3-006 (see Figure 3-6). The removal zone was established and included RFI sample locations A-3-006, A-3-120, A-3-122, and A-3-123 (see Figure 3-6). The removal zone was approximately 30 feet long and extended 21 feet west of the concrete pad. The zone included the adjacent portions of drainageway DW-1 (see Figure 5-10). The excavation was completed to a minimum depth of 6 inches and encompassed approximately 630 square feet. Approximately 20 cubic yards of soil were removed from this area. Photos A3-1 and A3-2 present a visual documentation of the removal activities conducted at Area A-3 (See Appendix F).

Confirmation Sampling Phase 1A

Eight confirmation soil samples (including one duplicate) were collected from seven locations. Four locations were centered within the removal zone. Three locations were established around the north, south, and west unpaved perimeters (see Figure 5-10). Mercury concentrations in all samples but one (A-3-206-01) were below the RRSN2 CUL for mercury (see Table 5-10). Sample A-3-206-01 was collected within the southwest segment of the removal zone and contained 0.12 mg/kg of mercury, 0.01 mg/kg greater than the RRSN2 CUL. Mercury concentrations in the other removal zone samples (includes one duplicate) were 0.011 mg/kg, 0.017 mg/kg, 0.063 mg/kg and 0.055 mg/kg, all less than RRSN2 CUL. The average mercury concentration in the removal zone was 0.06 mg/kg, less than one half the RRSN2 CUL. The mercury-contaminated soil in this area is therefore assumed to have been removed to levels below the RRSN2 CUL.

5.1.11 Leachfield

Removal Phase 1

On July 28, 1999, the south wall of the leachfield was demolished. The south wall of this area, which was approximately two feet high, six inches thick, and 25 feet long, was broken up with an excavator bucket and blended with the existing grade. No samples were collected from the leachfield area during the closure phase of this project.

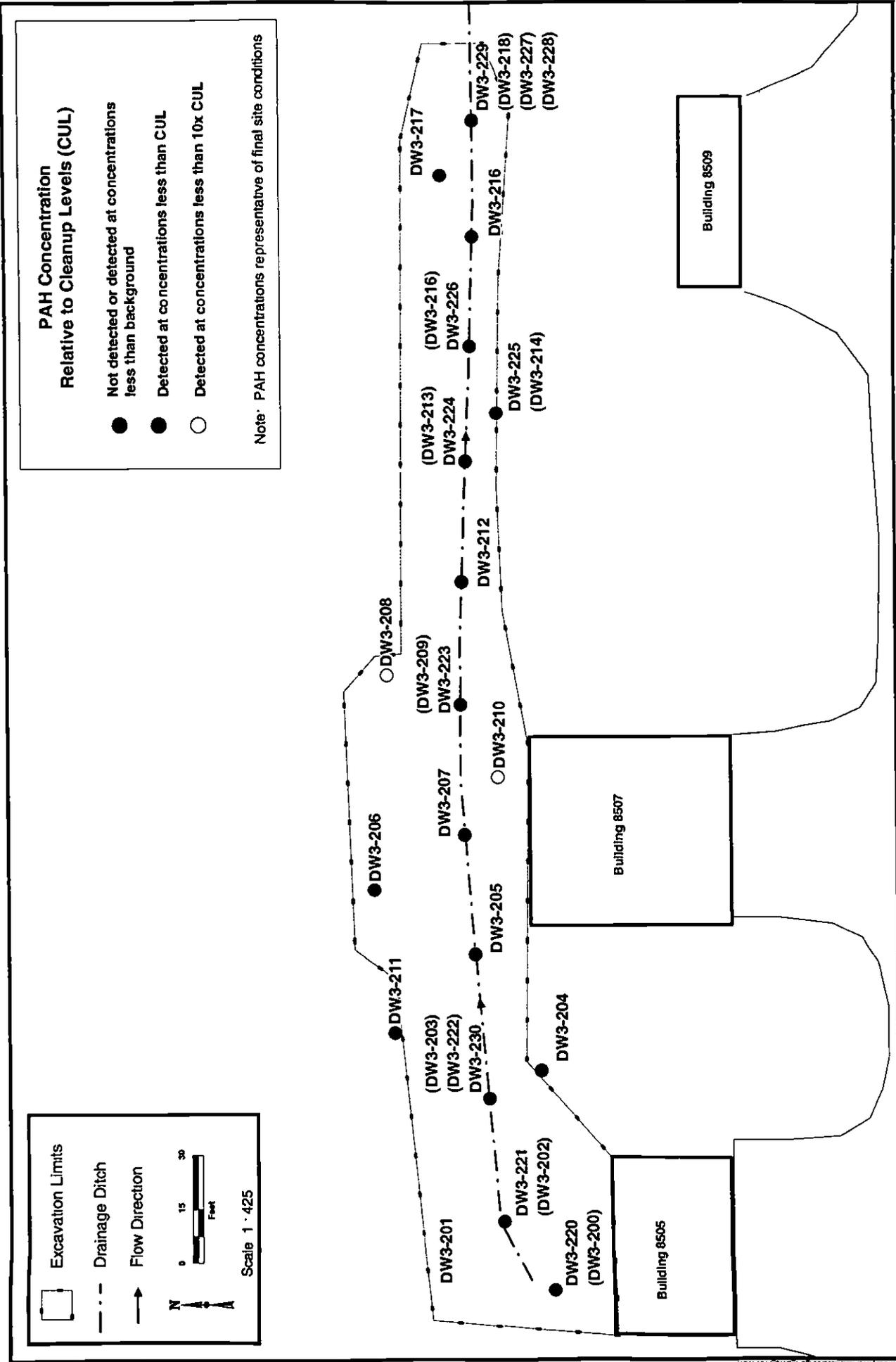
5.2 CLOSURE SURVEYING

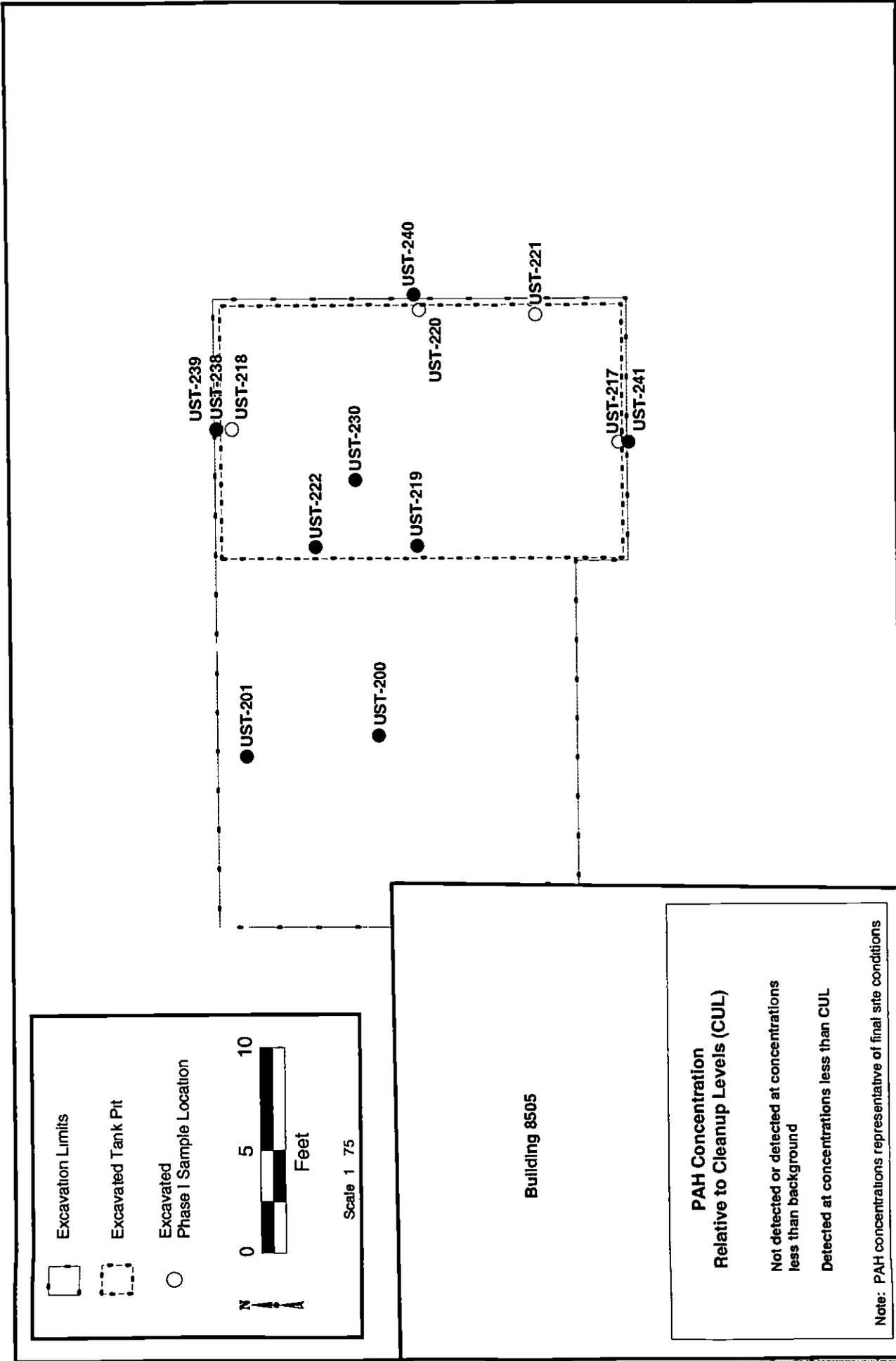
Gorrondona and Associates initiated surveying in support of site closure on February 15 and February, 16, 2000. TEC personnel were present to coordinate and observe surveying activities. Surveys included the limits of excavations and boundaries of those areas to be closed under 30 TAC§335. In addition, locations of confirmation sampling points were determined. Project survey data are provided in Appendix G.

5.3 RESTORATION AND DEMOBILIZATION

Restoration and demobilization activities began at the Offsite WSA on March 7, 2000. Unified Services of Texas personnel arrived onsite and began excavating soils from Area A-1 for use as fill material. As indicated in Section 3.0 of this report, these soils were not impacted by an unpermitted release.

A total of 432 cubic yards were obtained from Area A-1 and transported to UST-8500, UST-8505, UST-8507, and BD-8535 removal zones. An excavator and a front-end loader were used to place and compact the soil at each area. Restoration and demobilization work was completed as the soil borrow and fill areas were fine graded with a skid-steer loader. No fill was added to DW-3, Area A-3, or the other shallow bunker drain-related removal areas. The eastern extent of the DW-3 removal zone was graded to ensure that surface water would continue to flow to the east.



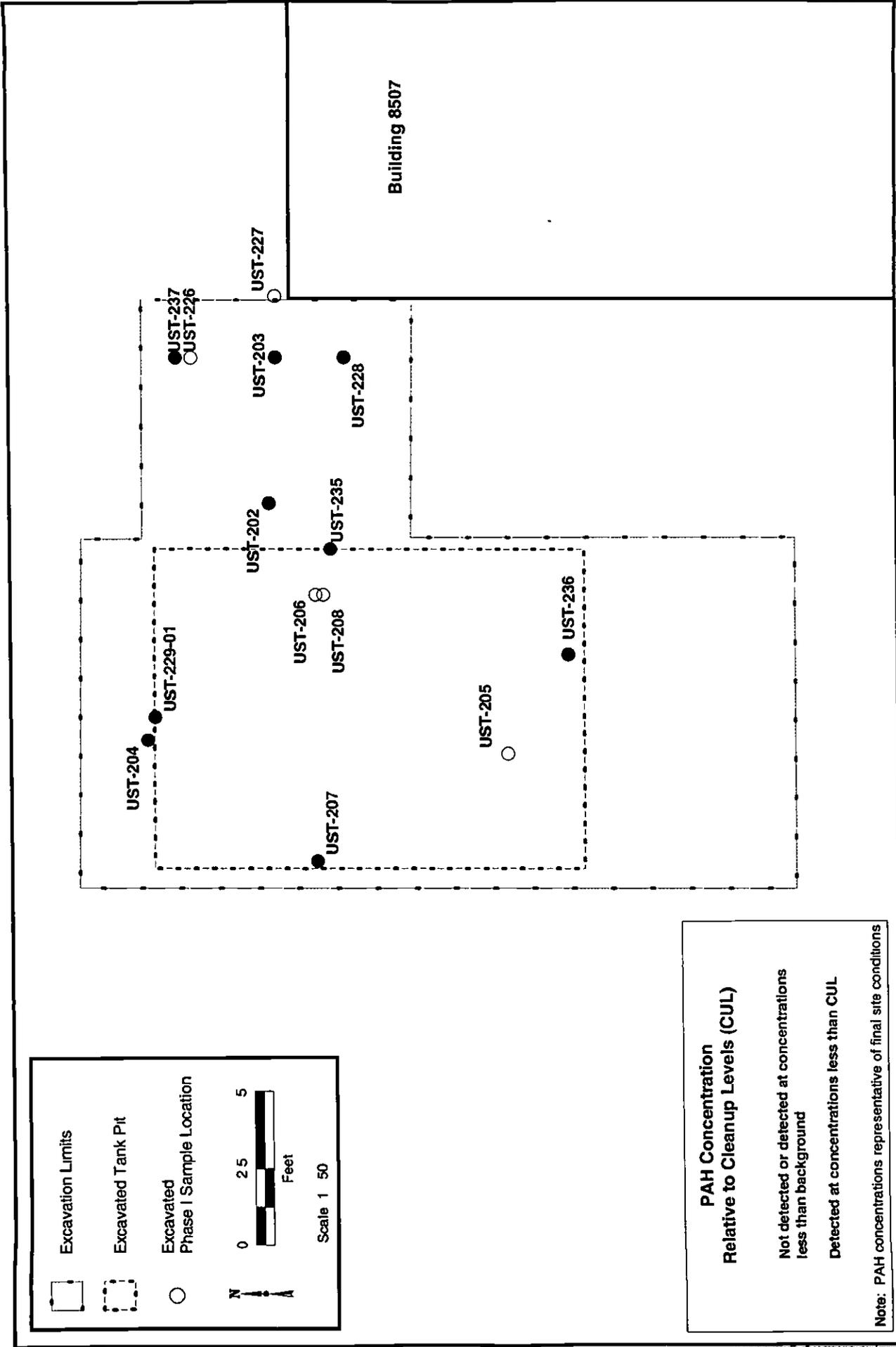


Creation Date 10/05/1999
 Rev Date 05/19/2000
 Project Manager B Duffner
 Prepared By D Waardenburg
 Project No P-3109

Figure 5-3
UST 8505 Limits of Excavation and Confirmatory Sample Results



\\mswrvsah\mswrvsah\3-8205 PAH.MXD



**PAH Concentration
Relative to Cleanup Levels (CUL)**

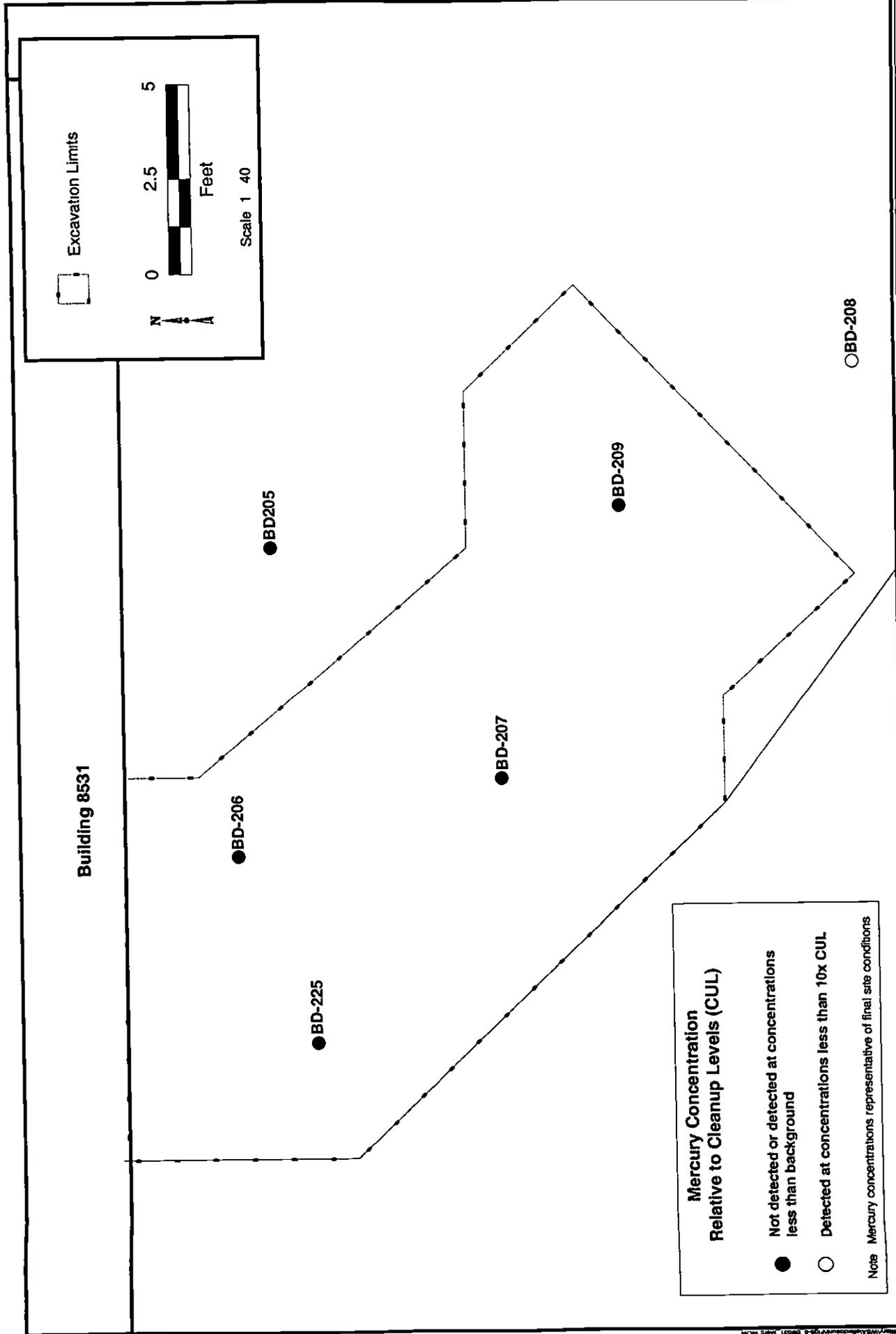
Not detected or detected at concentrations less than background

Detected at concentrations less than CUL

Note: PAH concentrations representative of final site conditions

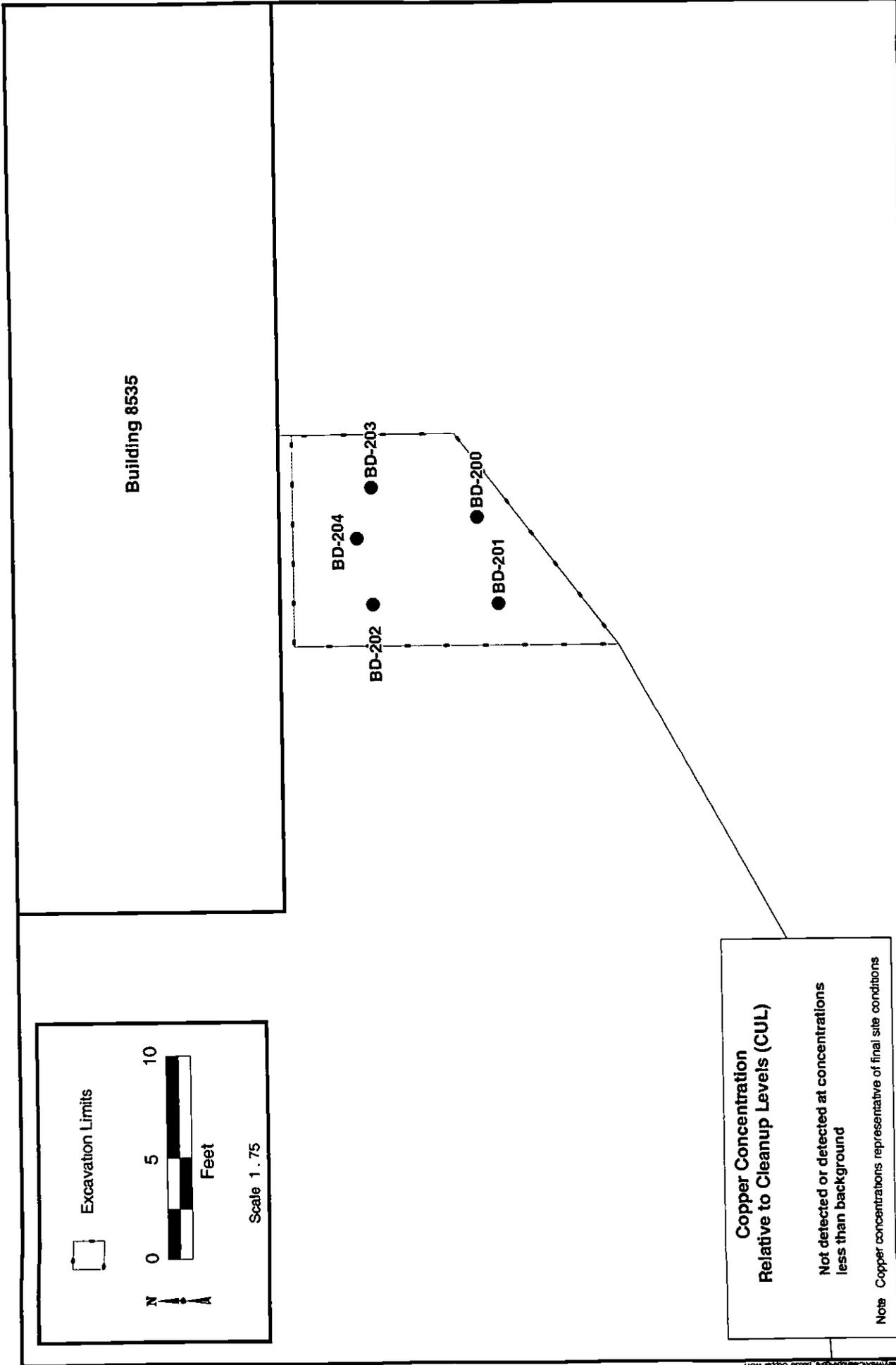
Figure 5-4
UST 8507 Limits of Excavation and Confirmatory Sample Results

Creation Date 10/05/1999
 Rev Date 05/19/2000
 Project Manager B. Duffner
 Prepared By D. Waardenburg
 Project No. P-3109



Creation Date 05/10/2000
 Rev Date 05/22/2000
 Project Manager B. Duffner
 Prepared By D. Waardenburg
 Project No. P-3109

Figure 5-5
Bunker Drain 8531 Limits of Excavation and Confirmatory Sample Results



Creation Date 05/10/2000
 Rev Date 05/22/2000
 Project Manager B. Duffner
 Prepared By W. Mitchell
 Project No P-3109

Figure 5-6
Bunker Drain 8535 Limits of Excavation and Confirmatory Sample Results

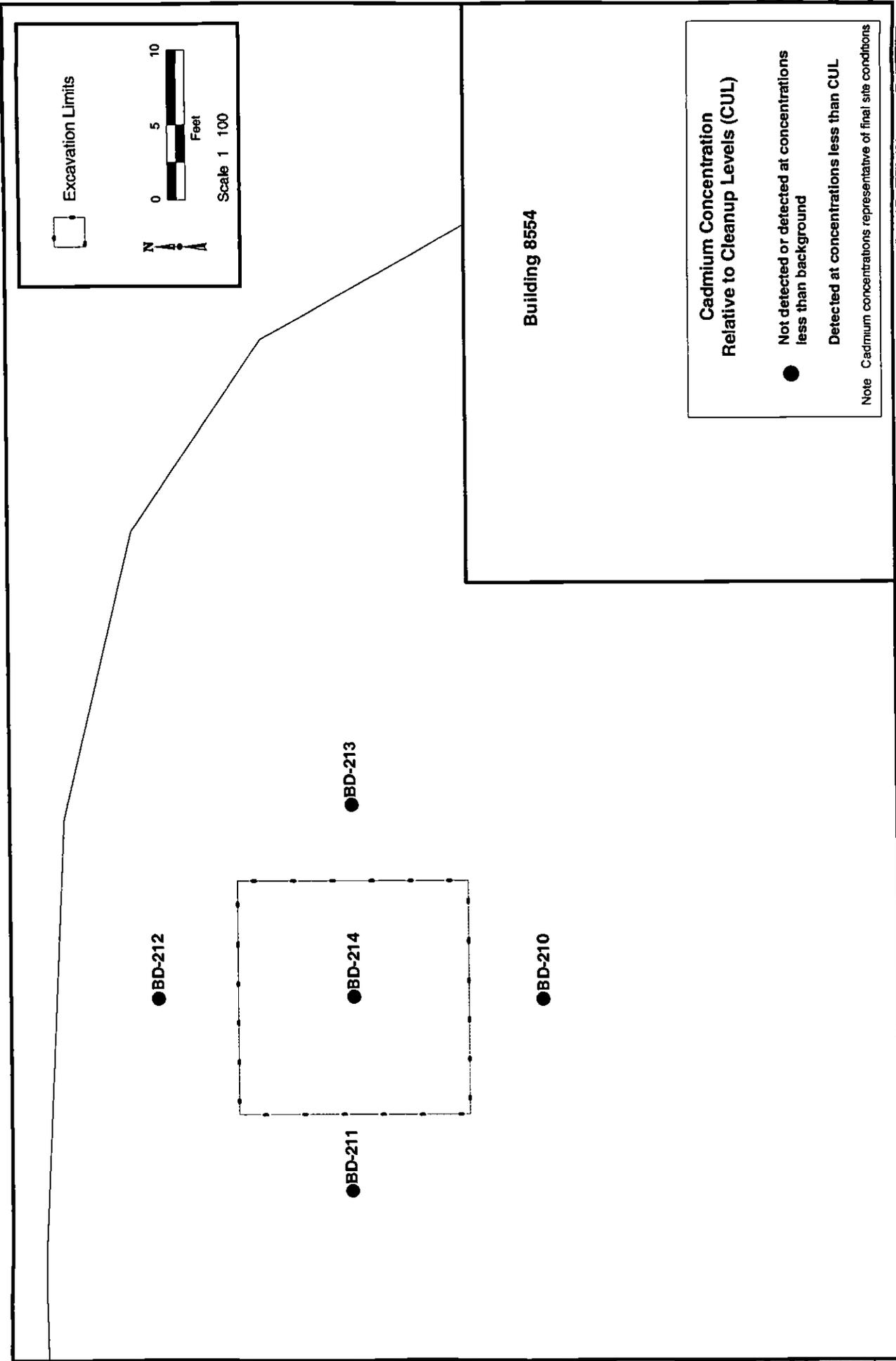


Figure 5-7

Bunker Drain 8554 Limits of Excavation and Confirmatory Sample Results

Creation Date 05/10/2000
 Rev Date 05/22/2000
 Project Manager B. Duffner
 Prepared By D. Waardenburg
 Project No. P-3109



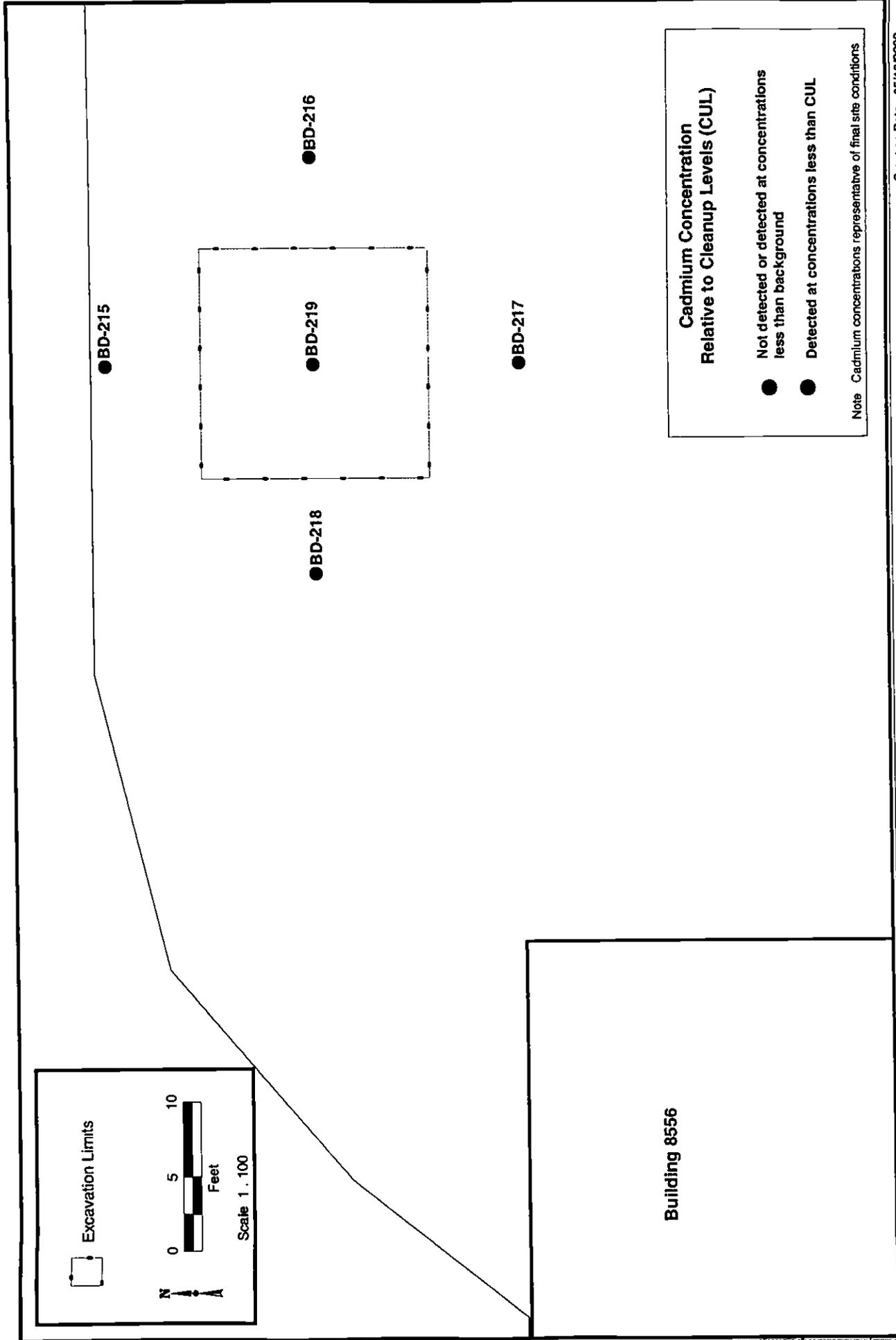
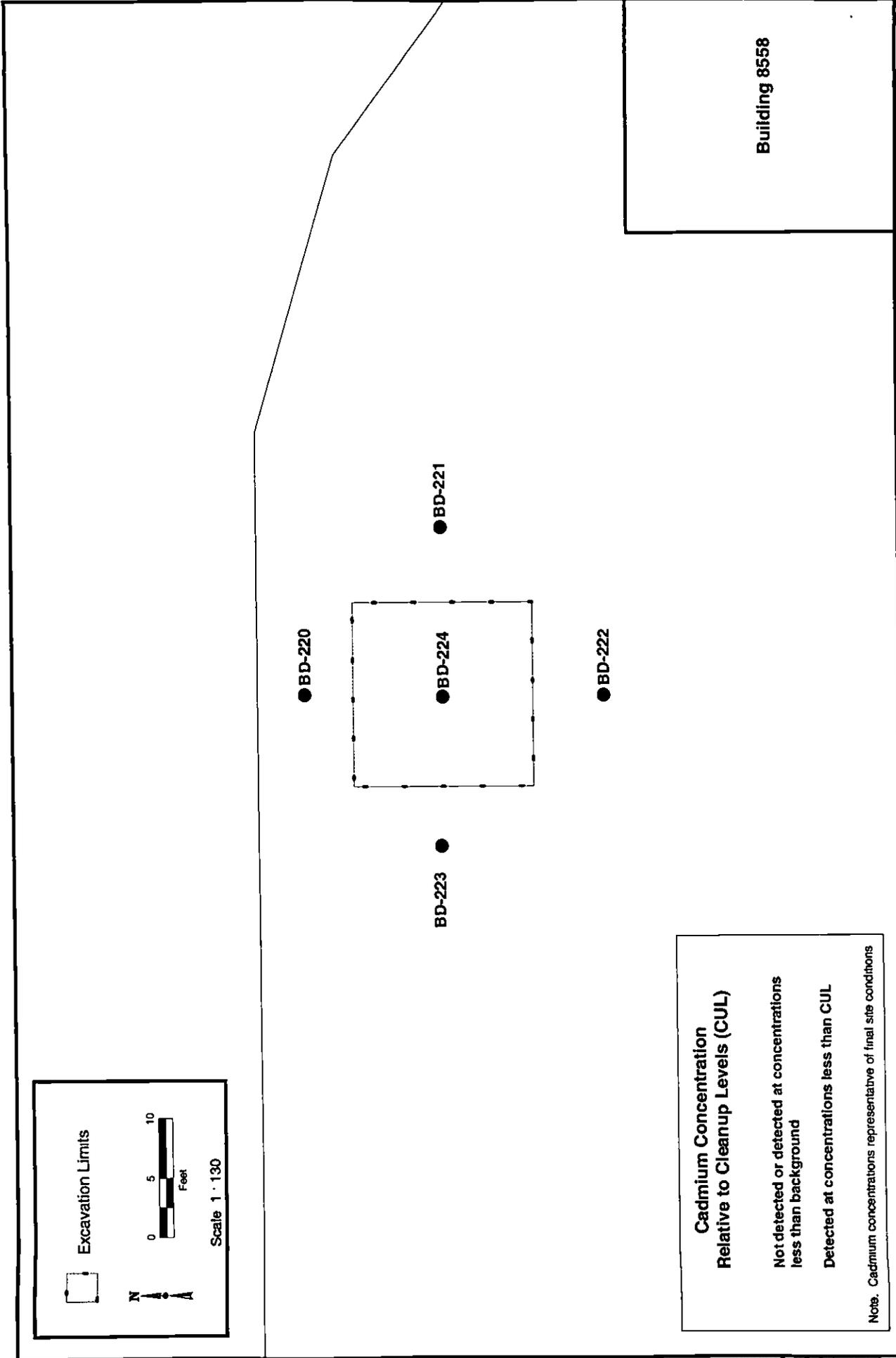


Figure 5-8
Bunker Drain 8556 Limits of Excavation and Confirmatory Sample Results

Creation Date 05/10/2000
 Rev Date 05/22/2000
 Project Manager B. Duffner
 Prepared By D. Waardenburg
 Project No. P-3109

The Environmental Company, Inc.



**Cadmium Concentration
Relative to Cleanup Levels (CUL)**

- Not detected or detected at concentrations less than background
- Detected at concentrations less than CUL

Note. Cadmium concentrations representative of final site conditions

Creation Date 05/10/2000
 Rev Date 05/22/2000
 Project Manager B Duffner
 Prepared By W Mitchell
 Project No P-3109

**Figure 5-9
 Bunker Drain 8558 Limits of Excavation and Confirmatory Sample Results**

6.0 SUMMARY OF CLOSURE REQUIREMENTS

As indicated in Section 3.0, five areas within the Offsite WSA require closure under TAC §335. These areas include:

- SWMU 59 including areas located to the north, west, and south of the concrete pad surrounding Bldg. 8503 (Area A-3 and DW-1);
- areas surrounding bunker Bldgs. 8531, 8535, 8537, 8539, 8541, 8552, 8554, 8556, 8558, and 8560;
- drainage way DW-3;
- former UST locations UST-8500 and UST-8507; and
- the leach field.

With the exception of the leach field, all areas contain soils with contaminants at concentrations exceeding background levels. As discussed in Sections 5.0, all media with contaminant concentrations exceeding RRSN2 CULs have been removed. These areas will therefore be closed in accordance the RRSN2. The leach field will be closed under RRNS1.

A summary of the closure requirements that have been attained for each of these areas are provided below. Section 6.1 summarizes final conditions at each area and identifies contaminants remaining. Sections 6.2 describes the closure boundary or track of land on which the closure is achieved based on background levels.

6.1 SUMMARY OF FINAL CONDITIONS

6.1.1 SWMU 59 Including Area A-3 and Drainage Way DW-1

SWMU 59, Area A-3, and drainage way DW-1 are shown on Figure 6-1. As discussed in Section 3 1.1, 10 inorganic analytes exceeded background levels in soil samples collected within 5 feet of the perimeter of the Bldg. 8503 concrete pad. A similar group of inorganic analytes were detected in drainage way DW-1. DW-1 is located 15 to 20 feet from the edge of the concrete pad. These inorganics include antimony, arsenic, cadmium, chromium, copper, iron, lead, mercury, molybdenum and zinc. These exceedances were generally found in surface soil samples (0 to 6 inches bgs). RFI results document that, with exception of mercury, all inorganic analytes attributable are to an unpermitted release are below the RRSN2 CULs. Subsequent to the RFI, soils containing elevated concentrations of mercury were removed as described in Section 5.1.10.

In addition to inorganic analyses, eight Area A-3 and DW-1 locations contained VOCs above background levels. Background levels for VOCs were generally considered to be the detection limits. The compounds included 1,4-dichlorobenzene, cis 1,2-dichloroethene, and trichloroethene. These compounds were reported only in subsurface soils between 2.5 feet bgs and bedrock (maximum depth 10.5 feet bgs). All concentrations are below the RRSN2 CULs

6.1.2 Bunker Buildings

Thirteen inorganic analytes remain in soils surrounding the bunker drains at concentrations above background levels and below the RRSN2 CULs. These include antimony, arsenic, cadmium, chromium, cobalt, copper, iron, lead, magnesium, mercury, nickel, selenium, and zinc.

RFI results indicated that mercury, copper and cadmium were present at six locations at concentrations above RRSN2 CULs. As discussed in Sections 5.1.5 through 5.1.9, soils from these locations were removed.

RFI and removal results generally indicate that contamination above background is limited to the surface soil (0 to 6 inches bgs) immediately adjacent to the bunker drain (within 2 feet of the wall). Concentrations typically decreased to below background within 15 feet from the wall, however, a number of analytes were detected above background beyond this point. The results of the RFI and removal sampling therefore indicate that surface soils containing inorganics with concentrations above background levels and below the RRSN2 CUL extent to the roadway surrounding the bunker buildings. Soils in the area between the two rows of bunker buildings (drainage way DW-2) contain inorganics with concentrations below background levels (see Figure 6-1).

6.1.3 Drainage Way DW-3

RFI results indicate that drainage way DW-3 soils contained four inorganics and 16 PAHs above background levels and below the RRSN2 CULs. The four inorganics included magnesium, mercury, selenium, and zinc.

PAHs introduced to the ditch from the power plant were detected in the drainage way above RRSN2 CULs. The area associated with this unpermitted release extends north and south to the top of the ditch bank and approximately 325 feet east from the pipe discharge (the midpoint between RFI sample locations DW3-118 and DW3-127). Although soils in areas beyond the top of the ditch bank and within the ditch downgradient from DW3-127 contain PAHs above RRSN2 CULs, they are attributed to vehicles that historically utilized that area and are therefore not subject to the closure requirements of TAC §335.

Following the DW-3 removal, confirmation samples indicate that PAH concentrations within the drainage way were reduced to concentrations less than RRSN2 CULs (see Section 5.1.1). Those PAHs remaining in the drainage way are identified in Table 5-1.

6.1.4 UST Locations UST-8500 and UST-8507

All UST-8500 and UST-8507 surface and subsurface soils containing PAHs at concentrations above RRSN2 CULs were removed (see Sections 5.1.2 and 5.1.4). In general, the removal effort reduced soil PAH concentrations to below the analytical detection limits. At UST-8500, only soils along the south tank pit wall and in the pipe run area between the pit and the building contain PAHs at concentrations above background (see Figure 5-2). At UST-8507, soils containing PAHs remain along the west tank pit

wall and in the pipe run area between the pit and the building (see Figure 5-4). Those PAHs remaining in the UST locations are identified in Tables 5-2 and 5-4.

6.1.5 Leach Field

No analytes attributable to the leach field were reported above background. In order to meet the closure requirements of RRSN1 The southern concrete wall of the leach field was removed (see Section 5.1.11).

6.2 CLOSURE BOUNDARY

The closure boundary or the track of land on which the closure is achieved is typically defined by a series of locations where site contaminant concentrations are below background. Offsite WSA closure boundary definition is complicated by the fact that all areas to be closed are adjacent to other unregulated areas with inorganic metals and SVOC soil concentrations elevated above the established site background (see Section 3.1)

At SWMU 59, Area A-3, and drainage way DW-1, three sample locations (A3-024, A3-025, and DW1-10) define the western and southern boundary of this area to background. However, the eastern side is adjacent to a roadway. East of the roadway is area A-1 (see Figure 2-2). Area A-1 contains inorganic metals and SVOCs at concentrations above background. However elevated concentrations in A-1 are not attributed to an unpermitted release.

Impacted soils associated with the bunker buildings also extend to a surrounding roadway. Beyond the roadway are areas A-1 and A-2. Inorganic metal concentrations in these adjacent areas were elevated above background but are not attributed to an unpermitted release.

Soils surrounding drainage way DW-3 and UST 8507 contain PAHs due to vehicle use through the area, as opposed to the unpermitted release from the power plant.

In response to these conflicts, a larger track is identified around the perimeter of the active Offsite WSA to define the closure boundary to background. These sample locations include:

- DW6-001;
- DW6-002;
- DW5-002;
- A5-004;
- SP-002;
- DW8-002;
- DW8-001;
- DW9-001; and
- DW7-001.

These sample locations and the Offsite WSA closure boundary are identified on Figure 6-1. Analytical results for samples collected at these locations are summarized on Figure 3-9 (sample location A5-4) and Figure 3-28 (all drainage way and seep sample locations). Appendix G contains laboratory analytical results for these sample locations. Appendix C contains the Deed Certification for RRSN2 based on this closure boundary.

7.0 REFERENCES

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664 162

Final Closure Report
Offsite Weapons Storage Area
NAS Fort Worth JRB Carswell Field
Contract No. F41624-95-D-8002/Delivery Order 009
February 5, 2001

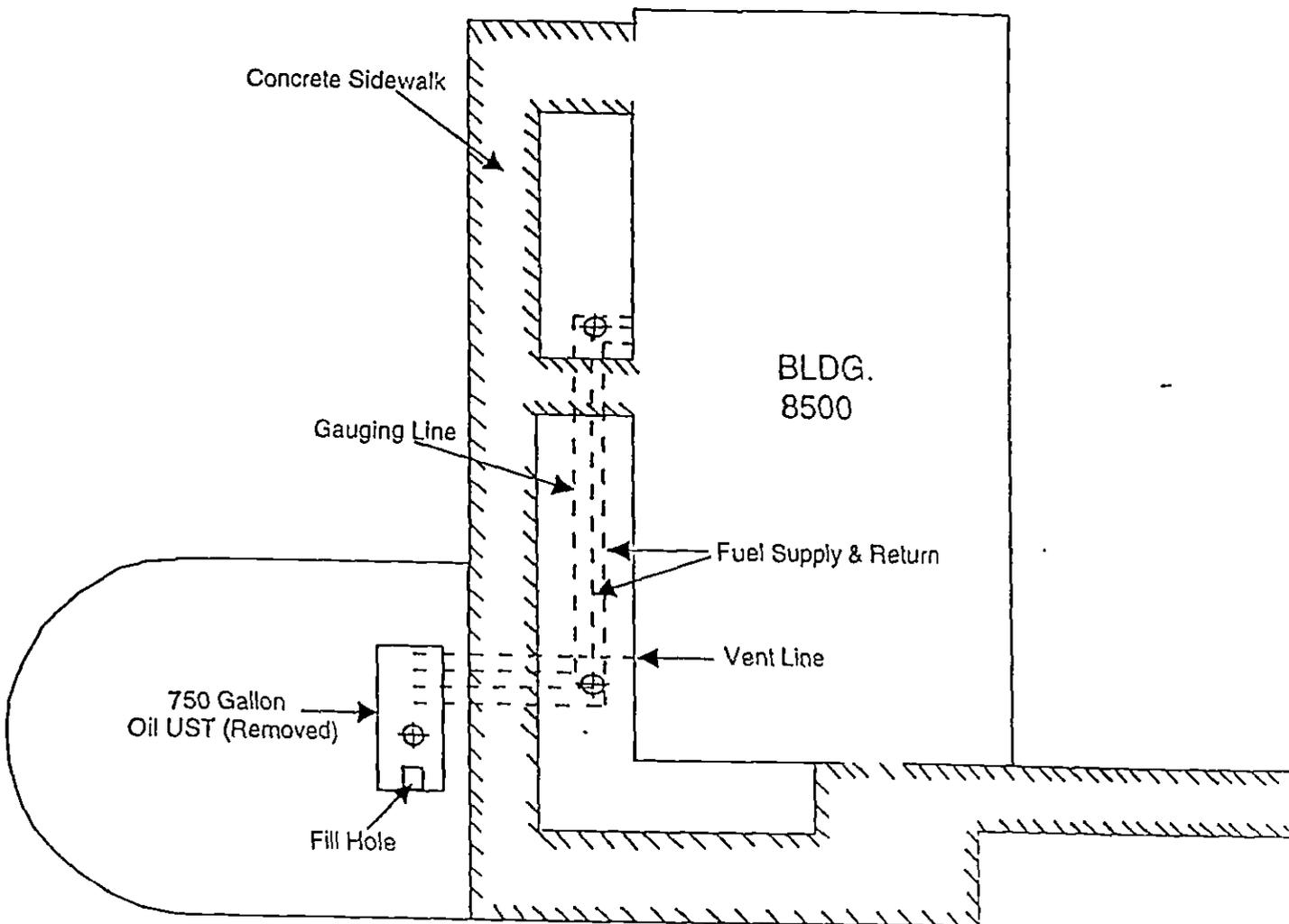
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APPENDIX A

UNDERGROUND STORAGE TANK LOCATION DIAGRAMS

664 164

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Legend

-  Borehole
-  Piping
-  Removed UST

Date January 1998 Project No 3:09 071
Project Manager B. Duffner
Prepared by AMM

 The Environmental Company, Inc.



1 Inch = 10 feet

**Building 8500
UST Borehole Locations**

664 166

BLDG.
8503

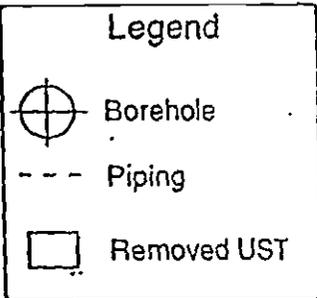
Pavement Edge

Fuel Supply &
Fuel Return

Vent

2,000 Gallon
Fuel Oil Tank
(1/2 Exposed,
Removed)

Fuel Stand



Date January 1998 Project No 3109 071

Project Manager B. Duffner

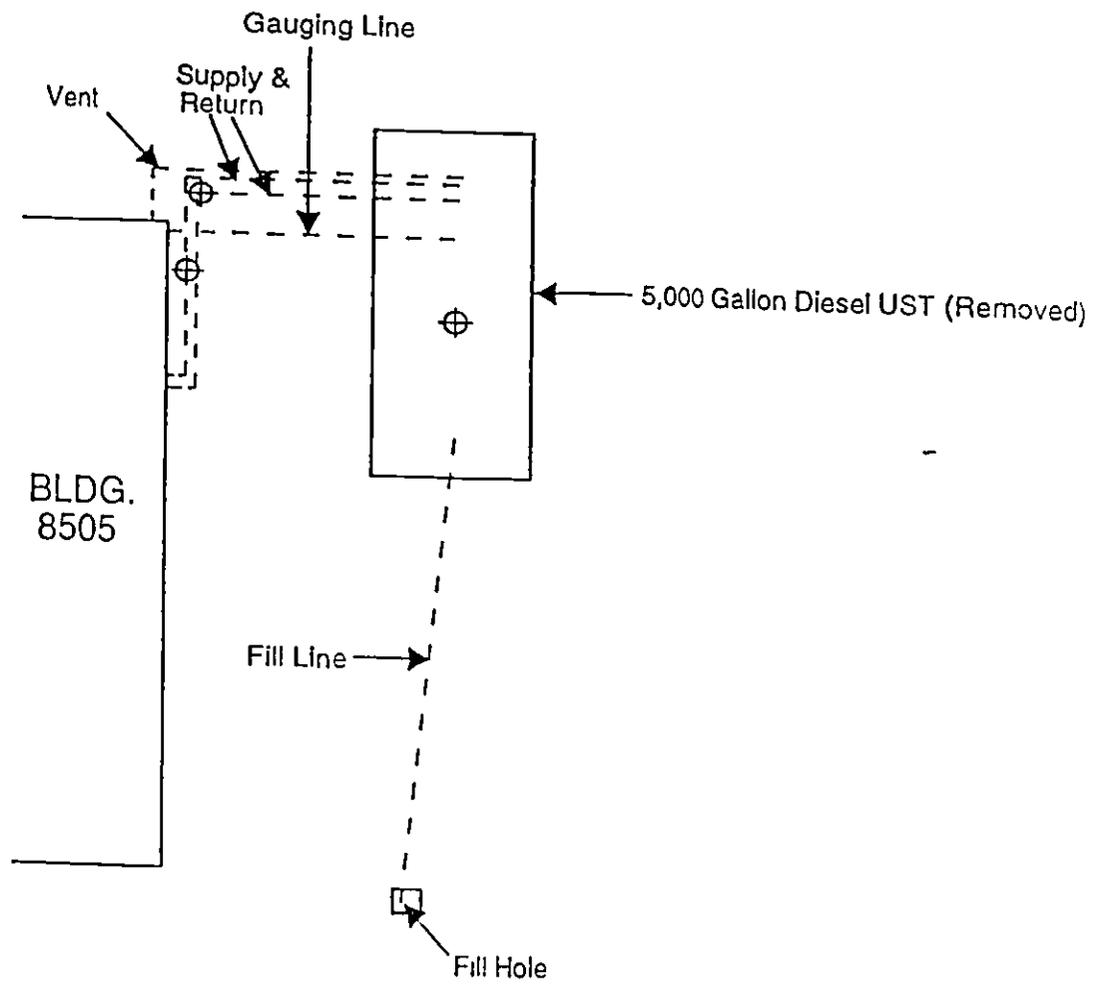
Prepared by AMM

 The
Environmental
Company, Inc.



1 Inch = 20 feet

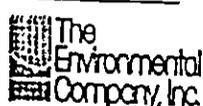
**Building 8503
UST Borehole Locations**



Legend

-  Borehole
-  Piping
-  Removed UST

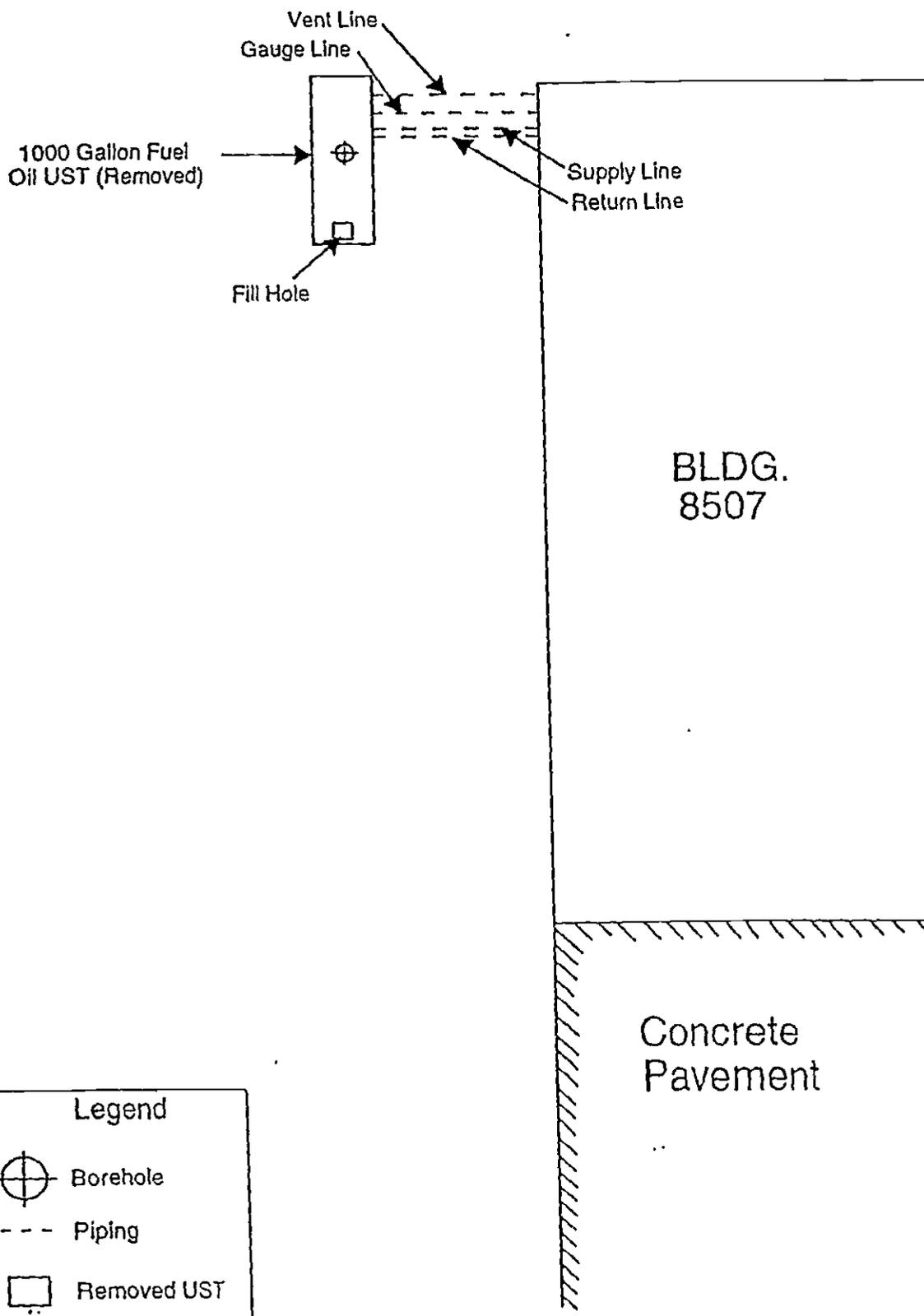
Date January 1993 Project No 3109 071
Project Manager B. Duffner
Prepared by AMM



1 Inch = 10 feet

**Building 8505
UST Borehole Locations**

664 168



Date January 1998 Project No 3109-071

Project Manager B. Duttner

Prepared by AMM

 The Environmental Company, Inc.



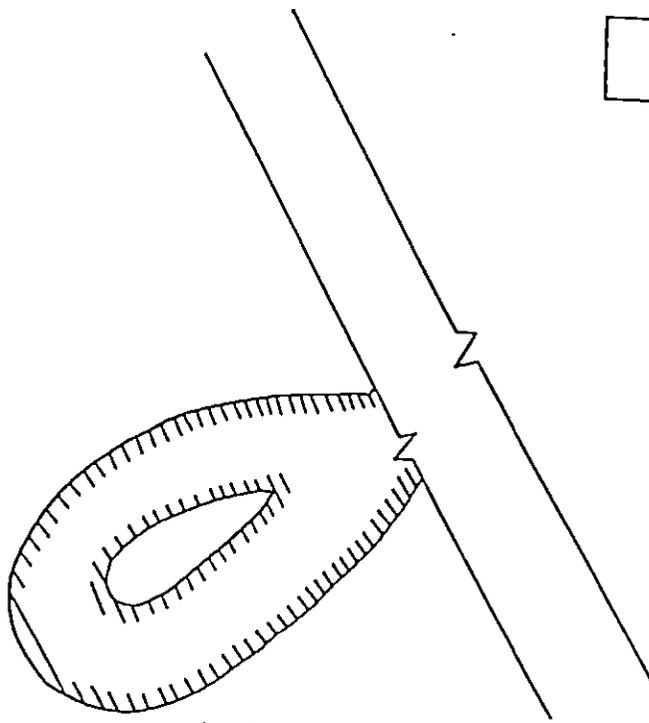
1 Inch = 10 feet

**Building 8507
UST Borehole Locations**

BLDG.
8514

RAMP

LOADING DOCK



- Fuel Pump
- - - Fuel Supply Line
- ⊕ 1000 Gallon Diesel UST (removed)
- Fill Hole
- Vent

Legend

⊕ Borehole

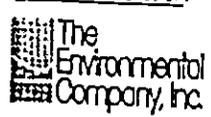
- - - Piping

□ Removed UST

Date January 1998 Project No 31C9 071

Project Manager B. Outner

Prepared by AMM



1 Inch = 25 feet

**Building 8514
UST Borehole Locations**

APPENDIX B
LPST CLOSURE FORM

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LPST SITE CLOSURE REQUEST FORM

664 172

I. GENERAL INFORMATION

LPST ID No: 98568 Facility ID No.: _____
 Responsible Party: U.S. Air Force Base Conversion Agency
 Responsible Party Address: 3711 Outlaw Dr City: Bergstrom AFB, Austin State: TX Zip: 78719-2557
 Facility Name: Carswell Offsite Weapons Storage Area
 Facility Street Address: 1100 White Settlement Road
 Facility City: Fort Worth County: Tarrant

What is the current use of site? (indicate all that apply): Site is not currently used.
 Residence¹ School or Day Care center Commercial/Industrial¹ Recreational Agricultural

What is the anticipated future use of the site? (indicate all that apply):
 Residence¹ School or Day Care center Commercial/Industrial¹ Recreational Agricultural

Adjacent property use (indicate all that apply):
 Residence¹ School or Day Care Center Commercial/Industrial¹ Recreational Agricultural

Distance to nearest off-site residence from property line: 400 feet in southern direction.

Distance to nearest school or day care center from property line: 5,000 feet in eastern direction.

II. CLOSURE SCREENING INFORMATION

Based on the *Limited Site Assessment Report* form or the *Risk-Based Assessment Report Form* (TNRCC-0562), the site is currently a **Priority 4.2** site. If the site priority has changed, list the other priorities that previously pertained to this site. _____

Yes No Have non-aqueous phase liquids (NAPL) ever been present at this site (including tankpit observation wells)? If yes, is NAPL present now (thickness ≥ 0.1 feet)? Yes No
 Current thickness: _____ ft. If NAPL is currently present, stop here and do not submit this form for case closure. Initiate or continue activities necessary for the removal of all recoverable NAPL at the site.

Yes No Were all soils, recovered contaminated groundwater, and any phase-separated hydrocarbons properly disposed of, treated, recycled or reused in accordance with TNRCC requirements? If No, stop here and do not submit this form. Provide a proposal (if the site is eligible for reimbursement) to properly dispose or otherwise manage the wastes materials or, if the site is not eligible for reimbursement, provide documentation of proper disposition of the wastes.

Yes No Do contaminant concentrations show a consistent decreasing or low static trend? If No, is the contaminant plume increasing in size? Yes No If Yes, stop here, do not submit this form, and initiate activities to control plume migration

No contaminants remain onsite.

¹ See definition in 30 TAC 334.202

LPST SITE CLOSURE REQUEST FORM (CONTINUED)

III. RELEASE ABATEMENT/REMEDIATION	
Date Release Discovered. <u>September 13, 1997</u>	
Substance(s) released: (check all that apply) <input type="checkbox"/> Gasoline <input type="checkbox"/> Alcohol-blended fuel (Type and percentage of alcohol, _____) <input checked="" type="checkbox"/> Diesel <input type="checkbox"/> Used Oil <input type="checkbox"/> Jet Fuel (type: _____) <input type="checkbox"/> Aviation Gasoline <input type="checkbox"/> Other: (be specific) _____	
Source of Release (specify all that apply): <input type="checkbox"/> Spills/overfills <input checked="" type="checkbox"/> Piping leaks <input type="checkbox"/> Dispenser leaks <input type="checkbox"/> Tank corrosion <input type="checkbox"/> Other: _____	
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Has a receptor survey been conducted?	
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Has a water well inventory been conducted?	
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Have vapor impacts to buildings or utility lines ever been associated with this release? If Yes, specify the measures taken to abate the impact and indicate the latest date that an impact was noted: _____
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Have subsurface utilities ever been affected with NAPL or vapors by this release? If Yes, indicate the latest date that an impact was noted: _____
If not already provided in <i>Release Determination Report Form</i> (TNRCC-0621), or if the information has changed since submittal of the <i>Release Determination Report</i> , indicate number of tanks currently and formerly located at this site (attach pages as necessary):	
Type (UST/AST) Product Type Size (approx. gal)	
Current: _____	
<u>Date Removed from Service</u>	
Former: <u>unknown</u>	
<u>UST-8514</u>	<u>1,000 diesel</u>
<u>UST-8505</u>	<u>5,000 diesel</u>

<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If the tanks were permanently removed from service, were native soil samples collected from beneath the tanks and the entire length of the piping? If No, explain why not:
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Was a new UST system installed? If Yes, indicate the date, number of tanks and their contents:
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Are there any open excavations at the site? If Yes, state size, location, purpose, and status for each of the excavations: _____
Type(s) of soil remediation and time periods the remediation method was operational (indicate all that apply):	
<input checked="" type="checkbox"/> Excavation <u>July 26, 1999 to July 30, 1999</u> (dates), and <u>December 6, 1999 to December 8, 1999</u> .	
<input type="checkbox"/> Aboveground Bioremediation/Aeration _____ to _____ (dates), or	
<input type="checkbox"/> Thermal Treatment _____ to _____ (dates), or	
<input type="checkbox"/> Disposal _____ to _____ (dates).	
<input type="checkbox"/> Soil Vapor Extraction _____ to _____ (dates).	
<input type="checkbox"/> In-Situ Bioremediation _____ to _____ (dates).	
<input type="checkbox"/> None	

III. RELEASE ABATEMENT/REMEDIATION (CONTINUED)

Type(s) of groundwater remediation and time periods the remediation method was operational (indicate all that apply):

- Groundwater Pump and Treat _____ to _____ (dates)
- Air Sparging/SVE _____ to _____ (dates)
- In-Situ Bioremediation _____ to _____ (dates)
- Other: _____ to _____ (dates)
- None

Yes No Were copies of all receipts and manifests to document disposition of all wastes submitted to the TNRCC? If No, attach copies to this form.

Measured total volume of NAPL recovered. _____ gallons.

Estimated total volume of soil treated/removed: 235 cubic yards (exclude soil cuttings removed from borings).

Estimated total volume of groundwater treated/removed: _____ gallons (if known).

Estimated pounds of hydrocarbons removed or treated from soil (if known):

Estimated pounds of hydrocarbons removed or treated from groundwater (if known).

Estimated percent of total contaminants removed or treated (if known):

IV. SOIL DATA VALIDATION

Are there now affected surface soils (contamination exceeding health-based target concentrations) present within 2 feet below the ground surface? Yes No Unknown

Type of surface cover over affected surface soil area:

- Paved [Asphalt or Concrete] Percent of affected soils covered? _____ Unpaved
- Other: _____

Is there public access to the uncovered affected surface soil area? Yes No

Total number of borings: 3 (including those completed as monitor wells)

- Yes Was the vertical and horizontal extent of soil impacts defined (to the more stringent of health-based target or groundwater protective soil concentrations horizontally and to groundwater or nondetect vertically) by the borings?
- No
- Yes Are shallow (0-15 feet below ground surface) soils affected (contaminant levels exceed health-based target concentrations) on adjacent properties (including right-of-way properties)?
- No
- Yes Were all soil sample collection, handling, transport, and analytical procedures conducted in accordance with TNRCC and EPA requirements? If No, provide justification: _____
- No

LPST SITE CLOSURE REQUEST FORM (CONTINUED)

MAXIMUM SOIL CONCENTRATION LEVELS						
Soil Contaminants	Sample Date	Sample Location	Depth (in feet below ground surface)	Analytical Method	Maximum Concentration * (mg/kg) U= not detected	Target Cleanup Goals** (indicate source of target cleanup goals: 1990 or 1994 [Plan A or B] guidance)
UST-8505						
Benzene	9/4/97	UST-006	6.0 to 8.0	8020	0.002 U	0.13
Toluene	9/4/97	UST-006	6.0 to 8.0	8020	0.005 U	69
Ethylbenzene	9/4/97	UST-006	6.0 to 8.0	8020	0.003 U	160
Total Xylenes	9/4/97	UST-006	6.0 to 8.0	8020	0.005 U	568
Total BTEX		UST-006	6.0 to 8.0	8020		
TPH		UST-006	6.0 to 8.0	418.1	179	
Anthracene	7/30/99	UST-209	7.0	8310	0.046	13
Acenaphthene	7/30/99	UST-209	7.0	8310	0.180	314
Benzo(a)anthracene	7/30/99	UST-209	7.0	8310	0.063	0.877
Benzo(a)pyrene	7/30/99	UST-209	7.0	8310	0.060	0.0877
Benzo(ghi)perylene	7/30/99	UST-209	7.0	8310	0.040	
Benzo(k)fluoranthene	7/30/99	UST-209	7.0	8310	0.019	8.77
Dibenzo(a,h)anthracene	7/30/99	UST-209	7.0	8310	0.041	0.0877
Fluoranthene	7/30/99	UST-209	7.0	8310	0.015	247
Pyrene	7/30/99	UST-209	7.0	8310	0.170	99
UST-8514						
Benzene	7/30/99	UST-002	6.0 to 8.0	8020	0.002U	0.13
Toluene	7/30/99	UST-002	6.0 to 8.0	8020	0.005U	69
Ethylbenzene	7/30/99	UST-002	6.0 to 8.0	8020	0.003U	160
Total Xylenes	7/30/99	UST-002	6.0 to 8.0		0.005U	568
TPH	7/30/99	UST-002	0.0 to 2.0	418.1	160	
Benzo(a)pyrene	7/30/99	UST-002	0.0 to 2.0	8310	0.041	0.0877
Other						

Utilized Category I Plan A Cleanup Levels

* Enter maximum soil analytical results for soils remaining beneath the site (take into account all available data, including information obtained during the release determination (tank removal from service, minimal site assessment, etc)).

** If Plan A cleanup goals were used, provide the potential groundwater beneficial use category and a justification of how it was determined in Section VI

1990 cleanup goals may be used only if all activities necessary to meet those goals were completed by November 8, 1995.

V. GROUNDWATER DATA VALIDATION

Is groundwater at the site impacted? Yes No
 Did the assessment document that groundwater was not impacted? Yes No If No or unsure, provide justification for not determining whether there is a groundwater impact. Two centrally located wells sampled. Wells were existing (abandoned) production wells. Soil data indicated no contamination beyond bedrock. No monitoring wells were installed.

Total number of monitoring wells installed: None Number of monitor wells remaining at the site:
 Will any of the remaining wells be used in the future? Yes No If Yes, specify exactly which well(s) will be used:

If No, they must be plugged in accordance with Water Code 32.017 after obtaining approval for site closure. Do not plug the wells until you receive concurrence on site closure. Costs of well plugging may be allowable for reimbursement if all eligibility requirements are met and if the wells were installed under the direction of the TNRCC specifically to address the confirmed release at the site. Provide a proposal with this form (if the site is eligible for reimbursement) for costs of the well plugging.

Measured total dissolved solids (TDS) concentration in groundwater: mg/l. From which monitor well(s) was/were the sample(s) collected? Not collected
 Measured groundwater yield at the site: gallons/day (as determined from well adequately screened in the impacted aquifer). Not determined.
 Measured groundwater depth at the site ranges between 95.85 and 97.08 feet below the top of well casing.

Time period of groundwater monitoring at the site (dates): September 1997.
 Total number of groundwater monitoring events: 1.

What type of aquifer is impacted? (unconfined, confined, semi-confined): not impacted.

Distance from maximum plume concentration point to nearest existing downgradient well location (not monitor well): No plume
 ft. in direction (Input ">0.5 mile" if there is no well within 0.5 mile downgradient)

Are any water supply wells impacted or immediately threatened? Yes No
 If Yes, specify type of well: Drinking water Non-drinking water

Are there any existing water wells located within the area of impacted groundwater? Yes No
 If Yes, specify type of well: Drinking water Non-drinking water

Has surface water been affected? Yes No

Will the groundwater contaminants likely discharge to a surface water body? Yes No

What is the potential impact of affected groundwater discharge on surface water?
 Current impact Discharges within 500 ft. Discharges within 500 to 0.25 miles
 No potential impact

Yes No Were groundwater sample collection, handling, transport, and analytical procedures conducted and documented in accordance with TNRCC requirements? If no, provide justification:

V. GROUNDWATER DATA VALIDATION (Continued)

- Yes No Is the extent of groundwater contamination defined (to MCL concentrations)? If No, provide justification for not defining the plume: No groundwater contamination
- Yes No Have groundwater impacts from this release been detected on adjacent properties? If No, is off-site migration probable? Yes No Is there documentation that off-site migration has not occurred (sample results from off-site sampling point)? Yes No
- Yes No Was the static groundwater level above the top of the well screen in any monitor wells during any of the last 4 monitoring events? If Yes, provide a statement of validity regarding these samples:
Unknown due to well construction methods.
- Yes No Have groundwater samples from all monitor wells met the target cleanup goals for the last four consecutive sampling events?

MAXIMUM GROUNDWATER CONCENTRATIONS

Groundwater Contaminants	Sample Date	Sample Location	Laboratory Method	Maximum Concentration* (mg/l) U= not detected	Target Cleanup Goals** (indicate source of target cleanup goals: 1990 or 1994 [Plan A or B] guidance)
Benzene	9/9/97	Xu-32-12901/02	8020	0.0004U	0.0005
Toluene	9/9/97	Xu-32-12901/02	8020	0.0011U	1.0
Ethyl benzene	9/9/97	Xu-32-12901/02	8020	0.0006U	0.7
Total Xylenes	9/9/97	Xu-32-12901/02	8020	0.0005U	10
Total BTEX					
TPH					
PAHs _____	9/9/97	Xu-32-12901/02	8310	0.010U	
PAHs _____	9/9/97	Xu-32-12901/02	8310		

Utilized Plan A 1994 Cleanup Goals Based on Category I.

* Enter maximum groundwater analytical results from the most recent 12 months of monitoring.

** 1990 cleanup goals may be used only if all activities necessary to meet those goals were completed by November 8, 1995.

VI. JUSTIFICATION FOR CLOSURE

Please provide a brief summary supporting this request for site closure, including footnoted discussions for the above entries as necessary. Include discussions providing necessary justifications for any site conditions which deviate from the specific requirements of TNRCC rules and policies, including the document *Risk-Based Corrective Action for Leaking Storage Tank Sites*. Provide documentation to justify case closure, including information which addresses the potential for future exposure, the existence of impervious cover or other actions which may prevent exposure or limit infiltration, the absence of receptors, etc.

All soils containing contaminants above category I Plan A CULs were removed

VII. REPORT PREPARATION

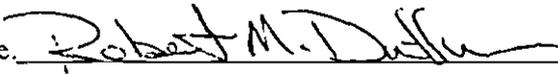
Based on the results of the site investigation and the additional information presented herein, I certify that the site investigation activities performed either by me, or under my direct supervision, including subcontracted work, were conducted in accordance with accepted industry standards/practices and further, that all such tasks were conducted in compliance with applicable TNRCC published rules, guidelines and the laws of the State of Texas. I have reviewed the information included within this report, and consider it to be complete, accurate and representative of the conditions discovered during the site investigation. I acknowledge that if I intentionally or knowingly make false statements, representations, or certifications in this report, I may be subject to administrative, civil, and/or criminal penalties. I certify that the site has met all requirements for closure and that closure is appropriate.

Project Manager: Robert M Duffner CAPM No.: _____ Expiration date: _____

Company: The Environmental Company

Address: 710 NW Juniper St Ste 208 City: Issaquah State: WA Zip: 98027

Telephone No.: (425) 557-7899 Fax No.: (425) 557-7878

Signature:  Date: 7/18/00

By my signature affixed below, I certify that I am the duly authorized representative of the Correction Action Specialist named and that I have personally reviewed the site investigation results and other relevant information presented herein and considered them to be in accordance with accepted standards/practices and in compliance with the applicable TNRCC published rules, guidelines and the laws of the State of Texas. Further, that the information presented herein is considered complete, accurate and representative of the conditions discovered during the site investigation. I acknowledge that if I intentionally or knowingly make false statements, representations, or certifications in this report, I may be subject to administrative, civil, and/or criminal penalties. I certify that the site has met all requirements for closure and that closure is appropriate.

Corrective Action Specialist: _____ CAS No.: _____ Expiration date: _____

Company: _____

Address: _____ City: _____ State: _____ Zip: _____

Telephone No.: _____ Fax No.: _____

Signature: _____ Date: _____

By my signature affixed below, I certify that I have reviewed this report for accuracy and completeness of information regarding points of contact and the facility and storage tank system history and status. I acknowledge that if I intentionally or knowingly make false statements, representations, or certifications in this report related to the contact information, and the facility and storage tank system history and status information, I may be subject to administrative, civil, and/or criminal penalties. I attest that I have reviewed this report for accuracy and completeness. I understand that I am responsible for addressing this matter.

I certify that the site has met all requirements for closure and that closure is appropriate.

Name of Responsible Party contact: _____

Telephone No.: _____ Fax No.: _____

Signature: _____ Date: _____

APPENDIX C

INDUSTRIAL SOLID WASTE CERTIFICATION OF REMEDIATION

664 180

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STATE OF TEXAS
TARRANT COUNTY

INDUSTRIAL SOLID WASTE
CERTIFICATION OF REMEDIATION

KNOW ALL MEN BY THESE PRESENTS THAT:

Pursuant to the Rules of the Texas Natural Resource Conservation Commission (TNRCC) pertaining to Industrial Solid Waste Management, this document is hereby filed in the Deed of Records of Tarrant County, Texas in compliance with the recordation requirements of said rules:

I

Department of the Air Force has performed a remediation of the land described herein. A copy of the Notice of Registration (No.), including a description of the facility, is attached hereto and is made part of this filing. A list of the known waste constituents, including known concentrations (i.e., soil and groundwater, if applicable), which have been left in place is attached hereto and is made part of this filing. Further information concerning this matter may be found by an examination of company records or in the Notice of Registration (No.) files, which are available for inspection upon request at the central office of the TNRCC in Austin, TX.

The TNRCC derives its authority to review the remediation of this tract of land from the Texas Solid Waste Disposal Act, §361.002, Texas Health and Safety Code, Chapter 361, which enable the TNRCC to promulgate closure and remediation standards to safeguard the health, welfare and physical property of the people of the State and to protect the environment by controlling the management of solid waste. In addition, pursuant to the Texas Water Code, §5.012 and §5.013, Texas Water Code, Annotated, Chapter 5, the TNRCC is given primary responsibility for implementing the laws of the State of Texas relating to water and shall adopt any rules necessary to carry out its powers and duties under the Texas Water Code. In accordance with this authority, the TNRCC requires certain persons to provide certification and/or recordation in the real property records to notify the public of the conditions of the land and/or the occurrence of remediation. This deed certification is not a representation or warranty by the TNRCC of the suitability of this land for any purpose, nor does it constitute any guarantee by the TNRCC that the remediation standards specified in this certification have been met by Department of the Air Force

II

Being an 87.327 (3,803,964 square feet) acre tract of land situated in the G. B. Kenney Survey, Abstract No. 920, the E. L. Alford Survey, Abstract No. 2000, the S. B. Hopkins Survey, Abstract No. 673, the J. M. Rice Survey, Abstract No. 1799, the Socorro Farming Company Survey, Abstract No. 1840 and the F. W. Schoeverling Survey, Abstract No. 1398, Tarrant County, Texas and being out of a 247 acre tract of land

known as Tract G-700 described in a "Judgement on Declaration of Taking No. 1" to the United States of America as recorded in Volume 2873, Page 583 of the Deed Records of Tarrant County, Texas and corrected in Volume 3338, Page 242 of the Deed Records of Tarrant County, Texas, said 87.327 acre tract of land being more particularly described by metes and bounds as follows:

COMMENCING at a concrete monument with brass cap stamped "Corps of Engineers" found in the west line of said 247 acre tract of land and being in the easterly line of a 35 acre tract of land deeded to Rudy E. Lambert as recorded in Volume 6485, Page 157 of the Deed Records of Tarrant County, Texas, from which the southwest corner of the said E. L. Alford Survey, Abstract No. 2000 bears, as described by said deed recorded in Volume 3338, Page 242 of the Deed Records of Tarrant County, Texas, North 26 degrees 50 minutes 00 seconds West, a distance of 430.00 feet, **THENCE**, from the **POINT OF COMMENCING**, North 71 degrees 53 minutes 24 seconds East, a distance of 418.63 feet to the **POINT OF BEGINNING**;

THENCE North 26 degrees 38 minutes 32 seconds East, a distance of 951.10 feet to a point for corner;

THENCE North 76 degrees 04 minutes 30 seconds East, a distance of 535.96 feet to a point for corner;

THENCE North 70 degrees 49 minutes 46 seconds East, a distance of 977.28 feet to a point for corner;

THENCE South 87 degrees 56 minutes 09 seconds East, a distance of 417.03 feet to a point for corner, from which a concrete monument with brass cap stamped "Corps of Engineers" found for the most easterly northeast corner of said 247 acre tract of land bears North 71 degrees 00 minutes 01 seconds East, a distance of 1152.98 feet;

THENCE South 32 degrees 55 minutes 21 seconds East, a distance of 556.33 feet to a point for corner,

THENCE South 05 degrees 46 minutes 05 seconds East, a distance of 1089.24 feet to a point for corner;

THENCE South 78 degrees 00 minutes 02 seconds West, a distance of 1058.04 feet to a point for corner;

THENCE South 88 degrees 16 minutes 07 seconds West, a distance of 1550.58 feet to a point for corner;

THENCE North 12 degrees 02 minutes 30 seconds West, a distance of 544.52 feet to the **POINT OF BEGINNING** and containing 87.327 acres or 3,803,964 square feet of land, more or less

Note Basis of Bearing being referenced to the Texas Coordinate System, NAD-83, the North Central Zone, Based on a G.P.S Survey and established along the west line of said 247 acre tract of land (North 05 degrees 24 minutes 49 seconds East, a distance of 1840.03 feet).

Inorganic metals, mercury and semi-volatile organic compound contaminated soil has been remediated to meet residential soil criteria, in accordance with a plan described to meet the TNRCC's requirements in 31 Texas Administrative Code §335.555, which

mandates that the remedy be designed to eliminate substantial present and future risk such as that no post-closure care of engineering or institutional control measures are required to protect human health and the environment. Future land use is considered suitable for residential purposes in accordance with risk reduction standards applicable at the time of this filing.

III

The owner of the site is Department of the Air Force, and its address is Air Force Base Conversion Agency (AFBCA), 3711 Outlaw Country Drive, Bergstrom Air Force Base, Austin, Texas 78749-2557, where more specific information may be obtained from the Installation Management Officer.

EXECUTED this the __day of _____, 2000.

Department of the Air Force

Richard K. Pautz

STATE OF TEXAS
TARRANT COUNTY

BEFORE ME, on this the ____ day of _____, personally appeared Richard K. Pautz, Installation Management Officer of Bergstrom Air Force Base, Air Force Base Conversion Agency, Department of the Air Force, known to me to be the person and agent of said government agency whose name is subscribed to the foregoing instrument, and he acknowledged to me that he executed the same for the purposes and in the capacity therein expressed.

GIVEN UNDER MY HAND AND SEAL OF OFFICE, this the ____ of _____, 2000.

Notary Public in and for the State of Texas, of _____ County

My Commission Expires

APPENDIX D

WASTE PROFILE AND DISPOSAL FACILITY WASTE ACCEPTANCE FORM

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USA Waste Approval Code _____

Important: This form is to be completed by a representative of the generator. Please read the instruction page prior to the completion of this form. This form must be typewritten or legibly handwritten in ink, signed and dated.

USA Waste Tracking Number: _____
Salesperson: _____
Telephone: (281) 922-0012 _____
Fax: (281) 922-1108 _____
Date: _____

New Waste Approval Addendum to Existing Approval
 Update Approval - Previous Number: _____
Disposal Site Requested _____
Approved for Solidification Yes No N/D
 Other _____

1. Generator Information

Generator's Name: Air Force Base Conversion Agency
Point of Origin/ Address: Carswell Offsite weapons Area
City: Fort Worth State: TX Zip: 76114-3520
Generator's Representative: Alvin Brown
Title: AFBCA / ROL BERG
Telephone: () 877-366-5429 (x23)
Fax: () _____
Emergency/Information Contact: Bob Duffner
Title: The Environmental Company
Telephone: () 425-557-7899

State Registration Number: 65004
TNRCC Waste Code Number: _____
Origin: Carswell Field Offsite weapons Storage Area
Customer's Name: Bob Duffner
Customer's Mailing Address: 110 Hill Municipal St
City: Irving State: TX Zip: 75027
Representative: The Environmental Company
Telephone: () 425-557-7899
Fax: () 425-557-7878

2. Transporter Information

Transporter's Name: Unified Services of Texas, Inc
Mailing Address: 2110 Greenbriar Drive
City: Southlake State: TX Zip: 76092

Transporter ID: Not Applicable
Telephone: () 817 481-9510
Fax: () 817 488-1729

3. Waste Stream Information

Waste/Waste Stream Name: Soil
Process Knowledge (Describe materials and process(es) generating the waste): Soil impacted by generator station runoff and fuel oil storage tank maintenance activities
Is this waste a characteristically hazardous waste as per 40 CFR 261.21-24? Yes No N/D
Is this waste an F, K, P, or U listed hazardous waste as per 40 CFR 261.32-33? Yes No N/D
Is this a waste regulated by the Railroad Commission? Yes No N/D (If yes, please provide Minor Permit)
Estimate Quantity: 1,600 Pounds Tons Cubic Yards Drums Gallons Other
Frequency: One Time Monthly Quarterly Semi-Annual Annual Other: One primary load within one week period, followed by second potential smaller load.

4. Physical Characteristics

Physical State at 72°F: Combination of Solid Liquid Semi-solid Powder
Appearance/Texture: Granular/Lump Powder/Fine Free Flowing Liquid Other: Silty Soil
Color(s): Brown
Odor: Strong - Describe: _____ Mild None
Corrosivity (pH): ≤2 2.1-7.0 7.1-12.4 ≥12.5 Actual _____ N/D
Density: _____ lbs./gal. lbs./yd.³ Other _____ N/D
Volatility (Flashpoint, °F): ≤72 73-140 141-200 ≥201 Actual _____ N/D

664 188

5. Chemical Composition

Based upon generator's knowledge of the process and expected contaminants please provide a breakdown of the waste stream requesting disposal. Account for 100 % of the waste.

Components/Expected Contaminants	Range (%)
Cadmium	0.5 to 51.4 mg/kg (majority = 1.2 mg/l)
Copper	5.0 to 166.0 mg/kg (majority = 14.2 mg/l)
Mercury	0.06 to 10.9 mg/kg (majority = 0.061 mg/l)
Polycyclic Aromatic Hydrocarbons	
Benzo(a)anthracene	> 0.06 to 6.1 mg/kg
Benzo(a)pyrene	> 0.06 to 5.6 mg/kg
Benzo(b)fluoranthrene	> 0.06 to 5.1 mg/kg

6. Additional Waste Components

Indicate if the waste contains any of the following. If any are marked, please include in the overall composition in Section 5.

- Used Oils
 Free Liquids
 Radioactive Materials
 Etiological Agents
 OSHA Substances
 Virgin Oils
 PCB's not regulated by TSCA 40 CFR 761
 Organic Solvents
 None of the Above

7. Reactivity

Indicate if the waste exhibits any of the following properties:

- Water Reactive
 Acid Reactive
 Alkaline Reactive
 Pyrophoric
 Thermally Sensitive
 Explosive
 Autopolymerizable
 Shock/Vibration Sensitive
 None of the Above

8. Supplemental Documents

- Letter/Memo
 Analytical Data
 Chain of Custody
 Notice of Registration
 Process Diagrams
 Material Safety Data Sheets
 None
 Other: _____

9. Generator Certifications

I certify that the analytical data identified below is representative and attached as support to the information certified on this application form.

Lab Name(s): RECRA LabNet
 Report Date(s): 9/97 and 2/99
 Sample I.D.(s): See Attached

By signing this form I certify that:

- I am the legal generator of the waste described on this application.
- The waste described is not a regulated Hazardous Waste as defined by the USEPA, State, or local Regulations.
- This form and its attachments contain true and accurate information regarding this waste stream.
- Any laboratory data used to support the information presented herein has been obtained from the analysis of a representative sample collected and preserved in a manner consistent with accepted technical standards.

Date: 18 June 1999
 Print Name: ALVIN D. BROWN
 Signature: Alvin D. Brown

Phone: 877-356-5429 Ext. 23
 Title: ENVIRONMENTAL ENGINEER



WASTE MANAGEMENT OF TEXAS AND OKLAHOMA SPECIAL WASTE APPROVAL FORM

664 189

CLASS II

APPROVAL #: WS-9131

GENERATOR'S NAME:	AIR FORCE BASE CONVERSION AGENCY		
GENERATING LOCATION:	Coraswell offsite weapons area, Fort Worth	COUNTY:	
DISPOSAL FACILITY:	Westside	SALES REPRESENTATIVE:	DeeDee Hix
TNRCC WASTE CODE #:	NA <i>AD</i>	STATE REGISTRATION #:	65004
BROKER'S NAME:		PROJECT #:	NA
WASTE STREAM:	Soil		
ANNUAL QUANTITY:	1600 cubic yards		
APPROVAL ISSUE DATE:	7/20/99	APPROVAL EXPIRATION DATE:	10/20/99

CONDITIONS OF APPROVAL

Contact customer prior to solidification

ATTACHMENTS

RCRA LabNet analysis

APPROVAL AMENDMENTS

SPECIAL WASTE APPROVALS SIGNATURE:

APPENDIX E
WASTE MANIFESTS

664 191

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North Texas Industrial Service Center
P.O. Box 719
Lewisville, TX 75067
(972) 316-2298 / FAX (972) 316-2298

NON-HAZARDOUS MANIFEST

GENERATOR: Air Force Base Conversion Agency
ADDRESS: Carswell Offsite Weapons Area
CITY/ST: Ft. Worth, TX 76114-
PHONE: (877) 388-5429

ID#: 65004
LOCATION: SAME

Description of Waste Materials	Approval Number	Quantity	Units
Contaminated soil	WS-9131	20	Yards

I hereby certify that the above described materials are not hazardous wastes as defined by 40 CFR Part 261 and does not contain free liquids as defined by 40 CFR Part 260.10 or any applicable state law. Have been fully and accurately described, classified and packaged, and are in proper condition for transportation according to applicable regulations.

Arvin D Brown
Generator Authorized Agent Name (Print)

[Signature] 7/21/99
Signature Delivery Date

TRANSPORTER

TRANSPORTER NAME: Unified Services of Texas, Inc
ADDRESS: 2110 Greenbriar Drive
CITY/ST.: Southlake, Tx. 76092

DRIVER NAME(Print): [Signature]
TRUCK NUMBER: _____
PHONE#: 817-481-9510

I hereby acknowledge receipt of the above described materials were received from the generator listed above and delivered to the disposal facility listed below without incident.

[Signature] 7/26/99
Driver Signature Shipment Date

[Signature] 7/26/99
Driver Signature Delivery Date

DISPOSAL FACILITY

SITE NAME: Westside Recycling and Disposal Facility
ADDRESS: 12280 U.S. Hwy 80 W., Alledo, Tx. 76008
I hereby acknowledge receipt of the above described materials.

PHONE NUMBER: 817-244-3500

Name of Authorized Agent (Print)

Signature Receipt Date

*D-Drum	C-Carton	B-Bag	P-Pounds	Y-Yards	O-Other
White-Original	Canary-Disposer Retain		Pink-Transporter Retain		Gold-Generator Retain



664 193

27424

truck 730

North Texas Industrial Service Center
P.O. Box 719
Lewisville, TX 75067
(972) 316-2296 / FAX (972) 316-2298

5 9 5 9 9 0

NON-HAZARDOUS MANIFEST

GENERATOR: **Air Force Base Conversion Agency**
ADDRESS: **Carswell Offsite Weapons Area**
CITY/ST: **Ft. Worth, TX 76114-**
PHONE: **(877) 386-5429**

ID#: **65004**
LOCATION: **SAME**

Description of Waste Materials	Approval Number	Quantity	Units
Contaminated soil	WS-9131	<u>20</u>	Yards

I hereby certify that the above described materials are not hazardous wastes as defined by 40 CFR Part 261 and does not contain free liquids as defined by 40 CFR Part 260.10 or any applicable state law. Have been fully and accurately described, classified and packaged, and are in proper condition for transportation according to applicable regulations.

ALVIN D. BROWN
Generator Authorized Agent Name (Print)

Alvin D. Brown 7/26/99
Signature Delivery Date

TRANSPORTER

TRANSPORTER NAME: **Unified Services of Texas, Inc**
ADDRESS: **2110 Greenbriar Drive**
CITY/ST: **Southlake, Tx. 76092**

DRIVER NAME(Print): Alvin D. Brown
TRUCK NUMBER: 730
PHONE#: **817-481-9510**

I hereby acknowledge receipt of the above described materials were received from the generator listed above and delivered to the disposal facility listed below without incident.

Alvin D. Brown 7/26/99
Driver Signature Shipment Date

Alvin D. Brown 7/26/99
Driver Signature Delivery Date

DISPOSAL FACILITY

SITE NAME: **Westside Recycling and Disposal Facility**
ADDRESS: **12280 U.S. Hwy 80 W., Aledo, Tx. 76008**

PHONE NUMBER: **817-244-3500**

I hereby acknowledge receipt of the above described materials.

Name of Authorized Agent (Print)

Signature Receipt Date

D-Drum	C-Carton	B-Bag	P-Pounds	Y-Yards	O-Other
White-Original	Canary-Disposer Retain		Pink-Transporter Retain		Gold-Generator Retain



27425

664 194

North Texas Industrial Service Center
P.O. Box 719
Lewisville, TX 75067
(972) 316-2298 / FAX (972) 316-2298

787201

NON-HAZARDOUS MANIFEST

GENERATOR: Air Force Base Conversion Agency
ADDRESS: Carswell Offsite Weapons Area
CITY/ST: Ft. Worth, TX 76114-
PHONE: (877) 386-5429

ID#: 66004
LOCATION: SAME

Description of Waste Materials	Approval Number	Quantity	Units
Contaminated soil	WS-0131	70	Yards

I hereby certify that the above described materials are not hazardous wastes as defined by 40 CFR Part 261 and does not contain free liquids as defined by 40 CFR Part 260.10 or any applicable state law. Have been fully and accurately described, classified and packaged, and are in proper condition for transportation according to applicable regulations.

ALVIN D. BROWN
Generator Authorized Agent Name (Print)

Alvin D. Brown 7/21/99
Signature Delivery Date

TRANSPORTER

TRANSPORTER NAME: Unified Services of Texas, Inc
ADDRESS: 2110 Greenbriar Drive
CITY/ST.: Southlake, Tx. 76092

DRIVER NAME(Print): Terrence Smith
TRUCK NUMBER: 4-12-0
PHONE#: 817-481-8510

I hereby acknowledge receipt of the above described materials were received from the generator listed above and delivered to the disposal facility listed below without incident.

[Signature] 7/21/99
Driver Signature Shipment Date

[Signature] 7/21/99
Driver Signature Delivery Date

DISPOSAL FACILITY

SITE NAME: Westside Recycling and Disposal Facility
ADDRESS: 12280 U.S. Hwy 80 W., Aledo, Tx. 76008
I hereby acknowledge receipt of the above described materials.

PHONE NUMBER: 817-244-3600

Name of Authorized Agent (Print)

Signature

Receipt Date

*D-Drum	C-Carton	B-Bag	P-Pounds	Y-Yards	O-Other
White-Original	Canary-Disposer Retain		Pink-Transporter Retain		Gold-Generator Retain



664 195

27426

North Texas Industrial Service Center
P.O. Box 719
Lewisville, TX 75067
(972) 316-2296 / FAX (972) 316-2298

6 5 7131

NON-HAZARDOUS MANIFEST

GENERATOR: Air Force Base Conversion Agency
ADDRESS: Carswell Offsite Weapons Area
CITY/ST: Ft. Worth, TX 76114-
PHONE: (877) 386-5429

ID#: 65004
LOCATION: SAME

Description of Waste Materials	Approval Number	Quantity	Units
Contaminated soil	WS-9131	<u>20</u>	Yards

I hereby certify that the above described materials are not hazardous wastes as defined by 40 CFR Part 261 and does not contain free liquids as defined by 40 CFR Part 260.10 or any applicable state law. Have been fully and accurately described, classified and packaged, and are in proper condition for transportation according to applicable regulations.

Alvin D. Bennett
Generator Authorized Agent Name (Print)

Alvin D. Bennett 7/26/99
Signature Delivery Date

TRANSPORTER

TRANSPORTER NAME: Unified Services of Texas, Inc
ADDRESS: 2110 Greenbriar Drive
CITY/ST.: Southlake, Tx. 76092

DRIVER NAME(Print): Alvin D. Bennett
TRUCK NUMBER: 204
PHONE#: 817-481-9510

I hereby acknowledge receipt of the above described materials were received from the generator listed above and delivered to the disposal facility listed below without incident.

Alvin D. Bennett 7/26/99
Driver Signature Shipment Date

Alvin D. Bennett 7/26/99
Driver Signature Delivery Date

DISPOSAL FACILITY

SITE NAME: Westside Recycling and Disposal Facility
ADDRESS: 12280 U.S. Hwy 80 W., Aledo, Tx. 76008

PHONE NUMBER: 817-244-3500

I hereby acknowledge receipt of the above described materials.

Name of Authorized Agent (Print)

Signature 7/26/99
Receipt Date

D-Drum	C-Carton	B-Bag	P-Pounds	Y-Yards	O-Other
White-Original	Canary-Disposer Retain		Pink-Transporter Retain		Gold-Generator Retain



27427

664 196

North Texas Industrial Service Center
P.O. Box 719
Lewisville, TX 75067
(972) 316-2296 / FAX (972) 316-2298

NON-HAZARDOUS MANIFEST

GENERATOR: Air Force Base Conversion Agency
ADDRESS: Carswell Offsite Weapons Area
CITY/ST: Ft. Worth, TX 76114-
PHONE: (877) 386-5429

ID#: 66004
LOCATION: SAME

Description of Waste Materials	Approval Number	Quantity	Units
Contaminated soil	WS-9131	<u>20</u>	Yards

I hereby certify that the above described materials are not hazardous wastes as defined by 40 CFR Part 261 and does not contain free liquids as defined by 40 CFR Part 260.10 or any applicable state law. Have been fully and accurately described, classified and packaged, and are in proper condition for transportation according to applicable regulations.

Generator Authorized Agent Name (Print) _____ Signature [Signature] Delivery Date 7/1/99

TRANSPORTER

TRANSPORTER NAME: Unified Services of Texas, Inc
ADDRESS: 2110 Greenbriar Drive
CITY/ST.: Southlake, Tx. 76092

DRIVER NAME (Print): [Signature]
TRUCK NUMBER: 764
PHONE#: 617-481-9610

I hereby acknowledge receipt of the above described materials were received from the generator listed above and delivered to the disposal facility listed below without incident.

Driver Signature [Signature] Shipment Date _____ Driver Signature _____ Delivery Date _____

DISPOSAL FACILITY

SITE NAME: Westside Recycling and Disposal Facility
ADDRESS: 12280 U.S. Hwy 80 W., Aledo, Tx. 76008
I hereby acknowledge receipt of the above described materials.

PHONE NUMBER: 817-244-3500

Name of Authorized Agent (Print) _____ Signature _____ Receipt Date _____

D-Drum	C-Carton	B-Bag	P-Pounds	Y-Yards	O-Other
White-Original	Canary-Disposer Retain		Pink-Transporter Retain		Gold-Generator Retain



664 197

27428

North Texas Industrial Service Center
P.O. Box 719
Lewisville, TX 75067
(972) 316-2298 / FAX (972) 316-2298

NON-HAZARDOUS MANIFEST

GENERATOR: **Air Force Base Conversion Agency**
ADDRESS: **Carswell Offsite Weapons Area**
CITY/ST: **Ft. Worth, TX 76114-**
PHONE: **(877) 388-5429**

ID#: **65004**
LOCATION: **SAME**

Description of Waste Materials	Approval Number	Quantity	Units
Contaminated soil	WS-9131	<u>20</u>	Yards

I hereby certify that the above described materials are not hazardous wastes as defined by 40 CFR Part 261 and does not contain free liquids as defined by 40 CFR Part 260.10 or any applicable state law. Have been fully and accurately described, classified and packaged, and are in proper condition for transportation according to applicable regulations.

ALVIN D. BROWN
Generator Authorized Agent Name (Print)

Alvin D. Brown 7/26/99
Signature Delivery Date

TRANSPORTER

TRANSPORTER NAME: **Unified Services of Texas, Inc**
ADDRESS: **2110 Greenbriar Drive**
CITY/ST.: **Southlake, Tx. 76092**

DRIVER NAME(Print): Fripp
TRUCK NUMBER: 517
PHONE#: **817-481-9610**

I hereby acknowledge receipt of the above described materials were received from the generator listed above and delivered to the disposal facility listed below without incident.

[Signature] 7/26/99
Driver Signature Shipment Date

[Signature] 7/26/99
Driver Signature Delivery Date

DISPOSAL FACILITY

SITE NAME: **Westside Recycling and Disposal Facility**
ADDRESS: **12280 U.S. Hwy 80 W., Aledo, Tx. 76008**
I hereby acknowledge receipt of the above described materials.

PHONE NUMBER: **817-244-3600**

Name of Authorized Agent (Print)

Signature Receipt Date

*D-Drum	C-Carton	B-Bag	P-Pounds	Y-Yards	O-Other
White-Original	Canary-Disposer Retain		Pink-Transporter Retain		Gold-Generator Retain



27429

664 198

North Texas Industrial Service Center
P.O. Box 719
Lewisville, TX 75067
(972) 316-2296 / FAX (972) 316-2298

NON-HAZARDOUS MANIFEST

GENERATOR: Air Force Base Conversion Agency
ADDRESS: Carswell Offsite Weapons Area
CITY/ST: Ft. Worth, TX 76114-
PHONE: (877) 386-5429

ID#: 65004
LOCATION: SAME

Description of Waste Materials	Approval Number	Quantity	Units
Contaminated soil	WS-9131	<u>20</u>	Yards

I hereby certify that the above described materials are not hazardous wastes as defined by 40 CFR Part 261 and does not contain free liquids as defined by 40 CFR Part 260.10 or any applicable state law. Have been fully and accurately described, classified and packaged, and are in proper condition for transportation according to applicable regulations.

ANNAL D. BROWN
Generator Authorized Agent Name (Print)

[Signature] 7/26/97
Signature Delivery Date

TRANSPORTER

TRANSPORTER NAME: Unified Services of Texas, Inc
ADDRESS: 2110 Greenbriar Drive
CITY/ST.: Southlake, Tx. 76092

DRIVER NAME(Print): _____
TRUCK NUMBER: N255
PHONE#: 817-481-9510

I hereby acknowledge receipt of the above described materials were received from the generator listed above and delivered to the disposal facility listed below without incident.

[Signature] 10/13/97
Driver Signature Shipment Date

[Signature] 1/1
Driver Signature Delivery Date

DISPOSAL FACILITY

SITE NAME: Westside Recycling and Disposal Facility
ADDRESS: 12280 U.S. Hwy 80 W., Aledo, Tx. 76008

PHONE NUMBER: 817-244-3500

I hereby acknowledge receipt of the above described materials.

Name of Authorized Agent (Print)

[Signature] 1/1
Signature Receipt Date

*D-Drum	C-Carton	B-Bag	P-Pounds	Y-Yards	O-Other
White-Original	Canary-Disposer Retain		Pink-Transporter Retain.		Gold-Generator Retain



664 199

27430

North Texas Industrial Service Center
P.O. Box 719
Lewisville, TX 75067
(972) 316-2296 / FAX (972) 316-2298

65-1195

NON-HAZARDOUS MANIFEST

GENERATOR: **Air Force Base Conversion Agency**
ADDRESS: **Carswell Offsite Weapons Area**
CITY/ST: **Ft. Worth, TX 76114-**
PHONE: **(877) 388-5429**

ID#: **65004**
LOCATION: **SAME**

Description of Waste Materials	Approval Number	Quantity	Units
Contaminated soil	WS-8131	_____	Yards

I hereby certify that the above described materials are not hazardous wastes as defined by 40 CFR Part 261 and does not contain free liquids as defined by 40 CFR Part 260.10 or any applicable state law. Have been fully and accurately described, classified and packaged, and are in proper condition for transportation according to applicable regulations.

ALVIN D. BROWN
Generator Authorized Agent Name (Print)

Alvin D. Brown 7/26/99
Signature Delivery Date

TRANSPORTER

TRANSPORTER NAME: **Unified Services of Texas, Inc**
ADDRESS: **2110 Greenbriar Drive**
CITY/ST.: **Southlake, Tx. 76092**

DRIVER NAME (Print): J. M. ...
TRUCK NUMBER: ...
PHONE#: **817-481-9510**

I hereby acknowledge receipt of the above described materials were received from the generator listed above and delivered to the disposal facility listed below without incident.

S. M. 7/26/99
Driver Signature Shipment Date

J. M. 7/26/99
Driver Signature Delivery Date

DISPOSAL FACILITY

SITE NAME: **Westside Recycling and Disposal Facility**
ADDRESS: **12280 U.S. Hwy 80 W., Aledo, Tx. 76008**

PHONE NUMBER: **817-244-3500**

I hereby acknowledge receipt of the above described materials.

Name of Authorized Agent (Print)

Signature Receipt Date

D-Drum	C-Carton	B-Bag	P-Pounds	Y-Yards	O-Other
White-Original	Canary-Disposer Retain		Pink-Transporter Retain		Gold-Generator Retain



664 201

27432

North Texas Industrial Service Center
P.O. Box 719
Lewisville, TX 75067
(972) 316-2296 / FAX (972) 316-2298

NON-HAZARDOUS MANIFEST

GENERATOR: **Air Force Base Conversion Agency**
ADDRESS: **Carswell Offsite Weapons Area**
CITY/ST: **Ft. Worth, TX 76114-**
PHONE: **(877) 386-5429**

ID#: **65004**
LOCATION: **SAME**

Description of Waste Materials	Approval Number	Quantity	Units
Contaminated soil	WS-9131	<u>20</u>	Yards

I hereby certify that the above described materials are not hazardous wastes as defined by 40 CFR Part 261 and does not contain free liquids as defined by 40 CFR Part 260.10 or any applicable state law. Have been fully and accurately described, classified and packaged, and are in proper condition for transportation according to applicable regulations.

ALVIN D. BROWN
Generator Authorized Agent Name (Print)

Gene D. Brown 7/26/99
Signature Delivery Date

TRANSPORTER

TRANSPORTER NAME: **Unified Services of Texas, Inc**
ADDRESS: **2110 Greenbriar Drive**
CITY/ST.: **Southlake, Tx. 76092**

DRIVER NAME(Print): _____
TRUCK NUMBER: _____
PHONE#: **817-481-9510**

I hereby acknowledge receipt of the above described materials were received from the generator listed above and delivered to the disposal facility listed below without incident.

Driver Signature Shipment Date Driver Signature Delivery Date

DISPOSAL FACILITY

SITE NAME: **Westside Recycling and Disposal Facility**
ADDRESS: **12280 U.S. Hwy 80 W., Alledo, Tx. 76008**

PHONE NUMBER: **817-244-3500**

I hereby acknowledge receipt of the above described materials.

Name of Authorized Agent (Print) Signature Receipt Date

D-Drum	C-Carton	B-Bag	P-Pounds	Y-Yards	O-Other
White-Original	Canary-Disposer Retain		Pink-Transporter Retain		Gold-Generator Retain



27433

664 202

North Texas Industrial Service Center
P.O. Box 719
Lewisville, TX 75067
(972) 316-2298 / FAX (972) 316-2298

NON-HAZARDOUS MANIFEST

GENERATOR: Air Force Base Conversion Agency
ADDRESS: Carswell Offsite Weapons Area
CITY/ST: Ft. Worth, TX 76114-
PHONE: (877) 388-5429

ID#: 65004
LOCATION: SAME

Description of Waste Materials	Approval Number	Quantity	Units
Contaminated soil	WS-9131	<u>50</u>	Yards

I hereby certify that the above described materials are not hazardous wastes as defined by 40 CFR Part 261 and does not contain free liquids as defined by 40 CFR Part 260.10 or any applicable state law. Have been fully and accurately described, classified and packaged, and are in proper condition for transportation according to applicable regulations.

Ann D. ...
Generator Authorized Agent Name (Print)

[Signature] 1/1/02
Signature Delivery Date

TRANSPORTER

TRANSPORTER NAME: Unified Services of Texas, Inc
ADDRESS: 2110 Greenbriar Drive
CITY/ST.: Southlake, Tx. 76092

DRIVER NAME(Print): [Signature]
TRUCK NUMBER: 2801120000202
PHONE#: 817-481-9510

I hereby acknowledge receipt of the above described materials were received from the generator listed above and delivered to the disposal facility listed below without incident.

[Signature] 1/1/02
Driver Signature Shipment Date

[Signature] 1/1/02
Driver Signature Delivery Date

DISPOSAL FACILITY

SITE NAME: Westside Recycling and Disposal Facility
ADDRESS: 12280 U.S. Hwy 80 W., Aledo, Tx. 76008

PHONE NUMBER: 817-244-3600

I hereby acknowledge receipt of the above described materials.

[Signature]
Name of Authorized Agent (Print)

[Signature] 1/1/02
Signature Receipt Date

*D-Drum	C-Carton	B-Bag	P-Pounds	Y-Yards	O-Other
White-Original	Canary-Disposer Retain		Pink-Transporter Retain		Gold-Generator Retain



664 203

27434

North Texas Industrial Service Center
P.O. Box 719
Lewisville, TX 75067
(972) 316-2296 / FAX (972) 316-2298

707204

NON-HAZARDOUS MANIFEST

GENERATOR: **Air Force Base Conversion Agency**
ADDRESS: **Carswell Offsite Weapons Area**
CITY/ST: **Ft. Worth, TX 76114-**
PHONE: **(877) 386-5429**

ID#: **66004**
LOCATION: **SAME**

Description of Waste Materials	Approval Number	Quantity	Units
Contaminated soil	WS-9131	<u>20</u>	Yards

I hereby certify that the above described materials are not hazardous wastes as defined by 40 CFR Part 261 and does not contain free liquids as defined by 40 CFR Part 260.10 or any applicable state law. Have been fully and accurately described, classified and packaged, and are in proper condition for transportation according to applicable regulations.

ALVIN D. BERNARD
Generator Authorized Agent Name (Print)

[Signature] 7/11/99
Signature Delivery Date

TRANSPORTER

TRANSPORTER NAME: **Unified Services of Texas, Inc**
ADDRESS: **2110 Greenbriar Drive**
CITY/ST.: **Southlake, Tx. 76092**

DRIVER NAME(Print): FERRERA SCHULZ
TRUCK NUMBER: 11117
PHONE#: **817-481-9510**

I hereby acknowledge receipt of the above described materials were received from the generator listed above and delivered to the disposal facility listed below without incident.

[Signature] 7/21/99
Driver Signature Shipment Date

[Signature] 7/21/99
Driver Signature Delivery Date

DISPOSAL FACILITY

SITE NAME: **Westside Recycling and Disposal Facility**
ADDRESS: **12280 U.S. Hwy 80 W., Aledo, Tx. 76008**
I hereby acknowledge receipt of the above described materials.

PHONE NUMBER: **817-244-3500**

Name of Authorized Agent (Print)

Signature Receipt Date

*D-Drum	C-Carton	B-Bag	P-Pounds	Y-Yards	O-Other
White-Original	Canary-Disposer Retain		Pink-Transporter Retain		Gold-Generator Retain



27437

54511

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Lewisville, TX 75067
(972) 316-2296 / FAX (972) 316-2298

664 206

NON-HAZARDOUS MANIFEST

GENERATOR: Air Force Base Conversion Agency
ADDRESS: Carswell Offsite Weapons Area
CITY/ST: Ft. Worth, TX 76114-
PHONE: (877) 388-5429

ID#: 66004
LOCATION: SAME

Description of Waste Materials	Approval Number	Quantity	Units
Contaminated soil	WS-8131	<u>777</u>	Yards

I hereby certify that the above described materials are not hazardous wastes as defined by 40 CFR Part 261 and does not contain free liquids as defined by 40 CFR Part 260.10 or any applicable state law. Have been fully and accurately described, classified and packaged, and are in proper condition for transportation according to applicable regulations.

[Signature]
Generator Authorized Agent Name (Print)

[Signature] 7/21/99
Signature Delivery Date

TRANSPORTER

TRANSPORTER NAME: Unified Services of Texas, Inc
ADDRESS: 2110 Greenbriar Drive
CITY/ST.: Southlake, Tx. 76092

DRIVER NAME (Print): [Signature]
TRUCK NUMBER: 7-1143
PHONE#: 817-481-9510

I hereby acknowledge receipt of the above described materials were received from the generator listed above and delivered to the disposal facility listed below without incident.

[Signature] 7/21/99
Driver Signature Shipment Date

[Signature] 7/21/99
Driver Signature Delivery Date

DISPOSAL FACILITY

SITE NAME: Westside Recycling and Disposal Facility
ADDRESS: 12280 U.S. Hwy 80 W., Aledo, Tx. 76008

PHONE NUMBER: 817-244-3500

I hereby acknowledge receipt of the above described materials.

[Signature]
Name of Authorized Agent (Print)

[Signature] 7/21/99
Signature Receipt Date

D-Drum	C-Carton	B-Bag	P-Pounds	Y-Yards	O-Other
White-Original	Canary-Disposer Retain		Pink-Transporter Retain		Gold-Generator Retain



664 207

27438

North Texas Industrial Service Center
P.O. Box 719
Lewisville, TX 75067
(972) 316-2296 / FAX (972) 316-2298

NON-HAZARDOUS MANIFEST

GENERATOR: **Air Force Base Conversion Agency**
ADDRESS: **Carswell Offsite Weapons Area**
CITY/ST: **Ft. Worth, TX 76114-**
PHONE: **(877) 386-6429**

ID#: **65004**
LOCATION: **SAME**

Description of Waste Materials	Approval Number	Quantity	Units
Contaminated soil	WS-9131	<u>210</u>	Yards

I hereby certify that the above described materials are not hazardous wastes as defined by 40 CFR Part 261 and does not contain free liquids as defined by 40 CFR Part 260.10 or any applicable state law. Have been fully and accurately described, classified and packaged, and are in proper condition for transportation according to applicable regulations.

MICHAEL D. REED
Generator Authorized Agent Name (Print)

Ali F. ... 7/1/99
Signature Delivery Date

TRANSPORTER

TRANSPORTER NAME: **Unified Services of Texas, Inc**
ADDRESS: **2110 Greenbriar Drive**
CITY/ST.: **Southlake, Tx. 76092**

DRIVER NAME(Print): ...
TRUCK NUMBER: ...
PHONE#: **817-481-0510**

I hereby acknowledge receipt of the above described materials were received from the generator listed above and delivered to the disposal facility listed below without incident.

... Shipment Date
Driver Signature

... Delivery Date
Driver Signature

DISPOSAL FACILITY

SITE NAME: **Westside Recycling and Disposal Facility**
ADDRESS: **12280 U.S. Hwy 80 W., Aledo, Tx. 76008**

PHONE NUMBER: **817-244-3500**

I hereby acknowledge receipt of the above described materials.

Name of Authorized Agent (Print)

Signature Receipt Date

D-Drum	C-Carton	B-Bag	P-Pounds	Y-Yards	O-Other
White-Original	Canary-Disposer Retain		Pink-Transporter Retain		Gold-Generator Retain



664 209

27,440.5

North Texas Industrial Service Center
P.O. Box 719
Lewisville, TX 75067
(972) 316-2296 / FAX (972) 316-2298

NON-HAZARDOUS MANIFEST

GENERATOR: **Air Force Base Conversion Agency**
ADDRESS: **Carswell Offsite Weapons Area**
CITY/ST: **Ft. Worth, TX 76114-**
PHONE: **(877) 388-6429**

ID#: **65004**
LOCATION: **SAME**

Description of Waste Materials	Approval Number	Quantity	Units
Contaminated soil	WS-9131	<u>27,440.5</u>	Yards

I hereby certify that the above described materials are not hazardous wastes as defined by 40 CFR Part 261 and does not contain free liquids as defined by 40 CFR Part 260.10 or any applicable state law. Have been fully and accurately described, classified and packaged, and are in proper condition for transportation according to applicable regulations.

Michael D. P. [Signature]
Generator Authorized Agent Name (Print)

[Signature] 7/26/99
Signature Delivery Date

TRANSPORTER

TRANSPORTER NAME: **Unified Services of Texas, Inc**
ADDRESS: **2110 Greenbriar Drive**
CITY/ST.: **Southlake, Tx. 76092**

DRIVER NAME(Print): [Signature]
TRUCK NUMBER: _____
PHONE#: **817-481-9510**

I hereby acknowledge receipt of the above described materials were received from the generator listed above and delivered to the disposal facility listed below without incident.

[Signature] 7/26/99
Driver Signature Shipment Date

[Signature] 7/26/99
Driver Signature Delivery Date

DISPOSAL FACILITY

SITE NAME: **Westside Recycling and Disposal Facility**
ADDRESS: **12280 U.S. Hwy 80 W., Aledo, Tx. 76008**

PHONE NUMBER: **817-244-3600**

I hereby acknowledge receipt of the above described materials.

Name of Authorized Agent (Print)

Signature Receipt Date

D-Drum	C-Carton	B-Bag	P-Pounds	Y-Yards	O-Other
White-Original	Canary-Disposer Retain		Pink-Transporter Retain		Gold-Generator Retain



27441

664 210

North Texas Industrial Service Center
P.O. Box 719
Lewisville, TX 75067
(972) 316-2296 / FAX (972) 316-2298

78 7856

NON-HAZARDOUS MANIFEST

GENERATOR: **Air Force Base Conversion Agency**
ADDRESS: **Carswell Offsite Weapons Area**
CITY/ST: **Ft. Worth, TX 76114-**
PHONE: **(877) 388-6428**

ID#: **85004**
LOCATION: **SAME**

Description of Waste Materials	Approval Number	Quantity	Units
Contaminated soil	WS-8131	<u>50</u>	Yards

I hereby certify that the above described materials are not hazardous wastes as defined by 40 CFR Part 261 and does not contain free liquids as defined by 40 CFR Part 260.10 or any applicable state law. Have been fully and accurately described, classified and packaged, and are in proper condition for transportation according to applicable regulations.

Amir A. Pappas
Generator Authorized Agent Name (Print)

[Signature] 7/6/10
Signature Delivery Date

TRANSPORTER

TRANSPORTER NAME: **Unified Services of Texas, Inc**
ADDRESS: **2110 Greenbriar Drive**
CITY/ST.: **Southlake, Tx. 76092**

DRIVER NAME(Print): [Signature]
TRUCK NUMBER: 0116
PHONE#: **817-481-9510**

I hereby acknowledge receipt of the above described materials were received from the generator listed above and delivered to the disposal facility listed below without incident.

[Signature] 7/6/10
Driver Signature Shipment Date

[Signature] 7/6/10
Driver Signature Delivery Date

DISPOSAL FACILITY

SITE NAME: **Westside Recycling and Disposal Facility**
ADDRESS: **12280 U.S. Hwy 80 W., Aledo, Tx. 76008**

PHONE NUMBER: **817-244-3500**

I hereby acknowledge receipt of the above described materials.

[Signature]
Name of Authorized Agent (Print)

[Signature] 7/6/10
Signature Receipt Date

*D-Drum	C-Carton	B-Bag	P-Pounds	Y-Yards	O-Other
White-Original	Canary-Disposer Retain		Pink-Transporter Retain		Gold-Generator Retain



664 211

27442

North Texas Industrial Service Center
P.O. Box 719
Lewisville, TX 75067
(972) 316-2296 / FAX (972) 316-2298

787206

NON-HAZARDOUS MANIFEST

GENERATOR: **Air Force Base Conversion Agency** ID#: **65004**
ADDRESS: **Carswell Offsite Weapons Area** LOCATION: **SAME**
CITY/ST: **Ft Worth, TX 76114-**
PHONE: **(877) 388-5429**

Description of Waste Materials	Approval Number	Quantity	Units
Contaminated soil	WS-9131	<u>30</u>	Yards

I hereby certify that the above described materials are not hazardous wastes as defined by 40 CFR Part 261 and does not contain free liquids as defined by 40 CFR Part 260.10 or any applicable state law. Have been fully and accurately described, classified and packaged, and are in proper condition for transportation according to applicable regulations.

M. D. ... Generator Authorized Agent Name (Print) [Signature] Signature 7/21/99 Delivery Date

TRANSPORTER

TRANSPORTER NAME: **Unified Services of Texas, Inc** DRIVER NAME(Print): Ferrico S. ...
ADDRESS: **2110 Greenbriar Drive** TRUCK NUMBER: 407-110
CITY/ST.: **Southlake, Tx. 76092** PHONE#: **817-481-9510**

I hereby acknowledge receipt of the above described materials were received from the generator listed above and delivered to the disposal facility listed below without incident.

[Signature] Driver Signature 7/21/99 Shipment Date [Signature] Driver Signature 7/21/99 Delivery Date

DISPOSAL FACILITY

SITE NAME: **Westside Recycling and Disposal Facility** PHONE NUMBER: **817-244-3600**
ADDRESS: **12280 U.S. Hwy 80 W., Aledo, Tx. 76008**
I hereby acknowledge receipt of the above described materials.

Name of Authorized Agent (Print) _____ Signature _____ Receipt Date

D-Drum	C-Carton	B-Bag	P-Pounds	Y-Yards	O-Other
White-Original	Canary-Disposer Retain		Pink-Transporter Retain		Gold-Generator Retain



27443

664 212

595996

North Texas Industrial Service Center
P.O. Box 719
Lewisville, TX 75067
(972) 316-2286 / FAX (972) 316-2298

NON-HAZARDOUS MANIFEST

GENERATOR: Air Force Base Conversion Agency
ADDRESS: Carswell Offsite Weapons Area
CITY/ST: Ft. Worth, TX 76114-
PHONE: (877) 386-5428

ID#: 66004
LOCATION: SAME

Description of Waste Materials	Approval Number	Quantity	Units
Contaminated soil	WS-9131	<u>711</u>	Yards

I hereby certify that the above described materials are not hazardous wastes as defined by 40 CFR Part 261 and does not contain free liquids as defined by 40 CFR Part 260.10 or any applicable state law. Have been fully and accurately described, classified and packaged, and are in proper condition for transportation according to applicable regulations.

ANITA D. BRIDGES
Generator Authorized Agent Name (Print)

[Signature] 7/26/99
Signature Delivery Date

TRANSPORTER

TRANSPORTER NAME: Unified Services of Texas, Inc
ADDRESS: 2110 Greenbriar Drive
CITY/ST.: Southlake, Tx. 76092

DRIVER NAME(Print): _____
TRUCK NUMBER: 2001-1102-5600
PHONE#: 817-481-8510

I hereby acknowledge receipt of the above described materials were received from the generator listed above and delivered to the disposal facility listed below without incident.

[Signature] 7/26/99
Driver Signature Shipment Date

[Signature] 1/1
Driver Signature Delivery Date

DISPOSAL FACILITY

SITE NAME: Westside Recycling and Disposal Facility
ADDRESS: 12280 U.S. Hwy 80 W., Aledo, Tx. 76008
I hereby acknowledge receipt of the above described materials.

PHONE NUMBER: 817-244-3500

Name of Authorized Agent (Print)

Signature

1/1
Receipt Date

*D-Drum	C-Carton	B-Bag	P-Pounds	Y-Yards	O-Other
White-Original	Canary-Disposer Retain		Pink-Transporter Retain		Gold-Generator Retain



664 213

27444

North Texas Industrial Service Center
P.O. Box 719
Lewisville, TX 75067
(972) 316-2296 / FAX (972) 316-2298

NON-HAZARDOUS MANIFEST

GENERATOR: Air Force Base Conversion Agency
ADDRESS: Carswell Offsite Weapons Area
CITY/ST: Ft. Worth, TX 76114-
PHONE: (877) 386-5429

ID#: 65004
LOCATION: SAME

Description of Waste Materials	Approval Number	Quantity	Units
Contaminated soil	WS-9131	<u>25</u>	Yards

I hereby certify that the above described materials are not hazardous wastes as defined by 40 CFR Part 261 and does not contain free liquids as defined by 40 CFR Part 260.10 or any applicable state law. Have been fully and accurately described, classified and packaged, and are in proper condition for transportation according to applicable regulations.

M. D. P. D. D.
Generator Authorized Agent Name (Print)

[Signature] 7-1-1999
Signature Delivery Date

TRANSPORTER

TRANSPORTER NAME: Unified Services of Texas, Inc
ADDRESS: 2110 Greenbriar Drive
CITY/ST.: Southlake, Tx. 76092

DRIVER NAME(Print): D. Garcia Merieth
TRUCK NUMBER: 1-551
PHONE#: 817-481-9510

I hereby acknowledge receipt of the above described materials were received from the generator listed above and delivered to the disposal facility listed below without incident.

[Signature] 7-21-99
Driver Signature Shipment Date

[Signature] 7-21-99
Driver Signature Delivery Date

DISPOSAL FACILITY

SITE NAME: Westside Recycling and Disposal Facility
ADDRESS: 12280 U.S. Hwy 80 W., Aledo, Tx. 76008

PHONE NUMBER: 817-244-3500

I hereby acknowledge receipt of the above described materials.

Name of Authorized Agent (Print)

Signature Receipt Date

*D-Drum	C-Carton	B-Bag	P-Pounds	Y-Yards	O-Other
White-Original	Canary-Disposer Retain		Pink-Transporter Retain		Gold-Generator Retain



27445

661 214

North Texas Industrial Service Center
P.O. Box 719
Lewisville, TX 75067
(972) 316-2298 / FAX (972) 316-2298

787857

NON-HAZARDOUS MANIFEST

GENERATOR: **Air Force Base Conversion Agency**
ADDRESS: **Carswell Offsite Weapons Area**
CITY/ST: **Ft. Worth, TX 76114-**
PHONE: **(877) 388-6429**

ID#: **65004**
LOCATION: **SAME**

Description of Waste Materials	Approval Number	Quantity	Units
Contaminated soil	WS-9131	20	Yards

I hereby certify that the above described materials are not hazardous wastes as defined by 40 CFR Part 261 and does not contain free liquids as defined by 40 CFR Part 260.10 or any applicable state law. Have been fully and accurately described, classified and packaged, and are in proper condition for transportation according to applicable regulations.

ALVIN D. PUGH
Generator Authorized Agent Name (Print)

Alvin D. Pugh 7/26/17
Signature Delivery Date

TRANSPORTER

TRANSPORTER NAME: **Unified Services of Texas, Inc**
ADDRESS: **2110 Greenbriar Drive**
CITY/ST.: **Southlake, Tx. 76092**

DRIVER NAME(Print): Quinn D. ...
TRUCK NUMBER: 079
PHONE#: **817-481-9510**

I hereby acknowledge receipt of the above described materials were received from the generator listed above and delivered to the disposal facility listed below without incident.

Quinn D. ... 7/27/17
Driver Signature Shipment Date

Quinn D. ... 7/27/17
Driver Signature Delivery Date

DISPOSAL FACILITY

SITE NAME: **Westside Recycling and Disposal Facility**
ADDRESS: **12280 U.S. Hwy 80 W., Aledo, Tx. 76008**

PHONE NUMBER: **817-244-3600**

I hereby acknowledge receipt of the above described materials.

Name of Authorized Agent (Print)

Signature

Receipt Date

*D-Drum	C-Carton	B-Bag	P-Pounds	Y-Yards	O-Other
White-Original	Canary-Disposer Retain		Pink-Transporter Retain		Gold-Generator Retain



661 215

27446

North Texas Industrial Service Center
P.O. Box 719
Lewisville, TX 75067
(972) 316-2296 / FAX (972) 316-2298

118194

NON-HAZARDOUS MANIFEST

GENERATOR: **Air Force Base Conversion Agency** ID#: **65004**
ADDRESS: **Carswell Offsite Weapons Area** LOCATION: **SAME**
CITY/ST: **Ft. Worth, TX 76114-**
PHONE: **(877) 386-5429**

Description of Waste Materials	Approval Number	Quantity	Units
Contaminated soil	WS-9131	_____	Yards

I hereby certify that the above described materials are not hazardous wastes as defined by 40 CFR Part 261 and does not contain free liquids as defined by 40 CFR Part 260.10 or any applicable state law. Have been fully and accurately described, classified and packaged, and are in proper condition for transportation according to applicable regulations.

ALVIN D. RYAN Signature 1/21/99 Delivery Date
Generator Authorized Agent Name (Print)

TRANSPORTER

TRANSPORTER NAME: **Unified Services of Texas, Inc** DRIVER NAME(Print): _____
ADDRESS: **2110 Greenbriar Drive** TRUCK NUMBER: _____
CITY/ST.: **Southlake, Tx. 76092** PHONE#: **817-481-9610**

I hereby acknowledge receipt of the above described materials were received from the generator listed above and delivered to the disposal facility listed below without incident.

Driver Signature Shipment Date Driver Signature Delivery Date

DISPOSAL FACILITY

SITE NAME: **Westside Recycling and Disposal Facility** PHONE NUMBER: **817-244-3600**
ADDRESS: **12280 U.S. Hwy 80 W., Alado, Tx. 76008**

I hereby acknowledge receipt of the above described materials.

Name of Authorized Agent (Print) Signature Receipt Date

*D-Drum	C-Carton	B-Bag	P-Pounds	Y-Yards	O-Other
White-Original	Canary-Disposer Retain		Pink-Transporter Retain		Gold-Generator Retain



27447

664 216

545197

North Texas Industrial Service Center
P.O. Box 719
Lewisville, TX 75067
(972) 316-2296 / FAX (972) 316-2298

NON-HAZARDOUS MANIFEST

GENERATOR: **Air Force Base Conversion Agency**
ADDRESS: **Carswell Offsite Weapons Area**
CITY/ST: **Ft. Worth, TX 76114-**
PHONE: **(877) 386-5429**

ID#: **65004**
LOCATION: **SAME**

Description of Waste Materials	Approval Number	Quantity	Units
Contaminated soil	WS-9131	_____	Yards

I hereby certify that the above described materials are not hazardous wastes as defined by 40 CFR Part 261 and does not contain free liquids as defined by 40 CFR Part 260.10 or any applicable state law. Have been fully and accurately described, classified and packaged, and are in proper condition for transportation according to applicable regulations.

ADVIN D. BEGLEY
Generator Authorized Agent Name (Print)

[Signature] 7/26/99
Signature Delivery Date

TRANSPORTER

TRANSPORTER NAME: **Unified Services of Texas, Inc**
ADDRESS: **2110 Greenbriar Drive**
CITY/ST.: **Southlake, Tx. 76092**

DRIVER NAME(Print): [Signature]
TRUCK NUMBER: [Signature]
PHONE#: **817-481-9510**

I hereby acknowledge receipt of the above described materials were received from the generator listed above and delivered to the disposal facility listed below without incident.

[Signature] 7/17/99
Driver Signature Shipment Date

[Signature] 7/27/99
Driver Signature Delivery Date

DISPOSAL FACILITY

SITE NAME: **Westside Recycling and Disposal Facility**
ADDRESS: **12280 U.S. Hwy 80 W., Aledo, Tx. 76008**
I hereby acknowledge receipt of the above described materials.

PHONE NUMBER: **817-244-3500**

Name of Authorized Agent (Print)

[Signature] 7/27/99
Signature Receipt Date

*D-Drum	C-Carton	B-Bag	P-Pounds	Y-Yards	O-Other
White-Original	Canary-Disposer Retain		Pink-Transporter Retain		Gold-Generator Retain



664 217

27448

North Texas Industrial Service Center
P.O. Box 719
Lewisville, TX 75067
(972) 316-2298 / FAX (972) 316-2298

NON-HAZARDOUS MANIFEST

GENERATOR: **Air Force Base Conversion Agency**
ADDRESS: **Carswell Offsite Weapons Area**
CITY/ST: **Ft. Worth, TX 76114-**
PHONE: **(877) 388-5428**

ID#: **65004**
LOCATION: **SAME**

Description of Waste Materials	Approval Number	Quantity	Units
Contaminated soil	WS-9131	_____	Yards

I hereby certify that the above described materials are not hazardous wastes as defined by 40 CFR Part 261 and does not contain free liquids as defined by 40 CFR Part 260.10 or any applicable state law. Have been fully and accurately described, classified and packaged, and are in proper condition for transportation according to applicable regulations.

Generator Authorized Agent Name (Print)

_____ 7/20/19
Signature Delivery Date

TRANSPORTER

TRANSPORTER NAME: **Unified Services of Texas, Inc**
ADDRESS: **2110 Greenbriar Drive**
CITY/ST.: **Southlake, Tx. 76092**

DRIVER NAME(Print): _____
TRUCK NUMBER: _____
PHONE#: **817-481-9510**

I hereby acknowledge receipt of the above described materials were received from the generator listed above and delivered to the disposal facility listed below without incident.

_____ _____
Driver Signature Shipment Date

_____ 7/20/19
Driver Signature Delivery Date

DISPOSAL FACILITY

SITE NAME: **Westside Recycling and Disposal Facility**
ADDRESS: **12280 U.S. Hwy 80 W., Aledo, Tx. 76008**

PHONE NUMBER: **817-244-3500**

I hereby acknowledge receipt of the above described materials.

Name of Authorized Agent (Print)

_____ _____
Signature Receipt Date

*D-Drum	C-Carton	B-Bag	P-Pounds	Y-Yards	O-Other
White-Original	Canary-Disposer Retain		Pink-Transporter Retain		Gold-Generator Retain



27449

661 218

North Texas Industrial Service Center
P.O. Box 719
Lewisville, TX 75067
(972) 316-2296 / FAX (972) 316-2298

NON-HAZARDOUS MANIFEST

GENERATOR: Air Force Base Conversion Agency
ADDRESS: Carswell Offsite Weapons Area
CITY/ST: Ft. Worth, TX 76114-
PHONE: (877) 388-5429

ID#: 65004
LOCATION: SAME

Description of Waste Materials	Approval Number	Quantity	Units
Contaminated soil	WS-9131	_____	Yards

I hereby certify that the above described materials are not hazardous wastes as defined by 40 CFR Part 261 and does not contain free liquids as defined by 40 CFR Part 260.10 or any applicable state law. Have been fully and accurately described, classified and packaged, and are in proper condition for transportation according to applicable regulations.

ALVIN D. BROWN
Generator Authorized Agent Name (Print)

[Signature] 7/10/11
Signature Delivery Date

TRANSPORTER

TRANSPORTER NAME: Unified Services of Texas, Inc
ADDRESS: 2110 Greenbriar Drive
CITY/ST.: Southlake, Tx. 76092

DRIVER NAME(Print): [Signature]
TRUCK NUMBER: _____
PHONE#: 817-481-9510

I hereby acknowledge receipt of the above described materials were received from the generator listed above and delivered to the disposal facility listed below without incident.

[Signature] 7/10/11
Driver Signature Shipment Date

[Signature] 7/10/11
Driver Signature Delivery Date

DISPOSAL FACILITY

SITE NAME: Westside Recycling and Disposal Facility
ADDRESS: 12280 U.S. Hwy 80 W., Aledo, Tx. 76008

PHONE NUMBER: 817-244-3500

I hereby acknowledge receipt of the above described materials.

Name of Authorized Agent (Print)

[Signature] 7/10/11
Signature Receipt Date

*D-Drum	C-Carton	B-Bag	P-Pounds	Y-Yards	O-Other
White-Original	Canary-Disposer Retain		Pink-Transporter Retain		Gold-Generator Retain



664 219

27450

North Texas Industrial Service Center
P.O. Box 719
Lewisville, TX 75067
(972) 316-2298 / FAX (972) 316-2298

77 11 58

NON-HAZARDOUS MANIFEST

GENERATOR: Air Force Base Conversion Agency
ADDRESS: Carswell Offsite Weapons Area
CITY/ST: Ft. Worth, TX 76114-
PHONE: (877) 386-6429

ID#: 85004
LOCATION: SAME

Description of Waste Materials	Approval Number	Quantity	Units
Contaminated soil	WS-9131		Yards

I hereby certify that the above described materials are not hazardous wastes as defined by 40 CFR Part 261 and does not contain free liquids as defined by 40 CFR Part 260.10 or any applicable state law. Have been fully and accurately described, classified and packaged; and are in proper condition for transportation according to applicable regulations.

DIVINA D. PEREZ
Generator Authorized Agent Name (Print)

[Signature] 11/11/98
Signature Delivery Date

TRANSPORTER

TRANSPORTER NAME: Unified Services of Texas, Inc
ADDRESS: 2110 Greenbriar Drive
CITY/ST.: Southlake, Tx. 76092

DRIVER NAME(Print): _____
TRUCK NUMBER: _____
PHONE#: 817-481-8510

I hereby acknowledge receipt of the above described materials were received from the generator listed above and delivered to the disposal facility listed below without incident.

[Signature] 11/11/98
Driver Signature Shipment Date

[Signature] 11/11/98
Driver Signature Delivery Date

DISPOSAL FACILITY

SITE NAME: Westside Recycling and Disposal Facility
ADDRESS: 12280 U.S. Hwy 80 W., Aledo, Tx. 76008

PHONE NUMBER: 817-244-3600

I hereby acknowledge receipt of the above described materials.

Name of Authorized Agent (Print)

[Signature] 11/11/98
Signature Receipt Date

D-Drum	C-Carton	B-Bag	P-Pounds	Y-Yards	O-Other
White-Original	Canary-Disposer Retain		Pink-Transporter Retain		Gold-Generator Retain



27451

664 220

1148115

North Texas Industrial Service Center
P.O. Box 719
Lewisville, TX 75067
(972) 316-2296 / FAX (972) 316-2298

NON-HAZARDOUS MANIFEST

GENERATOR: **Air Force Base Conversion Agency**
ADDRESS: **Carswell Offsite Weapons Area**
CITY/ST: **Ft. Worth, TX 76114-**
PHONE: **(877) 386-5428**

ID#: **66004**
LOCATION: **SAME**

Description of Waste Materials	Approval Number	Quantity	Units
Contaminated soil	WS-9131	200	Yards

I hereby certify that the above described materials are not hazardous wastes as defined by 40 CFR Part 261 and does not contain free liquids as defined by 40 CFR Part 260.10 or any applicable state law. Have been fully and accurately described, classified and packaged, and are in proper condition for transportation according to applicable regulations.

ADVIN D. FRIEDMAN
Generator Authorized Agent Name (Print)

[Signature] 7/26/11
Signature Delivery Date

TRANSPORTER

TRANSPORTER NAME: **Unified Services of Texas, Inc**
ADDRESS: **2110 Greenbriar Drive**
CITY/ST.: **Southlake, Tx. 76092**

DRIVER NAME(Print): LUYAN
TRUCK NUMBER: 817-481-9540
PHONE#: 817-481-9540

I hereby acknowledge receipt of the above described materials were received from the generator listed above and delivered to the disposal facility listed below without incident.

[Signature] 7/26/11
Driver Signature Shipment Date

[Signature] 7/26/11
Driver Signature Delivery Date

DISPOSAL FACILITY

SITE NAME: **Westside Recycling and Disposal Facility**
ADDRESS: **12280 U.S. Hwy 80 W., Aledo, Tx. 76008**

PHONE NUMBER: **817-244-3600**

I hereby acknowledge receipt of the above described materials.

[Signature]
Name of Authorized Agent (Print)

[Signature] 7/26/11
Signature Receipt Date

*D-Drum	C-Carton	B-Bag	P-Pounds	Y-Yards	O-Other
White-Original	Canary-Disposer Retain		Pink-Transporter Retain		Gold-Generator Retain



664 221

27452

North Texas Industrial Service Center
P.O. Box 719
Lewisville, TX 75067
(972) 316-2298 / FAX (972) 316-2298

475998

NON-HAZARDOUS MANIFEST

GENERATOR: **Air Force Base Conversion Agency**
ADDRESS: **Carswell Offsite Weapons Area**
CITY/ST: **Ft. Worth, TX 76114-**
PHONE: **(877) 386-5429**

ID#: **66004**
LOCATION: **SAME**

Description of Waste Materials	Approval Number	Quantity	Units
Contaminated soil	WS-9131	<u>2</u>	Yards

I hereby certify that the above described materials are not hazardous wastes as defined by 40 CFR Part 261 and does not contain free liquids as defined by 40 CFR Part 260.10 or any applicable state law. Have been fully and accurately described, classified and packaged, and are in proper condition for transportation according to applicable regulations.

ANNA D. SPINA
Generator Authorized Agent Name (Print)

[Signature] 7/21/11
Signature Delivery Date

TRANSPORTER

TRANSPORTER NAME: **Unified Services of Texas, Inc**
ADDRESS: **2110 Greenbriar Drive**
CITY/ST.: **Southlake, Tx. 76092**

DRIVER NAME(Print): _____
TRUCK NUMBER: 27-11
PHONE#: **817-481-9510**

I hereby acknowledge receipt of the above described materials were received from the generator listed above and delivered to the disposal facility listed below without incident.

[Signature] 7/21/11
Driver Signature Shipment Date

[Signature] 7/21/11
Driver Signature Delivery Date

DISPOSAL FACILITY

SITE NAME: **Westside Recycling and Disposal Facility**
ADDRESS: **12280 U.S. Hwy 80 W., Aledo, Tx. 76008**
I hereby acknowledge receipt of the above described materials.

PHONE NUMBER: **817-244-3600**

Name of Authorized Agent (Print)

[Signature] 7/21/11
Signature Receipt Date

*D-Drum	C-Carton	B-Bag	P-Pounds	Y-Yards	O-Other
White-Original	Canary-Disposer Retain		Pink-Transporter Retain		Gold-Generator Retain



27453 664 222

787204

North Texas Industrial Service Center
P.O. Box 719
Lewisville, TX 75067
(972) 316-2298 / FAX (972) 316-2298

NON-HAZARDOUS MANIFEST

GENERATOR: Air Force Base Conversion Agency
ADDRESS: Carswell Offsite Weapons Area
CITY/ST: Ft. Worth, TX 76114-
PHONE: (877) 388-6429

ID#: 65004
LOCATION: SAME

Description of Waste Materials	Approval Number	Quantity	Units
Contaminated soil	WS-9131	<u>20</u>	Yards

I hereby certify that the above described materials are not hazardous wastes as defined by 40 CFR Part 261 and does not contain free liquids as defined by 40 CFR Part 260.10 or any applicable state law. Have been fully and accurately described, classified and packaged, and are in proper condition for transportation according to applicable regulations.

WILL D. BEOWN
Generator Authorized Agent Name (Print)

[Signature]
Signature

7/1/94
Delivery Date

TRANSPORTER

TRANSPORTER NAME: Unified Services of Texas, Inc
ADDRESS: 2110 Greenbriar Drive
CITY/ST.: Southlake, Tx. 76092

DRIVER NAME(Print): FRANCIS S. SHER
TRUCK NUMBER: 4107
PHONE#: 817-481-9510

I hereby acknowledge receipt of the above described materials were received from the generator listed above and delivered to the disposal facility listed below without incident.

[Signature] 7/21/94
Driver Signature Shipment Date

[Signature] 7/21/94
Driver Signature Delivery Date

DISPOSAL FACILITY

SITE NAME: Westside Recycling and Disposal Facility
ADDRESS: 12280 U.S. Hwy 80 W., Aledo, Tx. 76008

PHONE NUMBER: 817-244-3500

I hereby acknowledge receipt of the above described materials.

Name of Authorized Agent (Print)

Signature

Receipt Date

*D-Drum	C-Carton	B-Bag	P-Pounds	Y-Yards	O-Other
White-Original	Canary-Disposer Retain		Pink-Transporter Retain		Gold-Generator Retain



27455

664 221

North Texas Industrial Service Center
P.O. Box 719
Lewisville, TX 75067
(972) 316-2296 / FAX (972) 316-2298

787855

NON-HAZARDOUS MANIFEST

GENERATOR: Air Force Base Conversion Agency
ADDRESS: Carswell Offsite Weapons Area
CITY/ST: Ft. Worth, TX 76114-
PHONE: (877) 388-5429

ID#: 85004
LOCATION: SAME

Description of Waste Materials	Approval Number	Quantity	Units
Contaminated soil	WB-9131	<u>20</u>	Yards

I hereby certify that the above described materials are not hazardous wastes as defined by 40 CFR Part 261 and does not contain free liquids as defined by 40 CFR Part 260.10 or any applicable state law. Have been fully and accurately described, classified and packaged, and are in proper condition for transportation according to applicable regulations.

ALVIN D. BROWN
Generator Authorized Agent Name (Print)

Alvin D. Brown 7/26/99
Signature Delivery Date

TRANSPORTER

TRANSPORTER NAME: Unified Services of Texas, Inc
ADDRESS: 2110 Greenbriar Drive
CITY/ST.: Southlake, Tx. 76092

DRIVER NAME(Print): [Signature]
TRUCK NUMBER: 025
PHONE#: 817-481-9510

I hereby acknowledge receipt of the above described materials were received from the generator listed above and delivered to the disposal facility listed below without incident.

[Signature] 7/27/99
Driver Signature Shipment Date

[Signature] 7/27/99
Driver Signature Delivery Date

DISPOSAL FACILITY

SITE NAME: Westside Recycling and Disposal Facility
ADDRESS: 12280 U.S. Hwy 80 W., Aledo, Tx. 76008

PHONE NUMBER: 817-244-3500

I hereby acknowledge receipt of the above described materials.

[Signature]
Name of Authorized Agent (Print)

[Signature] 7/27/99
Signature Receipt Date

*D-Drum	C-Carton	B-Bag	P-Pounds	Y-Yards	O-Other
White-Original	Canary-Disposer Retain		Pink-Transporter Retain		Gold-Generator Retain



664 225

27456

North Texas Industrial Service Center
P.O. Box 719
Lewisville, TX 75067
(972) 316-2296 / FAX (972) 316-2298

448146

NON-HAZARDOUS MANIFEST

GENERATOR: Air Force Base Conversion Agency
ADDRESS: Carswell Offsite Weapons Area
CITY/ST: Ft. Worth, TX 76114-
PHONE: (877) 388-6429

ID#: 65004
LOCATION: SAME

Description of Waste Materials	Approval Number	Quantity	Units
Contaminated soil	WS-9131		Yards

I hereby certify that the above described materials are not hazardous wastes as defined by 40 CFR Part 261 and does not contain free liquids as defined by 40 CFR Part 260.10 or any applicable state law. Have been fully and accurately described, classified and packaged, and are in proper condition for transportation according to applicable regulations.

Alvin A. Robinson
Generator Authorized Agent Name (Print)

[Signature] 7/1/99
Signature Delivery Date

TRANSPORTER

TRANSPORTER NAME: Unified Services of Texas, Inc
ADDRESS: 2110 Greenbriar Drive
CITY/ST.: Southlake, Tx. 76092

DRIVER NAME(Print): [Signature]
TRUCK NUMBER: 1185-41
PHONE#: 817-481-9510

I hereby acknowledge receipt of the above described materials were received from the generator listed above and delivered to the disposal facility listed below without incident.

[Signature] 7-1-99
Driver Signature Shipment Date

[Signature] 7-1-99
Driver Signature Delivery Date

DISPOSAL FACILITY

SITE NAME: Westside Recycling and Disposal Facility
ADDRESS: 12280 U.S. Hwy 80 W., Aledo, Tx. 76008

PHONE NUMBER: 817-244-3500

I hereby acknowledge receipt of the above described materials.

Name of Authorized Agent (Print)

[Signature] 7/1/99
Signature Receipt Date

D-Drum	C-Carton	B-Bag	P-Pounds	Y-Yards	O-Other
White-Original	Canary-Disposer Retain		Pink-Transporter Retain		Gold-Generator Retain



27457

664 226

595499

North Texas Industrial Service Center
P.O. Box 719
Lewisville, TX 75067
(972) 316-2296 / FAX (972) 316-2298

NON-HAZARDOUS MANIFEST

GENERATOR: Air Force Base Conversion Agency
ADDRESS: Carswell Offsite Weapons Area
CITY/ST: Ft. Worth, TX 76114-
PHONE: (877) 386-5429

ID#: 65004
LOCATION: SAME

Description of Waste Materials	Approval Number	Quantity	Units
Contaminated soil	WS-9131	20	Yards

I hereby certify that the above described materials are not hazardous wastes as defined by 40 CFR Part 261 and does not contain free liquids as defined by 40 CFR Part 260.10 or any applicable state law. Have been fully and accurately described, classified and packaged, and are in proper condition for transportation according to applicable regulations.

ALVIN D. BROWN
Generator Authorized Agent Name (Print)

Alvin D. Brown 7/27/99
Signature Delivery Date

TRANSPORTER

TRANSPORTER NAME: Unified Services of Texas, Inc
ADDRESS: 2110 Greenbriar Drive
CITY/ST.: Southlake, Tx. 76092

DRIVER NAME(Print):
TRUCK NUMBER: 421R1110C14K-11
PHONE#: 817-481-9510 130

I hereby acknowledge receipt of the above described materials were received from the generator listed above and delivered to the disposal facility listed below without incident.

[Signature] 7/27/99
Driver Signature Shipment Date

[Signature] 7/27/99
Driver Signature Delivery Date

DISPOSAL FACILITY

SITE NAME: Westside Recycling and Disposal Facility
ADDRESS: 12280 U.S. Hwy 80 W., Aledo, Tx. 76008
I hereby acknowledge receipt of the above described materials.

PHONE NUMBER: 817-244-3500

Name of Authorized Agent (Print)

Signature

Receipt Date

*D-Drum	C-Carton	B-Bag	P-Pounds	Y-Yards	O-Other
White-Original	Canary-Disposer Retain		Pink-Transporter Retain		Gold-Generator Retain



664 227

27458

787709

North Texas Industrial Service Center
P.O. Box 719
Lewisville, TX 75067
(972) 316-2298 / FAX (972) 316-2298

NON-HAZARDOUS MANIFEST

GENERATOR: Air Force Base Conversion Agency
ADDRESS: Carswell Offsite Weapons Area
CITY/ST: Ft. Worth, TX 76114-
PHONE: (877) 386-5429

ID#: 65004
LOCATION: SAME

Description of Waste Materials	Approval Number	Quantity	Units
Contaminated soil	WS-9131	20	Yards

I hereby certify that the above described materials are not hazardous wastes as defined by 40 CFR Part 261 and does not contain free liquids as defined by 40 CFR Part 260.10 or any applicable state law. Have been fully and accurately described, classified and packaged, and are in proper condition for transportation according to applicable regulations.

Generator Authorized Agent Name (Print)

Signature: *[Signature]* Delivery Date

TRANSPORTER

TRANSPORTER NAME: Unified Services of Texas, Inc
ADDRESS: 2110 Greenbriar Drive
CITY/ST.: Southlake, Tx. 76092

DRIVER NAME (Print): *[Signature]*
TRUCK NUMBER: *[Signature]*
PHONE#: 817-481-9510

I hereby acknowledge receipt of the above described materials were received from the generator listed above and delivered to the disposal facility listed below without incident.

Driver Signature: *[Signature]* Shipment Date

Driver Signature: *[Signature]* Delivery Date: *[Signature]*

DISPOSAL FACILITY

SITE NAME: Westside Recycling and Disposal Facility
ADDRESS: 12280 U.S. Hwy 80 W., Aledo, Tx. 76008

PHONE NUMBER: 817-244-3500

I hereby acknowledge receipt of the above described materials.

Name of Authorized Agent (Print)

Signature: _____ Receipt Date: *[Signature]*

D-Drum	C-Carton	B-Bag	P-Pounds	Y-Yards	O-Other
White-Original	Canary-Disposer Retain		Pink-Transporter Retain		Gold-Generator Retain



27459

664 228

North Texas Industrial Service Center
P.O. Box 719
Lewisville, TX 75067
(972) 316-2296 / FAX (972) 316-2298

657139

NON-HAZARDOUS MANIFEST

GENERATOR: Air Force Base Conversion Agency
ADDRESS: Carswell Offsite Weapons Area
CITY/ST: Ft. Worth, TX 76114-
PHONE: (877) 388-5429

ID#: 65004
LOCATION: SAME

Description of Waste Materials	Approval Number	Quantity	Units
Contaminated soil	WS-9131	_____	Yards

I hereby certify that the above described materials are not hazardous wastes as defined by 40 CFR Part 261 and does not contain free liquids as defined by 40 CFR Part 260.10 or any applicable state law. Have been fully and accurately described, classified and packaged, and are in proper condition for transportation according to applicable regulations.

Generator Authorized Agent Name (Print) _____ Signature [Signature] Delivery Date _____

TRANSPORTER

TRANSPORTER NAME: Unified Services of Texas, Inc
ADDRESS: 2110 Greenbriar Drive
CITY/ST.: Southlake, Tx. 76092

DRIVER NAME(Print): [Signature]
TRUCK NUMBER: [Signature]
PHONE#: 817-481-9510

I hereby acknowledge receipt of the above described materials were received from the generator listed above and delivered to the disposal facility listed below without incident.

Driver Signature [Signature] Shipment Date 7/27/99 Driver Signature [Signature] Delivery Date 7/27/99

DISPOSAL FACILITY

SITE NAME: Westside Recycling and Disposal Facility
ADDRESS: 12280 U.S. Hwy 80 W., Aledo, Tx. 76008

PHONE NUMBER: 817-244-3500

I hereby acknowledge receipt of the above described materials.

Name of Authorized Agent (Print) _____ Signature _____ Receipt Date _____

*D-Drum	C-Carton	B-Bag	P-Pounds	Y-Yards	O-Other
White-Original	Canary-Disposer Retain		Pink-Transporter Retain		Gold-Generator Retain



664 229
 North Texas Industrial Service Center
 P.O. Box 719
 Lewisville, TX 75067
 (972) 316-2298 / FAX (972) 316-2298

27460

4/18/17

NON-HAZARDOUS MANIFEST

GENERATOR: **Air Force Base Conversion Agency** ID#: **85004**
 ADDRESS: **Carswell Offsite Weapons Area** LOCATION: **SAME**
 CITY/ST: **Ft. Worth, TX 76114-**
 PHONE: **(877) 388-5429**

Description of Waste Materials	Approval Number	Quantity	Units
Contaminated soil	WS-9131	<u>221</u>	Yards

I hereby certify that the above described materials are not hazardous wastes as defined by 40 CFR Part 261 and does not contain free liquids as defined by 40 CFR Part 260.10 or any applicable state law. Have been fully and accurately described, classified and packaged, and are in proper condition for transportation according to applicable regulations.

Generator/Authorized Agent Name (Print) _____ Signature [Signature] Delivery Date 4/18/17

TRANSPORTER

TRANSPORTER NAME: **Unified Services of Texas, Inc** DRIVER NAME (Print): L. AVAL
 ADDRESS: **2110 Greenbriar Drive** TRUCK NUMBER: 1287
 CITY/ST.: **Southlake, Tx. 76092** PHONE#: **817-481-9510**

I hereby acknowledge receipt of the above described materials were received from the generator listed above and delivered to the disposal facility listed below without incident.

Driver Signature [Signature] Shipment Date 4-18-17 Driver Signature [Signature] Delivery Date 4-18-17

DISPOSAL FACILITY

SITE NAME: **Westside Recycling and Disposal Facility** PHONE NUMBER: **817-244-3500**
 ADDRESS: **12280 U.S. Hwy 80 W., Aledo, Tx. 76008**

I hereby acknowledge receipt of the above described materials.

Name of Authorized Agent (Print) _____ Signature _____ Receipt Date _____

D-Drum	C-Carton	B-Bag	P-Pounds	Y-Yards	O-Other
White-Original	Canary-Disposer Retain		Pink-Transporter Retain		Gold-Generator Retain



27461

664 230

North Texas Industrial Service Center
P.O. Box 719
Lewisville, TX 75067
(972) 316-2298 / FAX (972) 316-2298

596400

NON-HAZARDOUS MANIFEST

GENERATOR: Air Force Base Conversion Agency
ADDRESS: Carswell Offsite Weapons Area
CITY/ST: Ft. Worth, TX 78114-
PHONE: (877) 388-5429

ID#: 65004
LOCATION: SAME

Description of Waste Materials	Approval Number	Quantity	Units
Contaminated soil	WS-9131	<u>20</u>	Yards

I hereby certify that the above described materials are not hazardous wastes as defined by 40 CFR Part 261 and does not contain free liquids as defined by 40 CFR Part 260.10 or any applicable state law. Have been fully and accurately described, classified and packaged, and are in proper condition for transportation according to applicable regulations.

ALVIN D. BROWN
Generator Authorized Agent Name (Print)

Alvin D. Brown 7/27/97
Signature Delivery Date

TRANSPORTER

TRANSPORTER NAME: Unified Services of Texas, Inc
ADDRESS: 2110 Greenbriar Drive
CITY/ST.: Southlake, Tx. 76092

DRIVER NAME(Print): Julius
TRUCK NUMBER: 12V121110 641271
PHONE#: 817-481-9510

I hereby acknowledge receipt of the above described materials were received from the generator listed above and delivered to the disposal facility listed below without incident.

[Signature] 7/27/97
Driver Signature Shipment Date

Julius 7/27/97
Driver Signature Delivery Date

DISPOSAL FACILITY

SITE NAME: Westside Recycling and Disposal Facility
ADDRESS: 12280 U.S. Hwy 80 W., Aledo, Tx. 76008

PHONE NUMBER: 817-244-3500

I hereby acknowledge receipt of the above described materials.

Name of Authorized Agent (Print)

Signature

Receipt Date

D-Drum	C-Carton	B-Bag	P-Pounds	Y-Yards	O-Other
White-Original	Canary-Disposer Retain		Pink-Transporter Retain		Gold-Generator Retain



664 231

27462

North Texas Industrial Service Center
P.O. Box 719
Lewisville, TX 75067
(972) 316-2296 / FAX (972) 316-2298

1418148

NON-HAZARDOUS MANIFEST

GENERATOR: Air Force Base Conversion Agency
ADDRESS: Carswell Offsite Weapons Area
CITY/ST: Ft. Worth, TX 76114-
PHONE: (877) 386-5429

ID#: 65004
LOCATION: SAME

Description of Waste Materials	Approval Number	Quantity	Units
Contaminated soil	WS-8131	<u>2</u>	Yards

I hereby certify that the above described materials are not hazardous wastes as defined by 40 CFR Part 261 and does not contain free liquids as defined by 40 CFR Part 260.10 or any applicable state law. Have been fully and accurately described, classified and packaged, and are in proper condition for transportation according to applicable regulations.

Alvin D. Brown
Generator Authorized Agent Name (Print)

Alvin D. Brown 7/27/99
Signature - Delivery Date

TRANSPORTER

TRANSPORTER NAME: Unified Services of Texas, Inc
ADDRESS: 2110 Greenbriar Drive
CITY/ST.: Southlake, Tx. 76092

DRIVER NAME(Print): Alvin D. Brown
TRUCK NUMBER: 1107
PHONE#: 817-481-9510

I hereby acknowledge receipt of the above described materials were received from the generator listed above and delivered to the disposal facility listed below without incident.

Alvin D. Brown 7/27/99
Driver Signature Shipment Date

Alvin D. Brown 7/27/99
Driver Signature Delivery Date

DISPOSAL FACILITY

SITE NAME: Westside Recycling and Disposal Facility
ADDRESS: 12280 U.S. Hwy 80 W., Aledo, Tx. 76008

PHONE NUMBER: 817-244-3500

I hereby acknowledge receipt of the above described materials.

Name of Authorized Agent (Print)

Signature

Receipt Date

*D-Drum	C-Carton	B-Bag	P-Pounds	Y-Yards	O-Other
White-Original	Canary-Disposer Retain		Pink-Transporter Retain		Gold-Generator Retain



27463

664 232

North Texas Industrial Service Center
P.O. Box 719
Lewisville, TX 75067
(972) 316-2288 / FAX (972) 316-2288

787861

NON-HAZARDOUS MANIFEST

GENERATOR: **Air Force Base Conversion Agency**
ADDRESS: **Carswell Offsite Weapons Area**
CITY/ST: **Ft. Worth, TX 76114-**
PHONE: **(877) 388-5429**

ID#: **65004**
LOCATION: **SAME**

Description of Waste Materials	Approval Number	Quantity	Units
Contaminated soil	WS-9131	<u>20</u>	Yards

I hereby certify that the above described materials are not hazardous wastes as defined by 40 CFR Part 261 and does not contain free liquids as defined by 40 CFR Part 260.10 or any applicable state law. Have been fully and accurately described, classified and packaged, and are in proper condition for transportation according to applicable regulations.

Generator Authorized Agent Name (Print)

Signature [Signature] Delivery Date 7/27/98

TRANSPORTER

TRANSPORTER NAME: **Unified Services of Texas, Inc**
ADDRESS: **2110 Greenbriar Drive**
CITY/ST.: **Southlake, Tx. 76092**

DRIVER NAME (Print): ARMANDO GARCIA
TRUCK NUMBER: 929
PHONE#: **817-481-9510**

I hereby acknowledge receipt of the above described materials were received from the generator listed above and delivered to the disposal facility listed below without incident.

Driver Signature [Signature] Shipment Date 7/27/98

Driver Signature [Signature] Delivery Date 7/27/98

DISPOSAL FACILITY

SITE NAME: **Westside Recycling and Disposal Facility**
ADDRESS: **12280 U.S. Hwy 80 W., Aledo, Tx. 76008**

PHONE NUMBER: **817-244-3500**

I hereby acknowledge receipt of the above described materials.

Name of Authorized Agent (Print)

Signature

Receipt Date 7/27/98

*D-Drum	C-Canion	B-Bag	P-Pounds	Y-Yards	O-Other
*White-Original	Canary-Disposer Retain		Pink-Transporter Retain		Gold-Generator Retain



661 233

27464

North Texas Industrial Service Center
P.O. Box 719
Lewisville, TX 75067
(972) 316-2298 / FAX (972) 316-2298

595941

NON-HAZARDOUS MANIFEST

GENERATOR: Air Force Base Conversion Agency
ADDRESS: Carswell Offsite Weapons Area
CITY/ST: Ft. Worth, TX 76114
PHONE: (877) 388-5429

ID#: 65004
LOCATION: SAME

Description of Waste Materials	Approval Number	Quantity	Units
Contaminated soil	WS-9131	20	Yards

I hereby certify that the above described materials are not hazardous wastes as defined by 40 CFR Part 261 and does not contain free liquids as defined by 40 CFR Part 260.10 or any applicable state law. Have been fully and accurately described, classified and packaged, and are in proper condition for transportation according to applicable regulations.

Amory D. ...
Generator/Authorized Agent Name (Print)

Alvin J. ... 7/27/99
Signature Delivery Date

TRANSPORTER

TRANSPORTER NAME: Unified Services of Texas, Inc
ADDRESS: 2110 Greenbriar Drive
CITY/ST.: Southlake, Tx. 76092

DRIVER NAME(Print): Liz ...
TRUCK NUMBER: 7H 730
PHONE#: 817-481-9510

I hereby acknowledge receipt of the above described materials were received from the generator listed above and delivered to the disposal facility listed below without incident.

Liz ... 7/27/99
Driver Signature Shipment Date

Liz ... 7/27/99
Driver Signature Delivery Date

DISPOSAL FACILITY

SITE NAME: Westside Recycling and Disposal Facility
ADDRESS: 12280 U.S. Hwy 80 W., Aledo, Tx. 76008

PHONE NUMBER: 817-244-3500

I hereby acknowledge receipt of the above described materials.

Name of Authorized Agent (Print)

Signature Receipt Date

D-Drum	G-Carton	B-Bag	P-Pounds	Y-Yards	O-Other
White-Original	Canary-Disposer Retain		Pink-Transporter Retain		Gold-Generator Retain



27465

North Texas Industrial Service Center
P.O. Box 719
Lewisville, TX 75067
(972) 316-2296 / FAX (972) 316-2298

661 234

787860

NON-HAZARDOUS MANIFEST

GENERATOR: Air Force Base Conversion Agency
ADDRESS: Carswell Offsite Weapons Area
CITY/ST: Ft. Worth, TX 76114-
PHONE: (877) 386-5429

ID#: 85004
LOCATION: SAME

Description of Waste Materials	Approval Number	Quantity	Units
Contaminated soil	WS-9131	20	Yards

I hereby certify that the above described materials are not hazardous wastes as defined by 40 CFR Part 261 and does not contain free liquids as defined by 40 CFR Part 260.10 or any applicable state law. Have been fully and accurately described, classified and packaged, and are in proper condition for transportation according to applicable regulations.

Generator Authorized Agent Name (Print)	Signature	Delivery Date
<i>[Signature]</i>	<i>[Signature]</i>	<i>[Date]</i>

TRANSPORTER

TRANSPORTER NAME: Unified Services of Texas, Inc	DRIVER NAME (Print): <i>[Signature]</i>
ADDRESS: 2110 Greenbriar Drive	TRUCK NUMBER: <i>[Number]</i>
CITY/ST.: Southlake, Tx. 76092	PHONE#: 817-481-9510

I hereby acknowledge receipt of the above described materials were received from the generator listed above and delivered to the disposal facility listed below without incident.

Driver Signature	Shipment Date	Driver Signature	Delivery Date
<i>[Signature]</i>	<i>[Date]</i>	<i>[Signature]</i>	<i>[Date]</i>

DISPOSAL FACILITY

SITE NAME: Westside Recycling and Disposal Facility	PHONE NUMBER: 817-244-3500
ADDRESS: 12280 U.S. Hwy 80 W., Aledo, Tx. 76008	

I hereby acknowledge receipt of the above described materials.

Name of Authorized Agent (Print)	Signature	Receipt Date

*D-Drum	C-Carton	B-Bag	P-Pounds	Y-Yards	O-Other
White-Original	Canary-Disposer Retain		Pink-Transporter Retain		Gold-Generator Retain



664 236

27467

North Texas Industrial Service Center
P.O. Box 719
Lewisville, TX 75067
(972) 316-2296 / FAX (972) 316-2298

NON-HAZARDOUS MANIFEST

GENERATOR: **Air Force Base Conversion Agency**
ADDRESS: **Carswell Offsite Weapons Area**
CITY/ST: **Ft. Worth, TX 76114-**
PHONE: **(877) 388-5429**

ID#: **85004**
LOCATION: **SAME**

Description of Waste Materials	Approval Number	Quantity	Units
Contaminated soil	WS-9131	<u>211</u>	Yards

I hereby certify that the above described materials are not hazardous wastes as defined by 40 CFR Part 261 and does not contain free liquids as defined by 40 CFR Part 260.10 or any applicable state law. Have been fully and accurately described, classified and packaged, and are in proper condition for transportation according to applicable regulations.

Allen D. Johnson
Generator Authorized Agent Name (Print)

Allen D. Johnson 7/1-7/97
Signature Delivery Date

TRANSPORTER

TRANSPORTER NAME: **Unified Services of Texas, Inc**
ADDRESS: **2110 Greenbriar Drive**
CITY/ST.: **Southlake, Tx. 76092**

DRIVER NAME(Print): _____
TRUCK NUMBER: _____
PHONE#: **817-481-9510**

I hereby acknowledge receipt of the above described materials were received from the generator listed above and delivered to the disposal facility listed below without incident.

Driver Signature [Signature] Shipment Date [Date]

Driver Signature [Signature] Delivery Date 7/1/97

DISPOSAL FACILITY

SITE NAME: **Westside Recycling and Disposal Facility**
ADDRESS: **12280 U.S. Hwy 80 W., Alado, Tx. 76008**
I hereby acknowledge receipt of the above described materials.

PHONE NUMBER: **817-244-3600**

Name of Authorized Agent (Print)

Signature Receipt Date

*D-Drum	C-Carton	B-Bag	P-Pounds	Y-Yards	O-Other
White-Original	Canary-Disposer Retain		Pink-Transporter Retain		Gold-Generator Retain



664 237

27468

North Texas Industrial Service Center
P.O. Box 719
Lewisville, TX 75067
(972) 316-2298 / FAX (972) 316-2298

776953

NON-HAZARDOUS MANIFEST

GENERATOR: Air Force Base Conversion Agency
ADDRESS: Carswell Offsite Weapons Area
CITY/ST: Ft. Worth, TX 76114-
PHONE: (877) 388-6429

ID#: 65004
LOCATION: SAME

Description of Waste Materials	Approval Number	Quantity	Units
Contaminated soil	WS-9131	2.5	Yards

I hereby certify that the above described materials are not hazardous wastes as defined by 40 CFR Part 261 and does not contain free liquids as defined by 40 CFR Part 260.10 or any applicable state law. Have been fully and accurately described, classified and packaged, and are in proper condition for transportation according to applicable regulations.

[Signature]
Generator Authorized Agent Name (Print)

[Signature] 7/12/77
Signature Delivery Date

TRANSPORTER

TRANSPORTER NAME: Unified Services of Texas, Inc
ADDRESS: 2110 Greenbriar Drive
CITY/ST.: Southlake, Tx. 76092

DRIVER NAME (Print): [Signature]
TRUCK NUMBER: [Signature]
PHONE#: 817-481-9510

I hereby acknowledge receipt of the above described materials were received from the generator listed above and delivered to the disposal facility listed below without incident.

[Signature] 7/12/77
Driver Signature Shipment Date

[Signature] 7/12/77
Driver Signature Delivery Date

DISPOSAL FACILITY

SITE NAME: Westside Recycling and Disposal Facility
ADDRESS: 12280 U.S. Hwy 80 W., Aledo, Tx. 76008

PHONE NUMBER: 817-244-3500

I hereby acknowledge receipt of the above described materials.

[Signature]
Name of Authorized Agent (Print)

[Signature] 7/12/77
Signature Receipt Date

*D-Drum	C-Carton	B-Bag	P-Pounds	Y-Yards	O-Other
White-Original	Canary-Disposer Retain		Pink-Transporter Retain		Gold-Generator Retain



27469

664 238

North Texas Industrial Service Center
P.O. Box 719
Lewisville, TX 75067
(972) 316-2296 / FAX (972) 316-2298

59574

NON-HAZARDOUS MANIFEST

GENERATOR: Air Force Base Conversion Agency
ADDRESS: Carswell Offsite Weapons Area
CITY/ST: Ft. Worth, TX 76114-
PHONE: (877) 386-6429

ID#: 66004
LOCATION: SAME

Description of Waste Materials	Approval Number	Quantity	Units
Contaminated soil	WS-9131	20	Yards

I hereby certify that the above described materials are not hazardous wastes as defined by 40 CFR Part 261 and does not contain free liquids as defined by 40 CFR Part 260.10 or any applicable state law. Have been fully and accurately described, classified and packaged, and are in proper condition for transportation according to applicable regulations.

ALVIN D. BRIDGEMAN
Generator Authorized Agent Name (Print)

[Signature] 7/27/99
Signature Delivery Date

TRANSPORTER

TRANSPORTER NAME: Unified Services of Texas, Inc
ADDRESS: 2110 Greenbriar Drive
CITY/ST.: Southlake, Tx. 76092

DRIVER NAME(Print): [Signature]
TRUCK NUMBER: [Signature]
PHONE#: 817-481-9510

I hereby acknowledge receipt of the above described materials were received from the generator listed above and delivered to the disposal facility listed below without incident.

[Signature] 7/27/99
Driver Signature Shipment Date

[Signature] 7/27/99
Driver Signature Delivery Date

DISPOSAL FACILITY

SITE NAME: Westside Recycling and Disposal Facility
ADDRESS: 12280 U.S. Hwy 80 W., Aledo, Tx. 76008

PHONE NUMBER: 817-244-3500

I hereby acknowledge receipt of the above described materials.

Name of Authorized Agent (Print)

Signature Receipt Date

*D-Drum	G-Carton	B-Bag	P-Pounds	Y-Yards	O-Other
White-Original	Canary-Disposer Retain		Pink-Transporter Retain		Gold-Generator Retain



664 239

27470

North Texas Industrial Service Center
P.O. Box 719
Lewisville, TX 75067
(972) 316-2296 / FAX (972) 316-2298

776155

NON-HAZARDOUS MANIFEST

GENERATOR: Air Force Base Conversion Agency
ADDRESS: Carswell Offsite Weapons Area
CITY/ST: Ft. Worth, TX 76114-
PHONE: (877) 386-6429

ID#: 66004
LOCATION: SAME

Description of Waste Materials	Approval Number	Quantity	Units
Contaminated soil	WS-9131	10	Yards

I hereby certify that the above described materials are not hazardous wastes as defined by 40 CFR Part 261 and does not contain free liquids as defined by 40 CFR Part 260.10 or any applicable state law. Have been fully and accurately described, classified and packaged, and are in proper condition for transportation according to applicable regulations.

ANNAL D. BROWN
Generator Authorized Agent Name (Print)

[Signature] Delivery Date 1/1/99

TRANSPORTER

TRANSPORTER NAME: Unified Services of Texas, Inc
ADDRESS: 2110 Greenbriar Drive
CITY/ST.: Southlake, Tx. 76092

DRIVER NAME(Print): [Signature]
TRUCK NUMBER: 1107
PHONE#: 817-481-9510

I hereby acknowledge receipt of the above described materials were received from the generator listed above and delivered to the disposal facility listed below without incident.

[Signature] 2899
Driver Signature Shipment Date

[Signature] Delivery Date 1/1

DISPOSAL FACILITY

SITE NAME: Westside Recycling and Disposal Facility
ADDRESS: 12280 U.S. Hwy 80 W., Aledo, Tx. 76008

PHONE NUMBER: 817-244-3500

I hereby acknowledge receipt of the above described materials.

Name of Authorized Agent (Print)

Signature Receipt Date 1/1

*D-Drum	C-Carton	B-Bag	P-Pounds	Y-Yards	O-Other
White-Original	Canary-Disposer Retain		Pink-Transporter Retain		Gold-Generator Retain



27471

4/15/19 664 210

North Texas Industrial Service Center
P.O. Box 719
Lewisville, TX 75067
(972) 316-2296 / FAX (972) 316-2298

NON-HAZARDOUS MANIFEST

GENERATOR: Air Force Base Conversion Agency
ADDRESS: Carswell Offsite Weapons Area
CITY/ST: Ft. Worth, TX 76114-
PHONE: (877) 386-5429

ID#: 65004
LOCATION: SAME

Description of Waste Materials	Approval Number	Quantity	Units
Contaminated soil	WS-9131	22	Yards

I hereby certify that the above described materials are not hazardous wastes as defined by 40 CFR Part 261 and does not contain free liquids as defined by 40 CFR Part 260.10 or any applicable state law. Have been fully and accurately described, classified and packaged, and are in proper condition for transportation according to applicable regulations.

ALVIN D. BROWN
Generator Authorized Agent Name (Print)

Alvin D. Brown 7/27/99
Signature Delivery Date

TRANSPORTER

TRANSPORTER NAME: Unified Services of Texas, Inc
ADDRESS: 2110 Greenbriar Drive
CITY/ST.: Southlake, Tx 76092

DRIVER NAME(Print): _____
TRUCK NUMBER: _____
PHONE#: 817-481-9510

I hereby acknowledge receipt of the above described materials were received from the generator listed above and delivered to the disposal facility listed below without incident.

[Signature] 7/27/99
Driver Signature Shipment Date

[Signature] 7/27/99
Driver Signature Delivery Date

DISPOSAL FACILITY

SITE NAME: Westside Recycling and Disposal Facility
ADDRESS: 12280 U.S. Hwy 80 W., Aledo, Tx. 76008

PHONE NUMBER: 817-244-3500

I hereby acknowledge receipt of the above described materials.

Name of Authorized Agent (Print)

Signature Receipt Date

*D-Drum	C-Carton	B-Bag	P-Pounds	Y-Yards	O-Other
White-Original	Canary-Disposer Retain		Pink-Transporter Retain		Gold-Generator Retain



664 241

27472

North Texas Industrial Service Center
P.O. Box 719
Lewisville, TX 75067
(972) 316-2298 / FAX (972) 316-2298

78 786 3

NON-HAZARDOUS MANIFEST

GENERATOR: Air Force Base Conversion Agency
ADDRESS: Carswell Offsite Weapons Area
CITY/ST: Ft. Worth, TX 76114-
PHONE: (877) 386-5429

ID#: 65004
LOCATION: SAME

Description of Waste Materials	Approval Number	Quantity	Units
Contaminated soil	WS-9131	100	Yards

I hereby certify that the above described materials are not hazardous wastes as defined by 40 CFR Part 261 and does not contain free liquids as defined by 40 CFR Part 260.10 or any applicable state law. Have been fully and accurately described, classified and packaged, and are in proper condition for transportation according to applicable regulations.

[Signature]
Generator Authorized Agent Name (Print)

[Signature] 7/6/99
Signature Delivery Date

TRANSPORTER

TRANSPORTER NAME: Unified Services of Texas, Inc
ADDRESS: 2110 Greenbriar Drive
CITY/ST.: Southlake, Tx. 76092

DRIVER NAME(Print): ARMANDO GONZALEZ
TRUCK NUMBER: 975
PHONE#: 817-481-9510

I hereby acknowledge receipt of the above described materials were received from the generator listed above and delivered to the disposal facility listed below without incident.

[Signature] 7/27/99
Driver Signature Shipment Date

[Signature] 7/27/99
Driver Signature Delivery Date

DISPOSAL FACILITY

SITE NAME: Westside Recycling and Disposal Facility
ADDRESS: 12280 U.S. Hwy 80 W., Aledo, Tx. 76008

PHONE NUMBER: 817-244-3500

I hereby acknowledge receipt of the above described materials.

Name of Authorized Agent (Print)

[Signature] 7/27/99
Signature Receipt Date

*D-Drum	C-Carton	B-Bag	P-Pounds	Y-Yards	O-Other
White-Original	Canary-Disposer Retain		Pink-Transporter Retain		Gold-Generator Retain



27473

664 242

North Texas Industrial Service Center
P.O. Box 719
Lewisville, TX 75067
(972) 316-2298 / FAX (972) 316-2298

4418157

NON-HAZARDOUS MANIFEST

GENERATOR: **Air Force Base Conversion Agency**
ADDRESS: **Carswell Offsite Weapons Area**
CITY/ST: **Ft. Worth, TX 76114-**
PHONE: **(877) 386-5420**

ID#: **65004**
LOCATION: **SAME**

Description of Waste Materials	Approval Number	Quantity	Units
Contaminated soil	WS-0131	<u>20</u>	Yards

I hereby certify that the above described materials are not hazardous wastes as defined by 40 CFR Part 261 and does not contain free liquids as defined by 40 CFR Part 260.10 or any applicable state law. Have been fully and accurately described, classified and packaged, and are in proper condition for transportation according to applicable regulations.

[Signature]
Generator Authorized Agent Name (Print)

[Signature] [Date]
Signature Delivery Date

TRANSPORTER

TRANSPORTER NAME: **Unified Services of Texas, Inc**
ADDRESS: **2110 Greenbriar Drive**
CITY/ST.: **Southlake, Tx. 76092**

DRIVER NAME (Print): _____
TRUCK NUMBER: _____
PHONE#: **817-481-9510**

I hereby acknowledge receipt of the above described materials were received from the generator listed above and delivered to the disposal facility listed below without incident.

[Signature] [Date]
Driver Signature Shipment Date

[Signature] [Date]
Driver Signature Delivery Date

DISPOSAL FACILITY

SITE NAME: **Westside Recycling and Disposal Facility**
ADDRESS: **12280 U.S. Hwy 80 W., Aledo, Tx. 76008**
I hereby acknowledge receipt of the above described materials.

PHONE NUMBER: **817-244-3500**

Name of Authorized Agent (Print)

Signature Receipt Date

*D-Drum	C-Carton	B-Bag	P-Pounds	Y-Yards	O-Other
White-Original	Canary-Disposer Retain		Pink-Transporter Retain		Gold-Generator Retain



664 243

27474

North Texas Industrial Service Center
P.O. Box 719
Lewisville, TX 75067
(972) 316-2296 / FAX (972) 316-2298

913-12

NON-HAZARDOUS MANIFEST

GENERATOR: Air Force Base Conversion Agency
ADDRESS: Carswell Offsite Weapons Area
CITY/ST: Ft. Worth, TX 76114-
PHONE: (877) 386-6429

ID#: 65004
LOCATION: SAME

Description of Waste Materials	Approval Number	Quantity	Units
Contaminated soil	WS-9131	<u>20</u>	Yards

I hereby certify that the above described materials are not hazardous wastes as defined by 40 CFR Part 261 and does not contain free liquids as defined by 40 CFR Part 260.10 or any applicable state law. Have been fully and accurately described, classified and packaged, and are in proper condition for transportation according to applicable regulations.

M. D. Brown
Generator Authorized Agent Name (Print)

[Signature] 7/12/99
Signature Delivery Date

TRANSPORTER

TRANSPORTER NAME: Unified Services of Texas, Inc
ADDRESS: 2110 Greenbriar Drive
CITY/ST.: Southlake, Tx. 76092

DRIVER NAME(Print): _____
TRUCK NUMBER: _____
PHONE#: 817-481-9510

I hereby acknowledge receipt of the above described materials were received from the generator listed above and delivered to the disposal facility listed below without incident.

[Signature] 7/12/99
Driver Signature Shipment Date

[Signature] 7/12/99
Driver Signature Delivery Date

DISPOSAL FACILITY

SITE NAME: Westside Recycling and Disposal Facility
ADDRESS: 12280 U.S. Hwy 80 W., Aledo, Tx. 76008
I hereby acknowledge receipt of the above described materials.

PHONE NUMBER: 817-244-3500

Name of Authorized Agent (Print)

Signature

7/12/99
Receipt Date

D-Drum	C-Carton	B-Bag	P-Pounds	Y-Yards	O-Other
White-Original	Canary-Disposer Retain		Pink-Transporter Retain		Gold-Generator Retain



27475

664 244

North Texas Industrial Service Center
P.O. Box 719
Lewisville, TX 75067
(972) 318-2298 / FAX (972) 318-2298

NON-HAZARDOUS MANIFEST

GENERATOR: Air Force Base Conversion Agency
ADDRESS: Carswell Offsite Weapons Area
CITY/ST: Ft. Worth, TX 76114-
PHONE: (877) 386-5429

ID#: 65004
LOCATION: SAME

Description of Waste Materials	Approval Number	Quantity	Units
Contaminated soil	WS-9131	<u>20</u>	Yards

I hereby certify that the above described materials are not hazardous wastes as defined by 40 CFR Part 261 and does not contain free liquids as defined by 40 CFR Part 260.10 or any applicable state law. Have been fully and accurately described, classified and packaged, and are in proper condition for transportation according to applicable regulations.

ALVIN D BRIDGES
Generator Authorized Agent Name (Print)

[Signature] 7/2/09
Signature Delivery Date

TRANSPORTER

TRANSPORTER NAME: Unified Services of Texas, Inc
ADDRESS: 2110 Greenbriar Drive
CITY/ST.: Southlake, Tx. 76092

DRIVER NAME(Print): _____
TRUCK NUMBER: _____
PHONE#: 817-481-8510

I hereby acknowledge receipt of the above described materials were received from the generator listed above and delivered to the disposal facility listed below without incident.

Driver Signature Shipment Date

Driver Signature Delivery Date

DISPOSAL FACILITY

SITE NAME: Westside Recycling and Disposal Facility
ADDRESS: 12280 U.S. Hwy 80 W., Aledo, Tx. 76008

PHONE NUMBER: 817-244-3600

I hereby acknowledge receipt of the above described materials.

Name of Authorized Agent (Print)

Signature Receipt Date

*D-Drum	C-Carton	B-Bag	P-Pounds	Y-Yards	O-Other
*White-Original	Canary-Disposer Retain		Pink-Transporter Retain		Gold-Generator Retain



27477

664 246

776955

North Texas Industrial Service Center
P.O. Box 719
Lewisville, TX 75067
(972) 316-2296 / FAX (972) 316-2298

NON-HAZARDOUS MANIFEST

GENERATOR: **Air Force Base Conversion Agency**
ADDRESS: **Carswell Offsite Weapons Area**
CITY/ST: **Ft. Worth, TX 76114-**
PHONE: **(877) 386-5429**

ID#: **66004**
LOCATION: **SAME**

Description of Waste Materials	Approval Number	Quantity	Units
Contaminated soil	WS-9131	<u>20</u>	Yards

I hereby certify that the above described materials are not hazardous wastes as defined by 40 CFR Part 261 and does not contain free liquids as defined by 40 CFR Part 260.10 or any applicable state law. Have been fully and accurately described, classified and packaged, and are in proper condition for transportation according to applicable regulations.

William D. Brown
Generator Authorized Agent Name (Print)

[Signature] 7/27/10
Signature Delivery Date

TRANSPORTER

TRANSPORTER NAME: **Unified Services of Texas, Inc**
ADDRESS: **2110 Greenbriar Drive**
CITY/ST.: **Southlake, Tx. 76092**

DRIVER NAME(Print): [Signature]
TRUCK NUMBER: 1127
PHONE#: **817-481-8510**

I hereby acknowledge receipt of the above described materials were received from the generator listed above and delivered to the disposal facility listed below without incident.

[Signature] 7/27/10
Driver Signature Shipment Date

[Signature] 7/27/10
Driver Signature Delivery Date

DISPOSAL FACILITY

SITE NAME: **Westside Recycling and Disposal Facility**
ADDRESS: **12280 U.S. Hwy 80 W., Aledo, Tx. 76008**

PHONE NUMBER: **817-244-3500**

I hereby acknowledge receipt of the above described materials.

Name of Authorized Agent (Print)

Signature Receipt Date

*D-Drum	C-Carton	B-Bag	P-Pounds	Y-Yards	O-Other
White-Original	Canary-Disposer Retain		Pink-Transporter Retain		Gold-Generator Retain



664 247

27478

North Texas Industrial Service Cent r
P.O. Box 719
Lewisville, TX 75067
(972) 316-2296 / FAX (972) 316-2298

771456

NON-HAZARDOUS MANIFEST

GENERATOR: Air Force Base Conversion Agency
ADDRESS: Carswell Offsite Weapons Area
CITY/ST: Ft. Worth, TX 76114-
PHONE: (877) 388-6429

ID#: 65004
LOCATION: SAME

Description of Waste Materials	Approval Number	Quantity	Units
Contaminated soil	WS-8131	<u>20</u>	Yards

I hereby certify that the above described materials are not hazardous wastes as defined by 40 CFR Part 261 and does not contain free liquids as defined by 40 CFR Part 260.10 or any applicable state law. Have been fully and accurately described, classified and packaged, and are in proper condition for transportation according to applicable regulations.

ALVIN D. PERKINS
Generator Authorized Agent Name (Print)

[Signature] 7/2/2009
Signature Delivery Date

TRANSPORTER

TRANSPORTER NAME: Unified Services of Texas, Inc
ADDRESS: 2110 Greenbriar Drive
CITY/ST.: Southlake, Tx. 76092

DRIVER NAME(Print): WYVIE
TRUCK NUMBER: 417
PHONE#: 817-481-9510

I hereby acknowledge receipt of the above described materials were received from the generator listed above and delivered to the disposal facility listed below without incident.

[Signature] 7/2/2009
Driver Signature Shipment Date

[Signature] 7/2/2009
Driver Signature Delivery Date

DISPOSAL FACILITY

SITE NAME: Westside Recycling and Disposal Facility
ADDRESS: 12280 U.S. Hwy 80 W., Aledo, Tx. 76008
I hereby acknowledge receipt of the above described materials.

PHONE NUMBER: 817-244-3500

Name of Authorized Agent (Print)

Signature

1/1
Receipt Date

*D-Drum	C-Carton	B-Bag	P-Pounds	Y-Yards	O-Other
White-Original	Canary-Disposer Retain		Pink-Transporter Retain		Gold-Generator Retain



27479

664 248

North Texas Industrial Service Center
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Lewisville, TX 75067
(972) 316-2296 / FAX (972) 316-2298

NON-HAZARDOUS MANIFEST

GENERATOR: **Air Force Base Conversion Agency**
ADDRESS: **Carswell Offsite Weapons Area**
CITY/ST: **Ft. Worth, TX 76114-**
PHONE: **(877) 386-5429**

ID#: **65004**
LOCATION: **SAME**

Description of Waste Materials	Approval Number	Quantity	Units
Contaminated soil	WG-9131	<u>20</u>	Yards

I hereby certify that the above described materials are not hazardous wastes as defined by 40 CFR Part 261 and does not contain free liquids as defined by 40 CFR Part 260.10 or any applicable state law. Have been fully and accurately described, classified and packaged, and are in proper condition for transportation according to applicable regulations.

M. D. ...
Generator Authorized Agent Name (Print)

[Signature] 7/1/07
Signature Delivery Date

TRANSPORTER

TRANSPORTER NAME: **Unified Services of Texas, Inc**
ADDRESS: **2110 Greenbriar Drive**
CITY/ST.: **Southlake, Tx. 76092**

DRIVER NAME(Print): _____
TRUCK NUMBER: _____
PHONE#: **817-481-9510**

I hereby acknowledge receipt of the above described materials were received from the generator listed above and delivered to the disposal facility listed below without incident.

Driver Signature Shipment Date

Driver Signature Delivery Date

DISPOSAL FACILITY

SITE NAME: **Westside Recycling and Disposal Facility**
ADDRESS: **12280 U.S. Hwy 80 W., Aledo, Tx. 76008**
I hereby acknowledge receipt of the above described materials.

PHONE NUMBER: **817-244-3503**

Name of Authorized Agent (Print)

Signature Receipt Date

*D-Drum	C-Carton	B-Bag	P-Pounds	Y-Yards	O-Other
White-Original	Canary-Disposer Retain		Pink-Transporter Retain		Gold-Generator Retain



664 249

27480

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P.O. Box 719
Lewisville, TX 75067
(972) 316-2298 / FAX (972) 316-2298

NON-HAZARDOUS MANIFEST

GENERATOR: **Air Force Base Conversion Agency**
ADDRESS: **Carswell Offsite Weapons Area**
CITY/ST: **Ft. Worth, TX 76114-**
PHONE: **(877) 388-5429**

ID#: **65004**
LOCATION: **SAME**

Description of Waste Materials	Approval Number	Quantity	Units
Contaminated soil	WS-9131	<u>201</u>	Yards

I hereby certify that the above described materials are not hazardous wastes as defined by 40 CFR Part 261 and does not contain free liquids as defined by 40 CFR Part 260.10 or any applicable state law. Have been fully and accurately described, classified and packaged, and are in proper condition for transportation according to applicable regulations.

WILLIAM A. BRAUN
Generator Authorized Agent Name (Print)

W. J. Brown 7/6/99
Signature Delivery Date

TRANSPORTER

TRANSPORTER NAME: **Unified Services of Texas, Inc**
ADDRESS: **2110 Greenbriar Drive**
CITY/ST: **Southlake, Tx. 76092**

DRIVER NAME(Print): W. J. Brown
TRUCK NUMBER: 731
PHONE#: **817-481-9510**

I hereby acknowledge receipt of the above described materials were received from the generator listed above and delivered to the disposal facility listed below without incident.

W. J. Brown 7/6/99
Driver Signature Shipment Date

W. J. Brown 7/6/99
Driver Signature Delivery Date

DISPOSAL FACILITY

SITE NAME: **Westside Recycling and Disposal Facility**
ADDRESS: **12280 U.S. Hwy 80 W., Aledo, Tx. 76008**

PHONE NUMBER: **817-244-3500**

I hereby acknowledge receipt of the above described materials.

Name of Authorized Agent (Print)

Signature Receipt Date

D-Drum	C-Carton	B-Bag	P-Pounds	Y-Yards	O-Other
White-Original	Canary-Disposer Retain		Pink-Transportor Retain		Gold-Generator Retain

WVWVWV

31823 664 250' 899632

North Texas Industrial Service Center
P.O. Box 719
Lewisville, TX 75067
(972) 316-2296 / FAX (972) 316-2298

NON-HAZARDOUS MANIFEST

GENERATOR: Air Force Base Conversion Agency ID#: 65004
ADDRESS: Carswell Offsite Weapons Area Manifests to: The Environmental Co.
CITY/ST: Ft. Worth, TX 76114- 3 W Garden St. #300
PHONE: (877) 388-5429 Pensacola, FL. 32501
Attn: Jim Boone

Description of Waste Materials Approval Number Quantity Units

Contaminated soil WS-9131 15 Yards

I hereby certify that the above described materials are not hazardous wastes as defined by 40 CFR Part 261 and does not contain free liquids as defined by 40 CFR Part 260.10 or any applicable state law. Have been fully and accurately described, classified and packaged, and are in proper condition for transportation according to applicable regulations.

Generator Authorized Agent Name (Print) Signature Delivery Date 12-8-79

TRANSPORTER

TRANSPORTER NAME: Unified Services of Texas Inc DRIVER NAME(Print):
ADDRESS: 2110 Greenbriar Drive TRUCK NUMBER:
CITY/ST.: Southlake, Tx. 76092 PHONE#: 817-481-9510

I hereby acknowledge receipt of the above described materials were received from the generator listed above and delivered to the disposal facility listed below without incident.

Driver Signature Shipment Date Driver Signature Delivery Date

DISPOSAL FACILITY

SITE NAME: Westside Recycling and Disposal Facility PHONE NUMBER: 817-244-3500
ADDRESS: 12280 U.S. Hwy 80 W., Aledo, Tx. 76003 PERMIT # 1019A
I hereby acknowledge receipt of the above described materials

Name of Authorized Agent (Print) Signature Receipt
Date

D-Drum C-Carton B-Bag P-Pounds Y-Yards O-Other



31825
661 252

Truck ticket #
899654

North Texas Industrial Service Center
P.O. Box 719
Lewisville, TX 75067
(972) 316-2296 / FAX (972) 316-2298

NON-HAZARDOUS MANIFEST

GENERATOR: Air Force Base Conversion Agency ID#: 65004
ADDRESS: Carswell Offsite Weapons Area Manifests to: The Environmental Co.
CITY/ST: Ft. Worth, TX 76114- 3 W Garden St. #300
PHONE: (877) 386-5429 Pensacola, FL. 32501
Attn: Jim Boone

Description of Waste Materials Approval Number Quantity Units

Contaminated soil WS-9131 15 Yards

I hereby certify that the above described materials are not hazardous wastes as defined by 40 CFR Part 261 and does not contain free liquids as defined by 40 CFR Part 260.10 or any applicable state law. Have been fully and accurately described, classified and packaged, and are in proper condition for transportation according to applicable regulations.

Generator Authorized Agent Name (Print) Signature Delivery Date

TRANSPORTER

TRANSPORTER NAME: Unified Services of Texas Inc DRIVER NAME(Print)
ADDRESS: 2110 Greenbriar Drive TRUCK NUMBER:
CITY/ST.: Southlake, Tx 76092 PHONE#: 817-481-9510

I hereby acknowledge receipt of the above described materials were received from the generator listed above and delivered to the disposal facility listed below without incident.

Driver Signature Shipment Date Driver Signature Delivery Date

DISPOSAL FACILITY

SITE NAME: Westside Recycling and Disposal Facility PHONE NUMBER: 817-244-3500
ADDRESS: 12280 U.S. Hwy 80 W., Alado, Tx. 76008 PERMIT # 1019A

I hereby acknowledge receipt of the above described materials.

Name of Authorized Agent (Print) Signature Receipt
Date

*D-Drum C-Canon B-Bag P-Pounds Y-Yards O-Other



664 253

31826

North Texas Industrial Service Center
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Lewisville, TX 75067
(972) 316-2296 / FAX (972) 316-2298

899655

NON-HAZARDOUS MANIFEST

GENERATOR: Air Force Base Conversion Agency ID# 65004
ADDRESS: Carswell Offsite Weapons Area Manifests to: The Environmental Co.
CITY/ST: Ft. Worth, TX 76114- 3 W Garden St. #300
PHONE: (877) 386-5429 Pensacola, FL. 32501
Attn: Jim Boone

Description of Waste Materials Approval Number Quantity Units

Contaminated soil WS-9131 Yards
I hereby certify that the above described materials are not hazardous wastes as defined by 40 CFR Part 261 and does not contain free liquids as defined by 40 CFR Part 260.10 or any applicable state law. Have been fully and accurately described, classified and packaged, and are in proper condition for transportation according to applicable regulations.

Generator Authorized Agent Name (Print) Signature Delivery Date

TRANSPORTER

TRANSPORTER NAME: Unified Services of Texas Inc DRIVER NAME(Print): _____
ADDRESS: 2110 Greenbriar Drive TRUCK NUMBER: _____
CITY/ST.: Southlake, Tx. 76092 PHONE#: 817-481-9510

I hereby acknowledge receipt of the above described materials were received from the generator listed above and delivered to the disposal facility listed below without incident

Driver Signature Shipment Date Driver Signature Delivery Date

DISPOSAL FACILITY

SITE NAME: Westside Recycling and Disposal Facility PHONE NUMBER: 817-244-3500
ADDRESS: 12280 U.S. Hwy 80 W., Aledo, Tx. 76006 PERMIT # 1019A

I hereby acknowledge receipt of the above described materials.

Name of Authorized Agent (Print) Signature Receipt
Date

*D-Drum C-Carton B-Bag P-Pounds Y-Yards O-Other



31827

664 251

North Texas Industrial Service Center
P.O. Box 719
Lewisville, TX 75067
(972) 316-2296 / FAX (972) 316-2298

572694

NON-HAZARDOUS MANIFEST

GENERATOR: Air Force Base Conversion Agency ID#: 65004
ADDRESS: Carswell Offsite Weapons Area Manifests to: The Environmental Co.
CITY/ST: Ft. Worth, TX 76114- 3 W Garden St. #300
PHONE: (877) 388-5429 Pensacola, FL. 32601
Attn: Jim Boone

Description of Waste Materials Approval Number Quantity Units

Contaminated soil WS-9131 15 Yards

I hereby certify that the above described materials are not hazardous wastes as defined by 40 CFR Part 261 and does not contain free liquids as defined by 40 CFR Part 260.10 or any applicable state law. Have been fully and accurately described, classified and packaged, and are in proper condition for transportation according to applicable regulations.

Generator Authorized Agent Name (Print) Signature Delivery Date

TRANSPORTER

TRANSPORTER NAME: Unified Services of Texas Inc DRIVER NAME(Print):
ADDRESS: 2110 Greenbriar Drive TRUCK NUMBER:
CITY/ST.: Southlake, Tx. 76092 PHONE#: 817-481-9510

I hereby acknowledge receipt of the above described materials were received from the generator listed above and delivered to the disposal facility listed below without incident.

Driver Signature Shipment Date Driver Signature Delivery Date

DISPOSAL FACILITY

SITE NAME: Westside Recycling and Disposal Facility PHONE NUMBER: 817-244-3500
ADDRESS: 12280 U.S. Hwy 60 W., Aledo, Tx. 76008 PERMIT # 1019A

I hereby acknowledge receipt of the above described materials.

Name of Authorized Agent (Print) Signature Receipt
Date

D-Drum C-Carton B-Bag P-Pounds Y-Yards O-Other



661 255

31828

North Texas Industrial Service Center
P.O. Box 719
Lewisville, TX 75067
(972) 316-2296 / FAX (972) 316-2298

572610

NON-HAZARDOUS MANIFEST

GENERATOR: Air Force Base Conversion Agency ID#: 65004
ADDRESS: Carswell Offsite Weapons Area Manifests to: The Environmental C
CITY/ST: Ft. Worth, TX 76114- 3 W Garden St. #300
PHONE: (877) 388-5429 Pensacola, FL. 32501
Attn: Jim Boone

Description of Waste Materials Approval Number Quantity Units

Contaminated soil WS-9131 15 Yards

I hereby certify that the above described materials are not hazardous wastes as defined by 40 CFR Part 261 and does not contain free liquids as defined by 40 CFR Part 260.10 or any applicable state law. Have been fully and accurately described, classified and packaged, and are in proper condition for transportation according to applicable regulations

ALVIN D. BROWN Generator Authorized Agent Name (Print) [Signature] Signature 12-0-99 Delivery Date

TRANSPORTER

TRANSPORTER NAME: Uniflod Services of Texas Inc DRIVER NAME(Print) _____
ADDRESS: 2110 Greenbriar Drive TRUCK NUMBER: 717
CITY/ST.: Southlake, Tx. 76092 PHONE#: 817-481-8510

I hereby acknowledge receipt of the above described materials were received from the generator listed above and delivered to the disposal facility listed below without incident.

[Signature] Driver Signature 12/1/99 Shipment Date [Signature] Driver Signature 1/1 Delivery Date

DISPOSAL FACILITY

SITE NAME: Westside Recycling and Disposal Facility PHONE NUMBER 817-244-3500
ADDRESS: 12280 U.S. Hwy 80 W., Aledo, Tx. 76008 PERMIT # 1019A

I hereby acknowledge receipt of the above described materials.

[Signature] Name of Authorized Agent (Print) [Signature] Signature 1/1 Receipt
Date

D-Drum C-Carton B-Bag P-Pounds Y-Yards O-Other



664 257

31834

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P.O. Box 719
Lewisville, TX 75067
(972) 316-2296 / FAX (972) 316-2298

NON-HAZARDOUS MANIFEST

GENERATOR: Air Force Base Conversion Agency ID#: 65004
ADDRESS: Carswell Offsite Weapons Area Mall Manifests to: The Environmental Co.
CITY/ST: Ft. Worth, TX 76114- 3 W Garden St. #300
PHONE: (877) 386-5429 Pensacola, FL 32501
Attn: Jim Boone

Description of Waste Materials: Contaminated soil Approval Number: WS-9131 Quantity: 15 Units: Yards

I hereby certify that the above described materials are not hazardous wastes as defined by 40 CFR Part 261 and does not contain free liquids as defined by 40 CFR Part 260.10 or any applicable state law. Have been fully and accurately described, classified and packaged, and are in proper condition for transportation according to applicable regulations.

Generator Authorized Agent Name (Print): Michael D. ... Signature: [Signature] Delivery Date: 12-2-94

TRANSPORTER

TRANSPORTER NAME: Unified Services of Texas Inc DRIVER NAME (Print): [Signature]
ADDRESS: 2110 Greenbriar Drive TRUCK NUMBER: 6-01
CITY/ST.: Southlake, Tx 76092 PHONE#: 817-481-9510

I hereby acknowledge receipt of the above described materials were received from the generator listed above and delivered to the disposal facility listed below without incident.

Driver Signature: [Signature] Shipment Date: 12-1-94 Driver Signature: [Signature] Delivery Date: 1/1

DISPOSAL FACILITY

SITE NAME: Westside Recycling and Disposal Facility PHONE NUMBER: 817-244-3500
ADDRESS: 12280 U.S. Hwy 80 W., Aledo, Tx. 76008 PERMIT # 1019A
I hereby acknowledge receipt of the above described materials.

Name of Authorized Agent (Print): _____ Signature: _____ Receipt: _____
Date: _____

*D-Drum C-Carton B-Bag P-Pounds Y-Yards O-Other



31835

661 258

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NON-HAZARDOUS MANIFEST

GENERATOR: Air Force Base Conversion Agency ID#: 65004
ADDRESS: Carswell Offsite Weapons Area Mail Manifests to: The Environmental Co.
CITY/ST: Ft. Worth, TX 76114- 3 W Garden St. #300
PHONE: (877) 389-5429 Pensacola, FL 32501
Attn: Jim Boone

Description of Waste Materials : Approval Number : Quantity : Units :

Contaminated soil WS-9131 15 Yards

I hereby certify that the above described materials are not hazardous wastes as defined by 40 CFR Part 261 and does not contain free liquids as defined by 40 CFR Part 260.10 or any applicable state law. Have been fully and accurately described, classified and packaged, and are in proper condition for transportation according to applicable regulations.

Generator Authorized Agent Name (Print) Allen L. Bennett Signature [Signature] Delivery Date 12-17-94

TRANSPORTER

TRANSPORTER NAME: Unified Services of Texas Inc DRIVER NAME(Print) Miguel P.
ADDRESS: 2110 Greenbriar Drive TRUCK NUMBER: 6610
CITY/ST.: Southlake, Tx. 76092 PHONE#: 817-481-9510

I hereby acknowledge receipt of the above described materials were received from the generator listed above and delivered to the disposal facility listed below without incident

Driver Signature [Signature] Shipment Date 12-17-94 Driver Signature [Signature] Delivery Date 12-17-94

DISPOSAL FACILITY

SITE NAME: Westside Recycling and Disposal Facility PHONE NUMBER: 817-244-3500
ADDRESS: 12280 U.S. Hwy 80 W., Aledo, Tx. 76008 PERMIT # 1019A
I hereby acknowledge receipt of the above described materials.

Name of Authorized Agent (Print) _____ Signature _____ Receipt _____
Date _____

D-Drum C-Carton B-Bag P-Pounds Y-Yards O-Other



664 259

31836

North Texas Industrial Service Center
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Lewisville, TX 75067
(972) 316-2296 / FAX (972) 316-2298

872612

NON-HAZARDOUS MANIFEST

GENERATOR: Air Force Base Conversion Agency ID#: 65004
ADDRESS: Carswell Offsite Weapons Area
CITY/ST: Ft. Worth, TX 76114-3 W Garden St. #300
PHONE: (877) 388-6429 Pensacola, FL. 32501
Attn: Jim Boone

Description of Waste Materials Approval Number Quantity Units

Contaminated soil WS-9131 16 Yards

I hereby certify that the above described materials are not hazardous wastes as defined by 40 CFR Part 261 and does not contain free liquids as defined by 40 CFR Part 260.10 or any applicable state law. Have been fully and accurately described, classified and packaged, and are in proper condition for transportation according to applicable regulations.

D. Neal D. Radwan
Generator Authorized Agent Name (Print)

[Signature] 12-0-90
Signature Delivery Date

TRANSPORTER

TRANSPORTER NAME: Unified Services of Texas Inc DRIVER NAME(Print):
ADDRESS: 2110 Greenbriar Drive TRUCK NUMBER: 317
CITY/ST.: Southlake, Tx. 76092 PHONE#: 817-481-9510

I hereby acknowledge receipt of the above described materials were received from the generator listed above and delivered to the disposal facility listed below without incident.

[Signature] 12/18/90 [Signature] 1/1
Driver Signature Shipment Date Driver Signature Delivery Date

DISPOSAL FACILITY

SITE NAME: Westside Recycling and Disposal Facility PHONE NUMBER: 817-244-3500
ADDRESS: 12280 U.S. Hwy 80 W., Aledo, Tx. 76008 PERMIT # 1019A

I hereby acknowledge receipt of the above described materials.

[Signature] [Signature]
Name of Authorized Agent (Print) Signature Receipt
Date

D-Drum C-Carton B-Bag P-Pounds Y-Yards O-Other



31829

664 260

North Texas Industrial Service Center
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Lewisville, TX 75067
(972) 316-2296 / FAX (972) 316-2298

(73.76)

NON-HAZARDOUS MANIFEST

GENERATOR: Air Force Base Conversion Agency ID#: 65004
ADDRESS: Carswell Offsite Weapons Area Mail Manifests to: The Environmental Co.
CITY/ST: Ft. Worth, TX 76114- 3 W Garden St #300
PHONE: (877) 388-5429 Pensacola, FL 32501
Attn: Jim Boone

Description of Waste Materials: Contaminated soil
Approval Number: WS-9131
Quantity: 15
Units: Yards

I hereby certify that the above described materials are not hazardous wastes as defined by 40 CFR Part 261 and does not contain free liquids as defined by 40 CFR Part 260.10 or any applicable state law. Have been fully and accurately described, classified and packaged, and are in proper condition for transportation according to applicable regulations.

Generator Authorized Agent Name (Print): James D. Boone
Signature: James D. Boone
Delivery Date: 12-9-97

TRANSPORTER

TRANSPORTER NAME: Unified Services of Texas Inc DRIVER NAME (Print): JAMES STANLEY
ADDRESS: 2110 Greenbriar Drive TRUCK NUMBER: 605
CITY/ST.: Southlake, Tx. 76092 PHONE#: 817-481-9510

I hereby acknowledge receipt of the above described materials were received from the generator listed above and delivered to the disposal facility listed below without incident.

Driver Signature: [Signature] Shipment Date: 12/9/97 Driver Signature: [Signature] Delivery Date: 12/9/97

DISPOSAL FACILITY

SITE NAME: Westside Recycling and Disposal Facility PHONE NUMBER 817-244-3500
ADDRESS: 12280 U.S. Hwy 80 W., Aledo, Tx. 76008 PERMIT # 1019A

I hereby acknowledge receipt of the above described materials.

Name of Authorized Agent (Print): _____ Signature: _____ Receipt: _____
Date: _____

*D-Drum C-Carton B-Bag P-Pounds Y-Yards O-Other



664 261

31830

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(972) 316-2296 / FAX (972) 316-2298

7264

NON-HAZARDOUS MANIFEST

GENERATOR: Air Force Base Conversion Agency ID#: 65004
ADDRESS: Carswell Offsite Weapons Area
CITY/ST: Ft. Worth, TX 76114-3 W Garden St. #300
PHONE: (877) 386-6429 Pensacola, FL. 32501
Attn: Jim Boone

Description of Waste Materials	Approval Number	Quantity	Units
Contaminated soil	WS-9131	1	Yards

I hereby certify that the above described materials are not hazardous wastes as defined by 40 CFR Part 261 and does not contain free liquids as defined by 40 CFR Part 260.10 or any applicable state law. Have been fully and accurately described, classified and packaged, and are in proper condition for transportation according to applicable regulations.

Michael D. ... Generator Authorized Agent Name (Print)
[Signature] Signature
12-9-99 Delivery Date

TRANSPORTER

TRANSPORTER NAME: Unified Services of Texas Inc DRIVER NAME(Print) [Signature]
ADDRESS: 2110 Greenbriar Drive TRUCK NUMBER: 317
CITY/ST.: Southlake, Tx. 76092 PHONE#: 817-481-9510

I hereby acknowledge receipt of the above described materials were received from the generator listed above and delivered to the disposal facility listed below without incident

[Signature] Driver Signature
12/9/99 Shipment Date
[Signature] Driver Signature
1/1 Delivery Date

DISPOSAL FACILITY

SITE NAME: Westside Recycling and Disposal Facility PHONE NUMBER: 817-244-3500
ADDRESS: 12280 U.S. Hwy 80 W., Aledo, Tx. 76008 PERMIT # 1019A

I hereby acknowledge receipt of the above described materials.

[Signature] Name of Authorized Agent (Print) Signature
[Date] Date Receipt

D-Drum C-Carton B-Bag P-Pounds Y-Yards O-Other

APPENDIX F

PHOTO DOCUMENTATION OF SOIL REMOVAL

664 265

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Site: Drainageway DW-3

Photo: DW3-3

View: East

Comments: Area under excavation.

Date: July 28, 1999

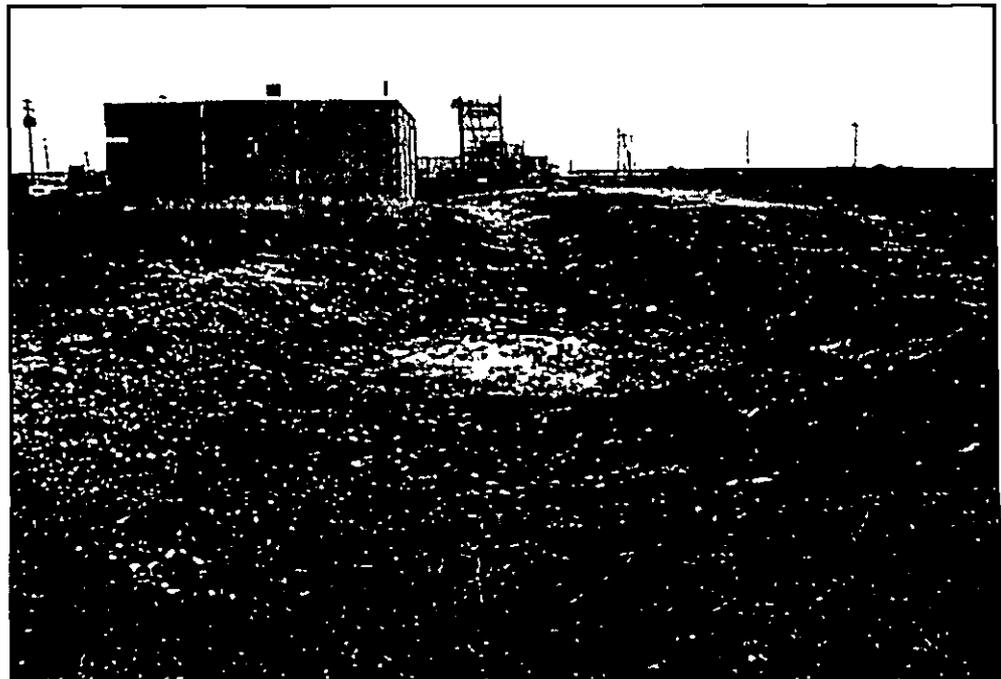
Site: Drainageway 3

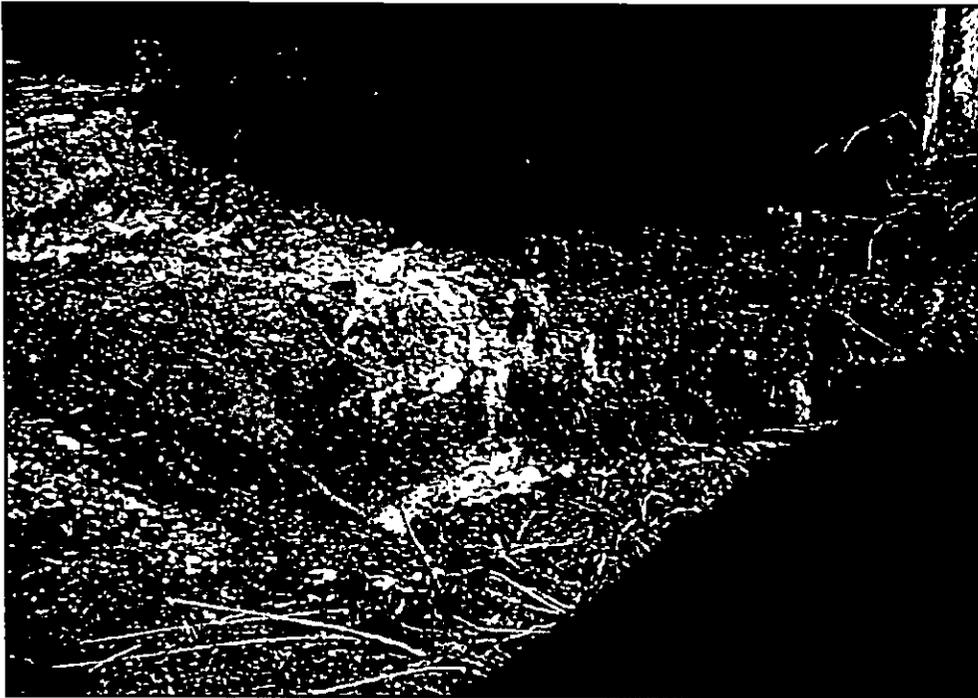
Photo Number: DW3 East

View: West

Comments: From beyond eastern extent of site showing completed excavation at sampling station DW3-218. Excavation along invert and banks of ditch also shown.

Date: December 8, 1999





Site: UST-8500

Photo Number: UST8500-1

View: South

Comments: Tank pit excavation.

Date: July 28, 1999

Site: UST-8500

Photo Number: 8500A

View: West

Comments: From above after
completion of excava-
tion of former UST
site.

Date: December 8, 1999





Site: UST-8500

Photo Number: UST8500-3

View: East

Comments: Filled and graded
former UST site.

Date: March 3, 2000

Site: UST-8505

Photo Number: UST8505-1

View: Southwest

Comments: Tank pit excavation.

Date: July 28, 1999





Site: UST-8505

Photo Number: 8505

View: Southeast

Comments: From northwest edge
of former UST site
just after completion
of Phase 1 excavation.

Date: July 28, 1999

Site: Underground Storage Tanks at
Bldg. 8505 and Bldg. 8507.

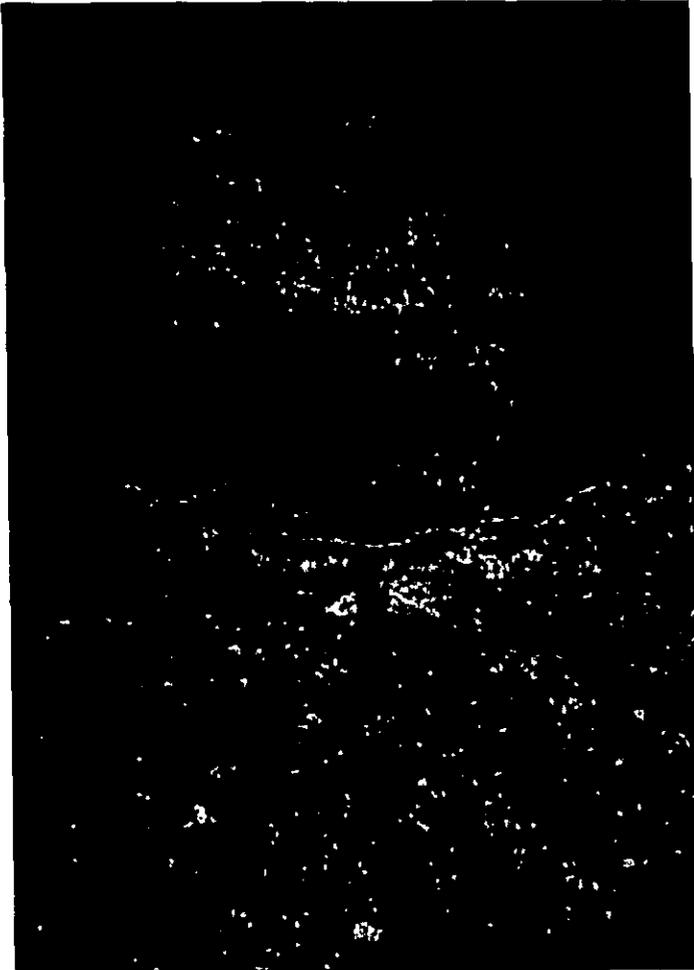
Photo Number: UST8505-3

View: Southeast

Comments: From north bank of
DW-3 of filled and
graded former UST
sites.

Date: March 3, 2000





Site: UST-8507

Photo Number: UST8507-1

View: South

Comments: From north edge of
former UST site after
excavation.

Date: July 27, 1999

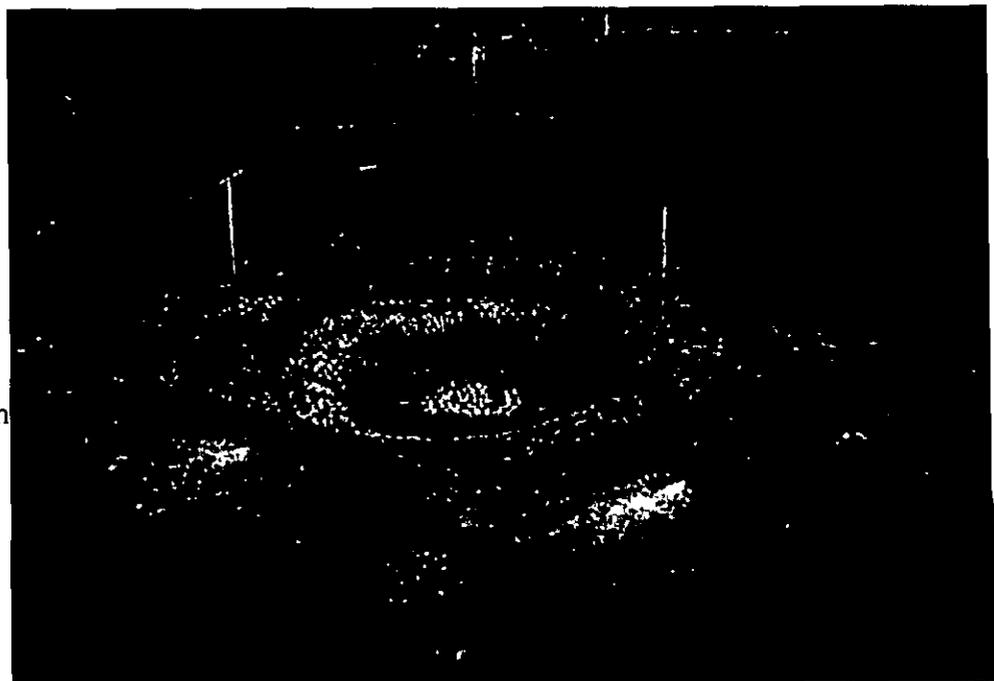
Site: UST-8507

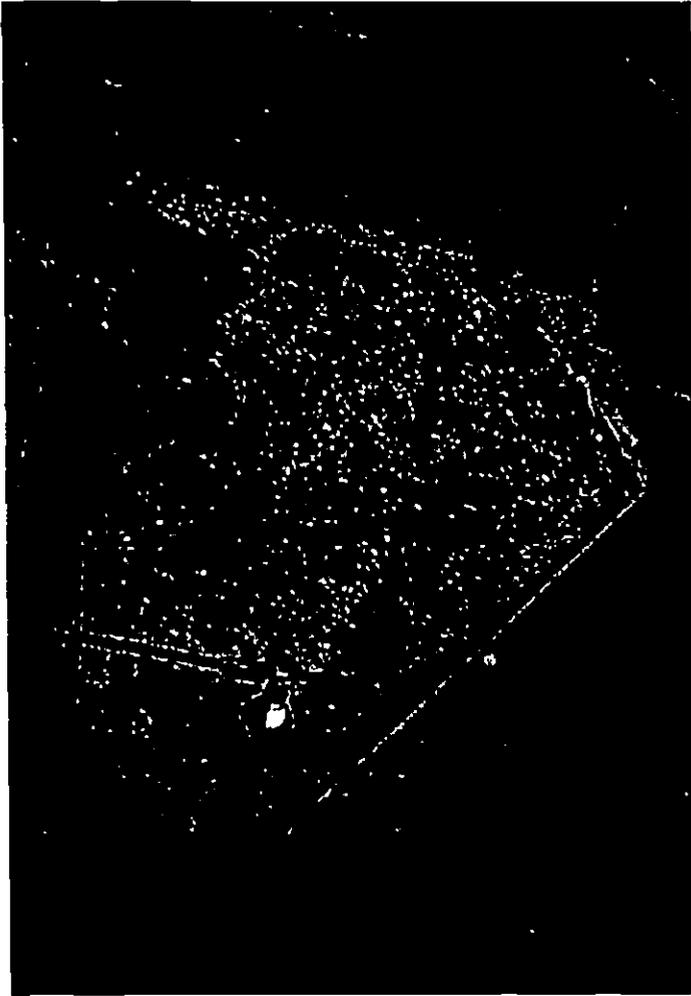
Photo Number: UST8507-2

View: South

Comments: From north bank of
DW-3 of former UST
site just after completion
of excavation

Date: December 8, 1999





Site: Bunker 8531 Drain Area

Photo Number: BD8531-1

View: Southeast

Comments: After completion of
excavation.

Date: July 30, 1999

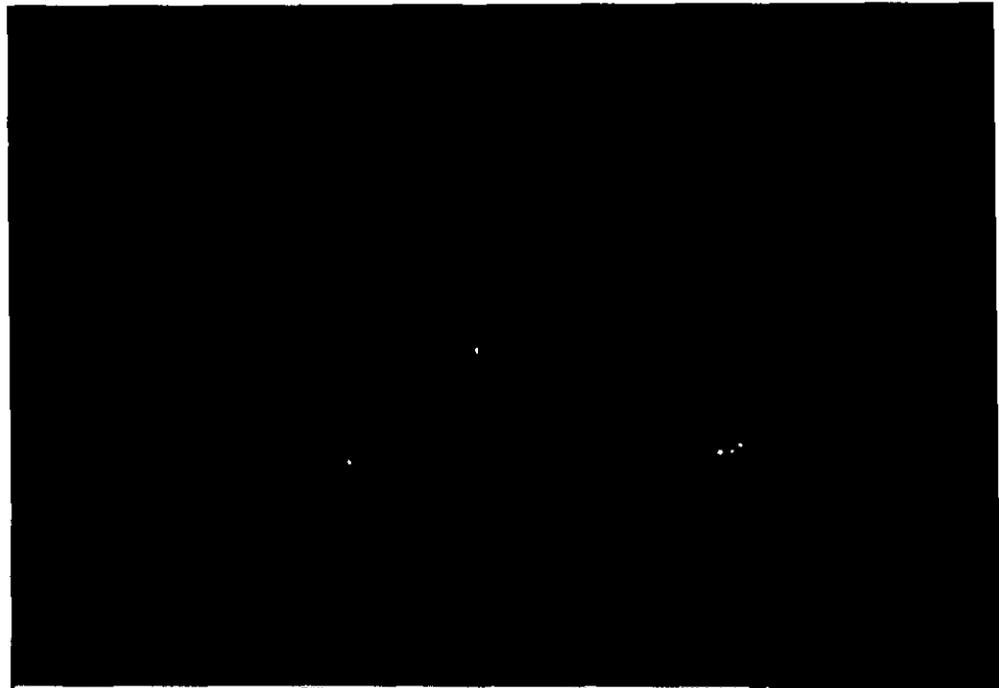
Site: Bunker 31 Drain Area

Photo Number: BD8531-2

View: Northwest

Comments: After filled with soil

Date: March 3, 2000





Site: Bunker 8535 Drain Area

Photo Number: 8535 Samp

View: North

Comments: Sampling at site after
Phase I Removal.

Date: July 30, 1999

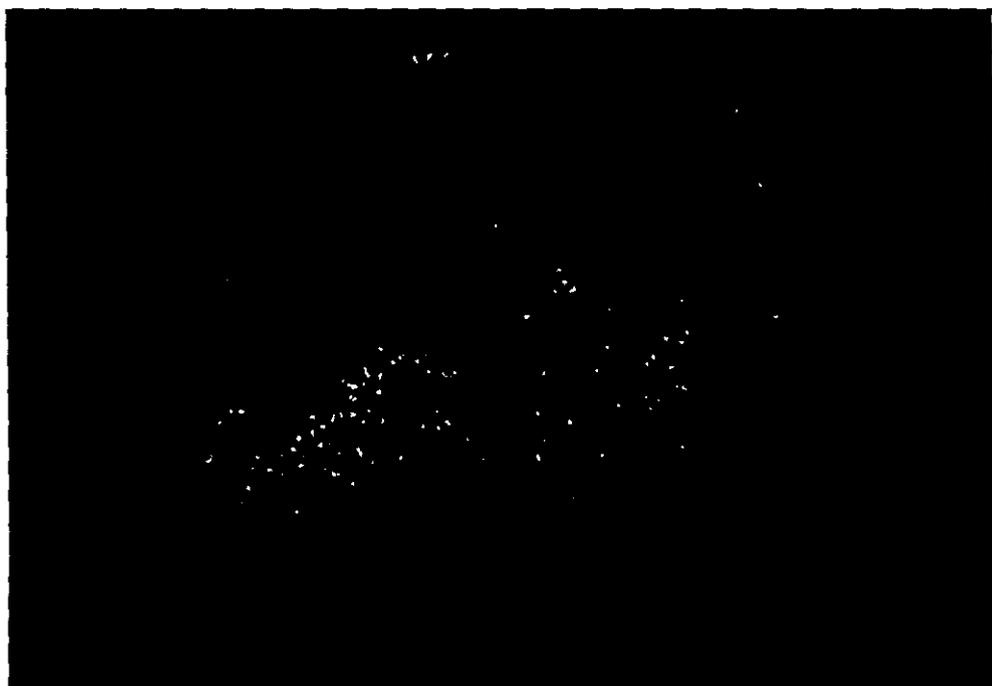
Site: Bunker 8535 Drain Area

Photo Number: BD8535-2

View: North

Comments: After filled with soil
during site restoration .

Date: March 3, 2000





Site: Bunker 8556 Drain Area

Photo Number: BD8556-1

View: Southwest

Comments: After completion of
excavation.

Date: July 30, 1999

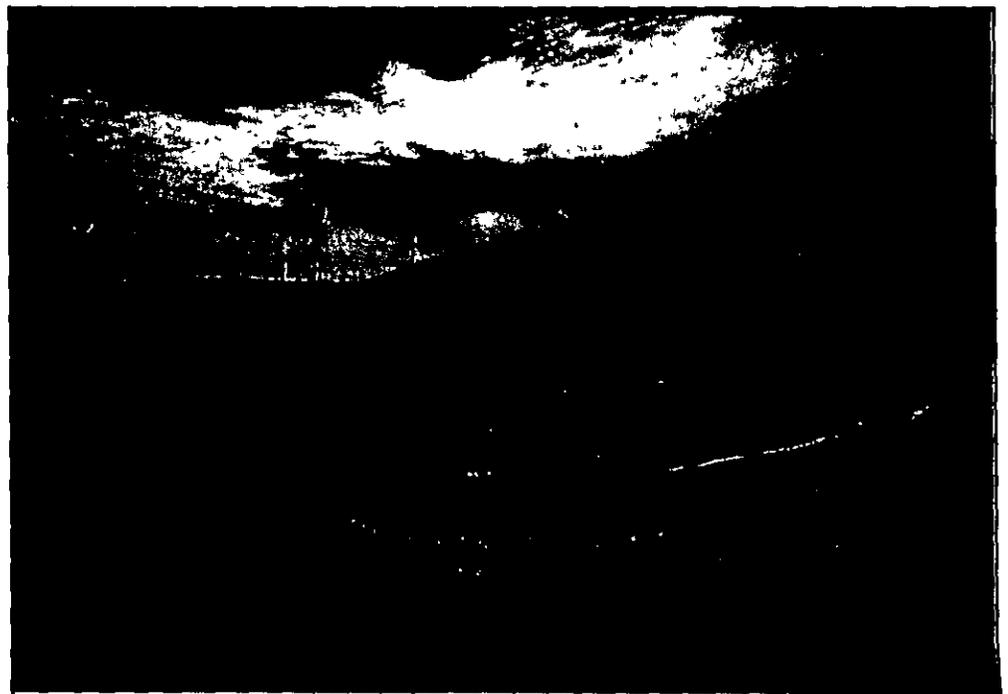
Site: Bunker 8556 Drain Area

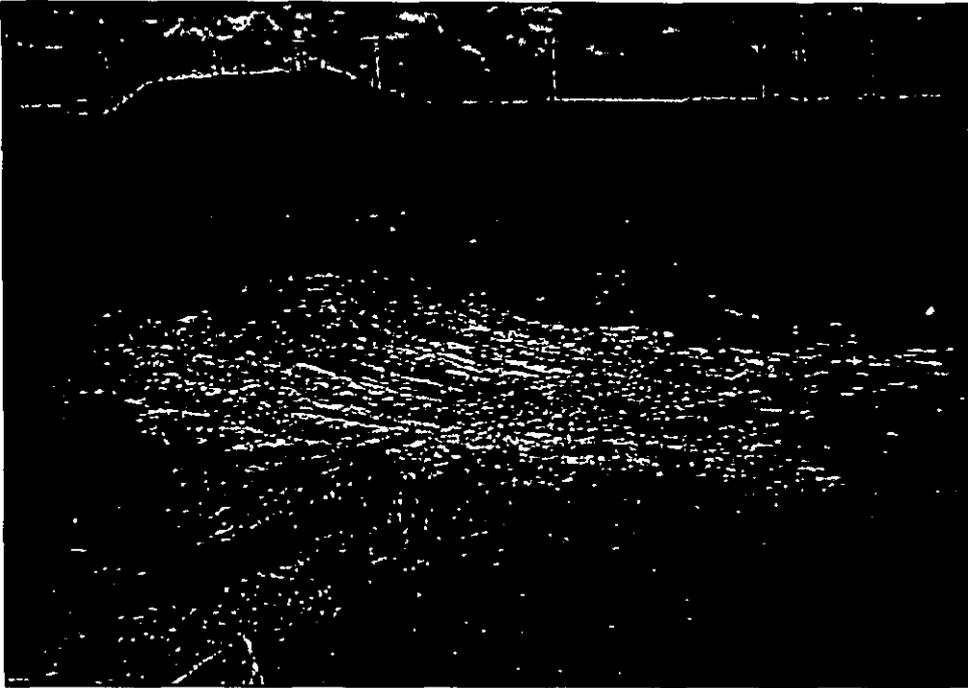
Photo Number: BD8556-2

View: Southwest

Comments: After filled with soil.

Date: March 3, 2000





Site: 8554

Photo Number: BD8554-1

View: Southwest

Comments: After completion of
excavation.

Date: July 30, 1999

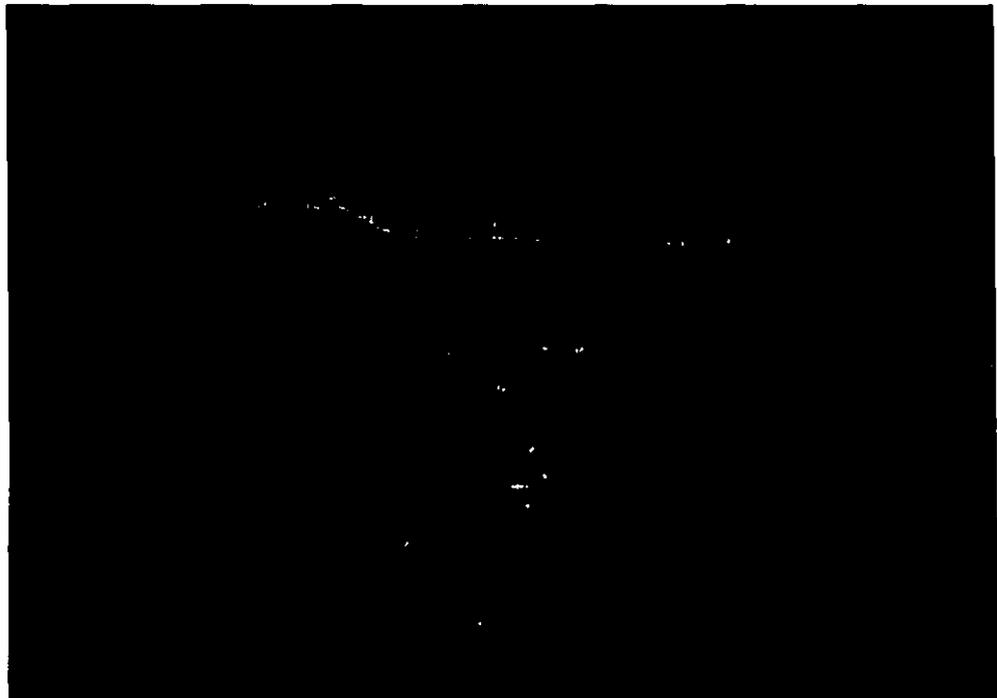
Site: Bunker 8554 Drain Area

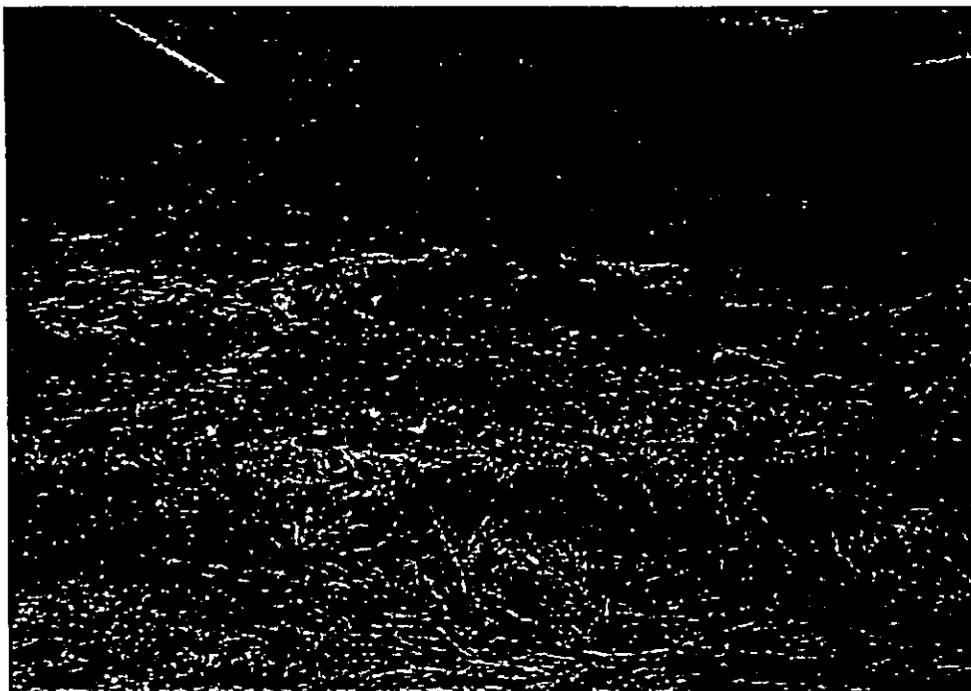
Photo Number: BD8554-2

View: Southwest

Comments: After filled with soil.

Date: March 3, 2000





Site: Bunker 8558 Drain Area

Photo Number: BD8558-1

View: Southeast

Comments: After completion of
excavation.

Date: July 30, 1999

Site: Bunker 8558 Drain Area

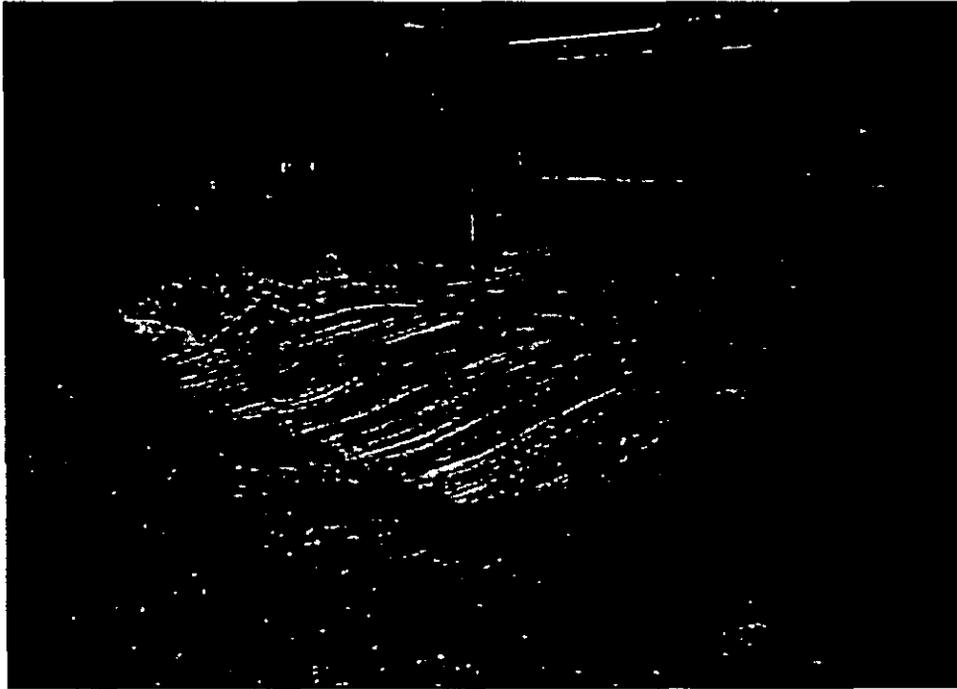
Photo Number: BD8558-2

View: Southwest

Comments: After filled with soil.

Date: March 3, 2000





Site Area A-3

Photo Number A3-1

View Northeast

Comments After completion of
excavation

Date July 30 1999

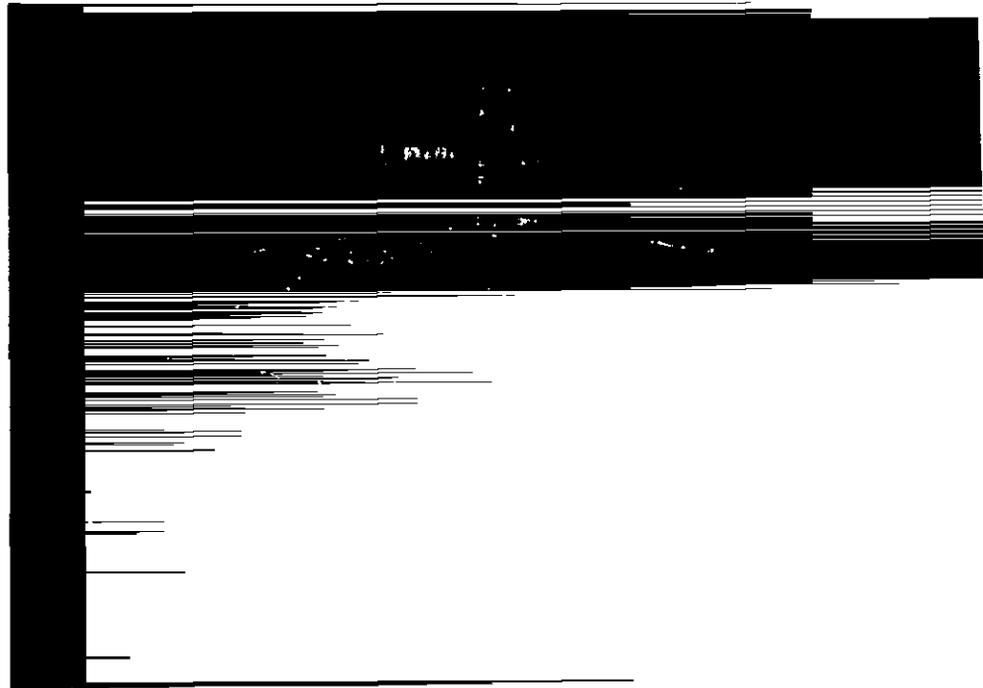
Site: Area A-3

Photo Number: A3-2

View: Northeast

Comments: After filled with soil.

Date: March 3, 2000





Site: Leach field

Photo Number: Leachfield-1

View: North

Comments: Leach field dismantling

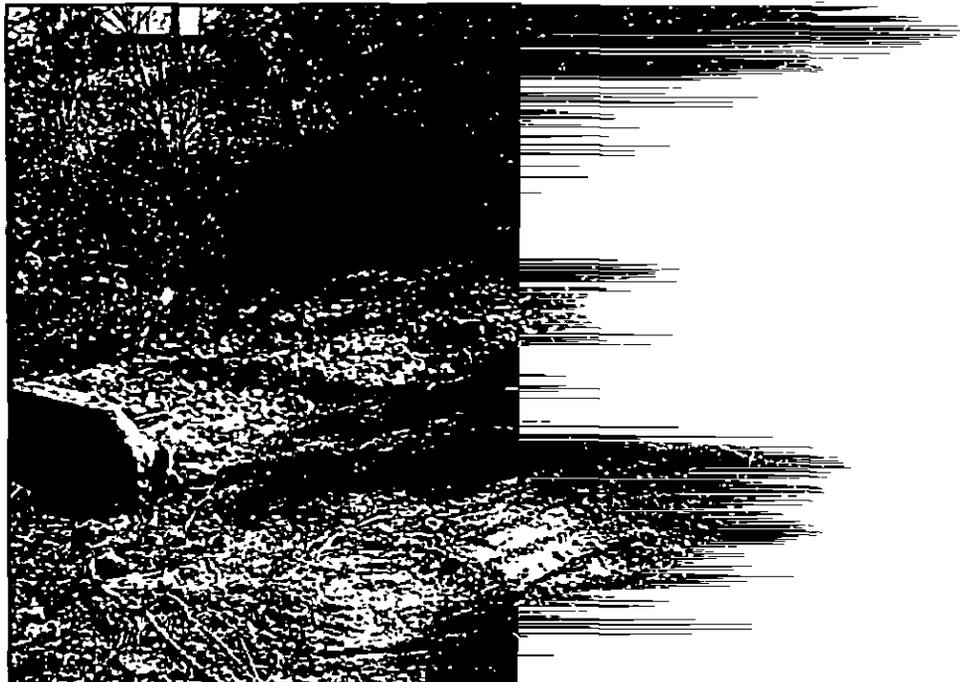
Site: Leach field

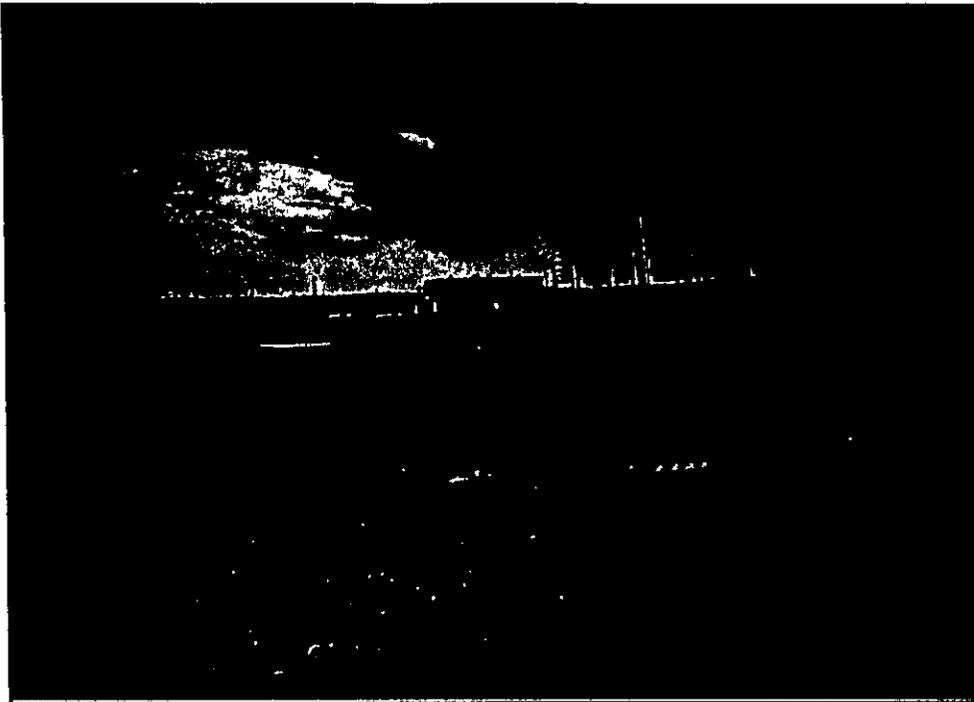
Photo Number: Leachfield-2

View: Northeast

Comments: Demolished south wall of leach field structure.

Date: July 28, 1999





Site: Area A-1 Soil Borrow Area

Photo Number: A1-1

View: South

Comments: Source of soil used
to fill closure
excavations after
restoration grading.

Date: March 3, 2000

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APPENDIX G

**LABORATORY ANALYTICAL RESULTS FOR CLOSURE BOUNDARY SAMPLE
LOCATIONS**

664, 280

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AFCEE
ORGANIC ANALYSES DATA SHEET 2
RESULTS

664 281

0165

Analytical Method: 8260

AAB #: A7B07736

Lab Name: Recre LabNet

Contract #: F46162495D80

Field Sample ID: DW7-001-01

Lab Sample ID: A7305618

Matrix: SOIL

% Solids: 99.7

Dilution: 1.00

Date Received: 3-Sep-97

Date Extracted: _____

Date Analyzed: 12-Sep-97

Concentration Units (ug/L or mg/kg dry weight): MG/KG

Analyte	MDL	PQL	Concentration	Qualifier
1,1,1,2-Tetrachloroethane	0.00093	0.0030	0.00093	U
1,1,1-Trichloroethane	0.00093	0.0040	0.00093	U
1,1,2,2-Tetrachloroethane	0.00091	0.0020	0.00091	U
1,1,2-Trichloroethane	0.00076	0.0050	0.00076	U
1,1-Dichloroethane	0.0012	0.0020	0.0012	U
1,1-Dichloroethene	0.0013	0.0060	0.0013	U
1,1-Dichloropropene	0.0011	0.0050	0.0011	U
1,2,3-Trichlorobenzene	0.00066	0.0020	0.00066	U
1,2,3-Trichloropropane	0.0011	0.020	0.0011	X R
1,2,4-Trichlorobenzene	0.00070	0.0020	0.00070	U
1,2,4-Trimethylbenzene	0.00083	0.0070	0.00083	U
1,2-Dichloroethane	0.00095	0.0030	0.00095	U
1,2-Dichlorobenzene	0.00087	0.0020	0.00087	U
1,2-Dibromo-3-chloropropane	0.0015	0.010	0.0015	U
1,2-Dichloropropane	0.00080	0.0020	0.00080	U
1,2-Dibromoethane	0.0011	0.0030	0.0011	U
1,3,5-Trimethylbenzene	0.00099	0.0030	0.00099	U
1,3-Dichlorobenzene	0.00077	0.0060	0.00077	U
1,3-Dichloropropane	0.00073	0.0020	0.00073	U
1,4-Dichlorobenzene	0.00065	0.0020	0.00065	U
1-Chlorohexane	0.00080	0.0030	0.00080	U
2,2-Dichloropropane	0.0013	0.020	0.0013	U
o-Chlorotoluene	0.00064	0.0020	0.00064	U
p-Chlorotoluene	0.00077	0.0030	0.00077	U
Benzene	0.00068	0.0020	0.00068	U

SMX
1/10/98

664 282

AFCEE
ORGANIC ANALYSES DATA SHEET 2
RESULTS

0166

Analytical Method: 8260AAB #: A7B07736Lab Name: Recra LabNetContract #: F46162495080Field Sample ID: DW7-001-01Lab Sample ID: A7305618Matrix: SOIL% Solids: 99.7Dilution: 1.00Date Received: 3-Sep-97

Date Extracted: _____

Date Analyzed: 12-Sep-97Concentration Units (ug/L or mg/kg dry weight): MG/KG

Analyte	MDL	PQL	Concentration	Qualifier
Bromobenzene	0.00086	0.0020	0.00086	U
Bromochloromethane	0.00048	0.0020	0.00048	U
Bromodichloromethane	0.00061	0.0040	0.00061	U
Bromoform	0.00078	0.0060	0.00078	U
Bromomethane	0.0013	0.0050	0.0013	✓ R
Carbon Tetrachloride	0.0013	0.010	0.0013	U
Chlorobenzene	0.00083	0.0020	0.00083	U
Chloroethane	0.0013	0.0050	0.0013	✓ R
Chloroform	0.00077	0.0020	0.00077	U
Chloromethane	0.0010	0.0070	0.0010	U
cis-1,2-Dichloroethene	0.00082	0.0060	0.00082	U
cis-1,3-Dichloropropene	0.00064	0.0050	0.00064	U
Dibromochloromethane	0.00083	0.0030	0.00083	U
Dibromomethane	0.00037	0.010	0.00037	U
Dichlorodifluoromethane	0.0032	0.0050	0.0032	U
Ethylbenzene	0.00099	0.0030	0.00099	U
Hexachlorobutadiene	0.00068	0.0050	0.00068	U
Isopropylbenzene	0.0010	0.0080	0.0010	U
m-Xylene	0.00063	0.0030	0.00063	U
Methylene chloride	0.0011	0.0020	0.0038	
n-Butylbenzene	0.00072	0.0050	0.00072	U
n-Propylbenzene	0.00093	0.0020	0.00093	U
Naphthalene	0.00081	0.0020	0.00081	U
o-Xylene	0.00063	0.0050	0.00063	U
p-Cymene	0.00092	0.0060	0.00092	U

SMK
11/10/98

AFCEE
ORGANIC ANALYSES DATA SHEET 2
RESULTS

664 283

0167

Analytical Method: 8260

AAS #: A7B07736

Lab Name: Recre LabNet

Contract #: F46162495080

Field Sample ID: PW7-001-01

Lab Sample ID: A7305618

Matrix: SOIL

% Solids: 99.7

Dilution: 1.00

Date Received: 3-Sep-97

Date Extracted: _____

Date Analyzed: 12-Sep-97

Concentration Units (ug/L or mg/kg dry weight): MG/KG

Analyte	MDL	PQL	Concentration	Qualifier
p-Xylene	0.00063	0.0070	0.00063	U
sec-Butylbenzene	0.00090	0.0070	0.00090	U
Styrene	0.00096	0.0020	0.00096	U
Trichloroethene	0.0010	0.010	0.0010	U
tert-Butylbenzene	0.0011	0.0070	0.0011	U
Tetrachloroethene	0.0011	0.0070	0.0011	U
Toluene	0.0010	0.0050	0.018	
trans-1,2-Dichloroethene	0.0013	0.0030	0.0013	U
trans-1,3-Dichloropropene	0.00082	0.0050	0.00082	U
Trichlorofluoromethane	0.0028	0.0040	0.0028	U
Vinyl chloride	0.0011	0.0090	0.0011	U

Comments:

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11/10/98

664 284 :

AFCEE
ORGANIC ANALYSES DATA SHEET 2
RESULTS

0069

Analytical Method: 8270AAB #: A7807374Lab Name: Recra LabNetContract #: F46162495080Field Sample ID: DW7-001-01Lab Sample ID: A7305817Matrix: SOIL% Solids: 99.4Dilution: 1.00Date Received: 3-Sep-97Date Extracted: 4-Sep-97Date Analyzed: 11-Sep-97Concentration Units (ug/L or mg/kg dry weight): MG/KG

Analyte	MDL	PQL	Concentration	Qualifier
1,2,4-Trichlorobenzene	0.025	0.700	0.025	U
1,2-Dichlorobenzene	0.049	0.700	0.049	U
1,3-Dichlorobenzene	0.040	0.700	0.040	U
1,4-Dichlorobenzene	0.046	0.700	0.046	U
2,4-Dinitrotoluene	0.042	0.700	0.042	U
2,6-Dinitrotoluene	0.058	0.700	0.058	U
2-Chloronaphthalene	0.049	0.700	0.049	U
2-Methylnaphthalene	0.036	0.700	0.036	U
2-Nitroaniline	0.049	3.3	0.049	U
3-Nitroaniline	0.062	3.3	0.062	U
3,3'-Dichlorobenzidine	0.052	1.3	0.052	U
4-Bromophenyl phenyl ether	0.058	0.700	0.058	U
4-Chloroaniline	0.033	1.3	0.033	U
4-Chlorodiphenylether	0.046	0.700	0.046	U
4-Nitroaniline	0.095	3.3	0.095	U
Acenaphthylene	0.040	0.700	0.040	U
Acenaphthene	0.046	0.700	0.046	U
Anthracene	0.049	0.700	0.049	U
Benzo(a)anthracene	0.052	0.700	0.052	U
Benzo(a)pyrene	0.052	0.700	0.052	U
Benzo(b)fluoranthene	0.098	0.700	0.098	U
Benzo(ghi)perylene	0.098	0.700	0.098	U
Benzyl alcohol	0.33	1.3	0.33	U
Bis(2-chloroethoxy) methane	0.040	0.700	0.040	U
Bis(2-chloroethyl) ether	0.054	0.700	0.054	U

*SMK
3/16/98*

AFCEE
ORGANIC ANALYSES DATA SHEET 2
RESULTS

664 285

0070

Analytical Method: 8270

AAS #: A7807374

Lab Name: Recra LabNet

Contract #: F46162495D80

Field Sample ID: DW7-001-01

Lab Sample ID: A7305817

Matrix: SDIL

% Solids: 99.4

Dilution: 1.00

Date Received: 3-Sep-97

Date Extracted: 4-Sep-97

Date Analyzed: 11-Sep-97

Concentration Units (ug/L or mg/kg dry weight): MG/KG

Analyte	MDL	PQL	Concentration	Qualifier
Bis(2-chloroisopropyl) ether	0.033	0.700	0.033	U
Bis(2-ethylhexyl) phthalate	0.072	0.700	0.072	U
Butyl benzyl phthalate	0.052	0.700	0.052	U
Chrysene	0.054	0.700	0.054	U
Di-n-butyl phthalate	0.049	0.700	0.049	U
Di-n-octyl phthalate	0.058	0.700	0.058	U
Dibenzo(a,h)anthracene	0.058	0.700	0.058	U
Dibenzofuran	0.052	0.700	0.052	U
Diethyl phthalate	0.054	0.700	0.054	U
Dimethyl phthalate	0.040	0.700	0.040	U
Fluoranthene	0.065	0.700	0.065	U
Fluorene	0.058	0.700	0.058	U
Hexachlorobenzene	0.072	0.700	0.072	U
Hexachlorobutadiene	0.040	0.700	0.040	U
Hexachlorocyclopentadiene	0.062	0.700	0.062	U
Hexachloroethane	0.028	0.700	0.028	U
Indeno(1,2,3-cd)pyrene	0.10	0.700	0.10	U
Isophorone	0.040	0.700	0.040	U
N-nitrosodiphenylamine	0.042	0.700	0.042	U
N-Nitroso-Di-n-propylamine	0.033	0.700	0.033	U
Naphthalene	0.042	0.700	0.042	U
Nitrobenzene	0.065	0.700	0.065	U
Phenanthrene	0.046	0.700	0.046	U
Pyrene	0.062	0.700	0.062	U
2,4,5-Trichlorophenol	0.091	3.3	0.091	U

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5/16/10

664 286

AFCEE
ORGANIC ANALYSES DATA SHEET 2
RESULTS

0071

Analytical Method: 8270

AAS #: A7B07374

Lab Name: Recra LabNet

Contract #: F46162495080

Field Sample ID: DW7-001-01

Lab Sample ID: A7305817

Matrix: SOIL

% Solids: 99.4

Dilution: 1.00

Date Received: 3-Sep-97

Date Extracted: 4-Sep-97

Date Analyzed: 11-Sep-97

Concentration Units (ug/L or mg/kg dry weight): MG/KG

Analyte	MDL	PQL	Concentration	Qualifier
2,4,6-Trichlorophenol	0.10	0.300	0.10	U
2,4-Dichlorophenol	0.028	0.300	0.028	U
2,4-Dimethylphenol	0.054	0.300	0.054	U
2,4-Dinitrophenol	0.068	3.3	0.068	U
2-Chlorophenol	0.036	0.300	0.036	U
2-Methylphenol	0.082	0.300	0.082	U
2-Nitrophenol	0.049	0.300	0.049	U
4,6-Dinitro-2-methylphenol	0.062	3.3	0.062	✓
4-Chloro-3-methylphenol	0.036	1.3	0.036	U
4-Methylphenol	0.033	0.300	0.033	U
4-Nitrophenol	0.098	1.6	0.098	U
Benzoic acid	1.6	1.6	1.6	U
Pentachlorophenol	0.12	3.3	0.12	U
Phenol	0.082	0.300	0.082	U

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Comments:

SMK
3/16/97

AFCEE
ORGANIC ANALYSES DATA SHEET 2
RESULTS

664 287

000018

Analytical Method: 8330

AAB #: L7800016

Lab Name: Recre LabNet

Contract #: F46162495080

Field Sample ID: DW7-001-01

Lab Sample ID: L7001802

Matrix: SOIL

% Solids: 100.0

Dilution: 1.00

Date Received: 3-Sep-97

Date Extracted: 7-Sep-97

Date Analyzed: 10-Sep-97

Concentration Units (ug/L or mg/kg dry weight): MG/KG

Analyte	MDL	PQL	Concentration	Qualifier
2,4,6-TRINITROTOLUENE	0.18	0.250	0.18	U
2,4-DINITROTOLUENE	0.13	0.250	0.13	U
2,6-DINITROTOLUENE	0.23	0.260	0.23	U
2-NITROTOLUENE	0.28	0.250	0.28	✓
3-NITROTOLUENE	0.40	0.250	0.40	✓
4-NITROTOLUENE	0.36	0.250	0.36	✓
HEXAHYDRO-1,3,5-TRINITRO-1,3,5,7-TETRAZOCINE	0.29	1.0	0.29	U
1,3-DINITROBENZENE	0.082	0.250	0.082	U
TETRYL	0.64	0.650	0.64	U
NITROBENZENE	0.26	0.260	0.26	U
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOC	0.39	2.2	0.39	U
1,3,5-TRINITROBENZENE	0.12	0.250	0.12	U

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Comments:

SIMX
2/27/98

664 288

AFCEE
INORGANIC ANALYSES DATA SHEET 2
RESULTS

030.7

Analytical Method: 6010AAB #: A7B07706Lab Name: Recra LabNetContract #: F46162495080Field Sample ID: DW7-001-02Lab Sample ID: A7305818Matrix: SOIL% Solids: 99.0Dilution: 1.00Date Received: 3-Sep-97Date Extracted: 15-Sep-97Date Analyzed: 27-Sep-97Concentration Units (ug/L or mg/kg dry weight): MG/KG

Analyte	MOL	PQL	Concentration	Qualifier
Aluminum - Total	3.0	5.0	3950	B
Antimony - Total	0.80	1.0	0.93	F
Arsenic - Total	0.70	2.0	3.9	
Barium - Total	0.10	0.500	17.5	
Beryllium - Total	0.10	0.300	0.38	
Cadmium - Total	0.070	0.100	0.47	
Calcium - Total	15.0	20.0	304000	B M30M
Chromium - Total	0.35	0.500	7.7	
Cobalt - Total	0.20	0.200	1.1	
Copper - Total	0.35	0.500	3.3	
Iron - Total	4.0	5.0	5950	B
Manganese - Total	0.15	0.500	249	
Molybdenum - Total	0.30	0.500	2.8	
Nickel - Total	0.50	0.500	5.0	
Potassium - Total	30.0	10.0	1300	
Sodium - Total	150	100.0	1080	
Vanadium - Total	0.25	0.500	21.2	
Zinc - Total	0.35	3.0	15.6	

Comments:

The Calcium result was diluted by 10 fold on 09/28/97.

SMK
0/13/98

AFCEE
INORGANIC ANALYSES DATA SHEET 2
RESULTS

664 289

0373

Analytical Method: 6010

AAB #: A7B08194

Lab Name: Recre LabNet

Contract #: F46162495080

Field Sample ID: DW7-001-02

Lab Sample ID: A7305818

Matrix: SOIL

% Solids: 99.0

Dilution: 1.00

Date Received: 3-Sep-97

Date Extracted: 29-Sep-97

Date Analyzed: 1-Oct-97

Concentration Units (ug/L or mg/kg dry weight): MG/KG

Analyte	MDL	PQL	Concentration	Qualifier
Lead - Total	0.35	1.0	4.7	
Magnesium - Total	1.5	5.0	2200	J
Selenium - Total	0.65	1.0	0.65	J R
Silver - Total	0.45	0.200	0.45	U
Thallium - Total	0.84	2.0	0.84	U

Comments:

SMK/kl
3/13/98

664 290

AFCEE
INORGANIC ANALYSES DATA SHEET 2
RESULTS

034

Analytical Method: 7471

AAB #: A7B07718

Lab Name: Recra LabNet

Contract #: F46162495080

Field Sample ID: DW7-001-02

Lab Sample ID: A7305818

Matrix: SOIL

% Solids: 99.0

Dilution: 1.00

Date Received: 3-Sep-97

Date Extracted: 17-Sep-97

Date Analyzed: 17-Sep-97

Concentration Units (ug/L or mg/kg dry weight): MG/KG

Analyte	MDL	PQL	Concentration	Qualifier
Mercury - Total	0.040	0.100	0.040	U

Comments:

SMK
3/13/98

AFCEE
ORGANIC ANALYSES DATA SHEET 2
RESULTS

664 291

019

Analytical Method: 8081

AAB #: A7807358

Lab Name: Recra LabMet

Contract #: F46162495D80

Field Sample ID: DW7-001-02

Lab Sample ID: A7305818

Matrix: SOIL

% Solids: 99.0

Dilution: 4.00

Date Received: 3-Sep-97

Date Extracted: 4-Sep-97

Date Analyzed: 17-Sep-97

Concentration Units (ug/L or mg/kg dry weight): MG/KG

Analyte	MDL	PQL	Concentration	Qualifier
alpha-BHC	0.0020	0.0190	0.0020	U
beta-BHC	0.0015	0.0330	0.0015	U
delta-BHC	0.0017	0.0110	0.0017	U
gamma-BHC (Lindane)	0.0017	0.020	0.0017	U
alpha-Chlordane	0.0015	0.0150	0.0015	U
gamma-Chlordane	0.0014	0.0150	0.0014	U
4,4'-DDB	0.0037	0.0420	0.0037	U
4,4'-DDE	0.0034	0.0250	0.0034	✓
4,4'-DDT	0.0037	0.0360	0.0037	✓
Aldrin	0.0021	0.0220	0.0021	U
Dieldrin	0.0036	0.0350	0.0036	U
Endosulfan I	0.0018	0.0210	0.0018	U
Endosulfan II	0.0028	0.0240	0.0028	U
Endosulfan Sulfate	0.0031	0.0360	0.0031	U
Endrin	0.0036	0.0360	0.0036	U
Endrin aldehyde	0.0029	0.0160	0.0029	U
Heptachlor	0.0019	0.020	0.0019	U
Heptachlor epoxide	0.0014	0.0210	0.0014	U
Methoxychlor	0.025	0.0570	0.025	U
Aroclor 1016	0.011	0.700	0.011	U
Aroclor 1221	0.015	0.700	0.015	U
Aroclor 1232	0.015	0.700	0.015	U
Aroclor 1242	0.015	0.700	0.015	U
Aroclor 1248	0.018	0.700	0.018	U
Aroclor 1254	0.016	0.700	0.016	U

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SMK
9/13/97

664 292

AFCEE
ORGANIC ANALYSES DATA SHEET 2
RESULTS

019

Analytical Method: 8081

AAB #: A7B07358

Lab Name: Recre LabNet

Contract #: F46162495080

Field Sample ID: 0W7-001-02

Lab Sample ID: A7305818

Matrix: SOIL

% Solids: 99.0

Dilution: 4.00

Date Received: 3-Sep-97

Date Extracted: 4-Sep-97

Date Analyzed: 17-Sep-97

Concentration Units (ug/L or mg/kg dry weight): MG/KG

Analyte	MDL	PQL	Concentration	Qualifier
Aroclor 1260	0.022	0.700	0.022	<input checked="" type="checkbox"/>
Toxaphene	0.11	0.570	0.11	U

R

Comments:

SMK
9/13/97

AFCEE
ORGANIC ANALYSES DATA SHEET 2
RESULTS

664 293

0168

Analytical Method: 8260

AAB #: A7807736

Lab Name: Recra LabNet

Contract #: F46162495D80

Field Sample ID: 047-001-02

Lab Sample ID: A7305619

Matrix: SOIL

% Solids: 99.5

Dilution: 1.00

Date Received: 3-Sep-97

Date Extracted: _____

Date Analyzed: 12-Sep-97

Concentration Units (ug/L or mg/kg dry weight): MG/KG

Analyte	MDL	PQL	Concentration	Qualifier
1,1,1,2-Tetrachloroethane	0.00092	0.0030	0.00092	U
1,1,1-Trichloroethane	0.00092	0.0040	0.00092	U
1,1,2,2-Tetrachloroethane	0.00090	0.0020	0.00090	U
1,1,2-Trichloroethane	0.00076	0.0050	0.00076	U
1,1-Dichloroethane	0.0012	0.0020	0.0012	U
1,1-Dichloroethene	0.0013	0.0060	0.0013	U
1,1-Dichloropropene	0.0011	0.0050	0.0011	U
1,2,3-Trichlorobenzene	0.00066	0.0020	0.00066	U
1,2,3-Trichloropropane	0.0011	0.020	0.0011	U
1,2,4-Trichlorobenzene	0.00070	0.0020	0.00070	U
1,2,4-Trimethylbenzene	0.00082	0.0070	0.00082	U
1,2-Dichloroethane	0.00094	0.0030	0.00094	U
1,2-Dichlorobenzene	0.00086	0.0020	0.00086	U
1,2-Dibromo-3-chloropropane	0.0015	0.010	0.0015	U
1,2-Dichloropropane	0.00079	0.0020	0.00079	U
1,2-Dibromoethane	0.0011	0.0030	0.0011	U
1,3,5-Trimethylbenzene	0.00098	0.0030	0.00098	U
1,3-Dichlorobenzene	0.00076	0.0060	0.00076	U
1,3-Dichloropropane	0.00072	0.0020	0.00072	U
1,4-Dichlorobenzene	0.00064	0.0020	0.00064	U
1-Chlorohexane	0.00079	0.0030	0.00079	U
2,2-Dichloropropane	0.0013	0.020	0.0013	U
o-Chlorotoluene	0.00064	0.0020	0.00064	U
p-Chlorotoluene	0.00076	0.0030	0.00076	U
Benzene	0.00068	0.0020	0.00068	U

R

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11/20/98

664 291

AFCEE
ORGANIC ANALYSES DATA SHEET 2
RESULTS

0169

Analytical Method: 8260AAB #: A7B07736Lab Name: Recre LabNetContract #: F46162495D80Field Sample ID: DW7-001-02Lab Sample ID: A7305619Matrix: SOIL% Solids: 99.5Dilution: 1.00Date Received: 3-Sep-97

Date Extracted: _____

Date Analyzed: 12-Sep-97Concentration Units (ug/L or mg/kg dry weight): MG/KG

Analyte	MDL	PQL	Concentration	Qualifier
Bromobenzene	0.00085	0.0020	0.00085	U
Bromochloromethane	0.00048	0.0020	0.00048	U
Bromodichloromethane	0.00061	0.0040	0.00061	U
Bromoform	0.00078	0.0060	0.00078	U
Bromomethane	0.0013	0.0050	0.0013	X R
Carbon Tetrachloride	0.0013	0.010	0.0013	U
Chlorobenzene	0.00082	0.0020	0.00082	U
Chloroethane	0.0013	0.0050	0.0013	X R
Chloroform	0.00076	0.0020	0.00076	U
Chloromethane	0.00099	0.0070	0.00099	U
cis-1,2-Dichloroethene	0.00081	0.0060	0.00081	U
cis-1,3-Dichloropropene	0.00064	0.0050	0.00064	U
Dibromochloromethane	0.00082	0.0030	0.00082	U
Dibromomethane	0.00037	0.010	0.00037	U
Dichlorodifluoromethane	0.0032	0.0050	0.0032	U
Ethylbenzene	0.00098	0.0030	0.00098	U
Hexachlorobutadiene	0.00068	0.0050	0.00068	U
Isopropylbenzene	0.00099	0.0080	0.00099	U
m-Xylene	0.00062	0.0030	0.00062	U
Methylene chloride	0.0011	0.0020	0.0023	
n-Butylbenzene	0.00072	0.0050	0.00072	U
n-Propylbenzene	0.00092	0.0020	0.00092	U
Naphthalene	0.00080	0.0020	0.00080	U
o-Xylene	0.00062	0.0050	0.00062	U
p-Cymene	0.00091	0.0060	0.00091	U

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11/10/98

AFCEE
ORGANIC ANALYSES DATA SHEET 2
RESULTS

664 295 0170

Analytical Method: 8260

AAB #: A7B07736

Lab Name: Recre LabNet

Contract #: F46162495080

Field Sample ID: 0W7-001-02

Lab Sample ID: A7305619

Matrix: SOIL

% Solids: 99.5

Dilution: 1.00

Date Received: 3-Sep-97

Date Extracted: _____

Date Analyzed: 12-Sep-97

Concentration Units (ug/L or mg/kg dry weight): MG/KG

Analyte	MDL	PQL	Concentration	Qualifier
p-Xylene	0.00062	0.0070	0.00062	U
sec-Butylbenzene	0.00089	0.0070	0.00089	U
Styrene	0.00095	0.0020	0.00095	U
Trichloroethene	0.00099	0.010	0.00099	U
tert-Butylbenzene	0.0011	0.0070	0.0011	U
Tetrachloroethene	0.0011	0.0070	0.0011	U
Toluene	0.00099	0.0050	0.0030	F
trans-1,2-Dichloroethene	0.0013	0.0030	0.0013	U
trans-1,3-Dichloropropene	0.00081	0.0050	0.00081	U
Trichlorofluoromethane	0.0028	0.0040	0.0028	U
Vinyl chloride	0.0011	0.0090	0.0011	U

Comments:

*SMK
11/10/98*

664 296

AFCEE
ORGANIC ANALYSES DATA SHEET 2
RESULTS

0072

Analytical Method: 8270AAB #: A7807374Lab Name: Recra LabNetContract #: F46162495D80Field Sample ID: DW7-001-02Lab Sample ID: A7305818Matrix: SOIL% Solids: 99.0Dilution: 1.00Date Received: 3-Sep-97Date Extracted: 4-Sep-97Date Analyzed: 11-Sep-97Concentration Units (ug/L or mg/kg dry weight): MG/KG

Analyte	MDL	PQL	Concentration	Qualifier
1,2,4-Trichlorobenzene	0.025	0.700	0.025	U
1,2-Dichlorobenzene	0.050	0.700	0.050	U
1,3-Dichlorobenzene	0.040	0.700	0.040	U
1,4-Dichlorobenzene	0.046	0.700	0.046	U
2,4-Dinitrotoluene	0.043	0.700	0.043	U
2,6-Dinitrotoluene	0.059	0.700	0.059	U
2-Chloronaphthalene	0.050	0.700	0.050	U
2-Methylnaphthalene	0.036	0.700	0.036	U
2-Nitroaniline	0.050	3.3	0.050	U
3-Nitroaniline	0.063	3.3	0.063	U
3,3'-Dichlorobenzidine	0.053	1.3	0.053	U
4-Bromophenyl phenyl ether	0.059	0.700	0.059	U
4-Chloroaniline	0.033	1.3	0.033	U
4-Chlorodiphenylether	0.046	0.700	0.046	U
4-Nitroaniline	0.096	3.3	0.096	U
Acenaphthylene	0.040	0.700	0.040	U
Acenaphthene	0.046	0.700	0.046	U
Anthracene	0.050	0.700	0.050	U
Benzo(a)anthracene	0.053	0.700	0.053	U
Benzo(a)pyrene	0.053	0.700	0.053	U
Benzo(b)fluoranthene	0.099	0.700	0.099	U
Benzo(ghi)perylene	0.099	0.700	0.099	U
Benzyl alcohol	0.33	1.3	0.33	U
Bis(2-chloroethoxy) methane	0.040	0.700	0.040	U
Bis(2-chloroethyl) ether	0.055	0.700	0.055	U

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ORGANIC ANALYSES DATA SHEET 2
RESULTS

664 297

007

Analytical Method: B270

AAB #: A7807374

Lab Name: Recra LabNet

Contract #: F46162495080

Field Sample ID: 0W7-001-02

Lab Sample ID: A7305818

Matrix: SOIL

% Solids: 99.0

Dilution: 1.00

Date Received: 3-Sep-97

Date Extracted: 4-Sep-97

Date Analyzed: 11-Sep-97

Concentration Units (ug/L or mg/kg dry weight): MG/KG

Analyte	MOL	PQL	Concentration	Qualifier
Bis(2-chloroisopropyl) ether	0.033	0.700	0.033	U
Bis(2-ethylhexyl) phthalate	0.073	0.700	0.073	U
Butyl benzyl phthalate	0.053	0.700	0.053	U
Chrysene	0.055	0.700	0.055	U
Di-n-butyl phthalate	0.050	0.700	0.050	U
Di-n-octyl phthalate	0.059	0.700	0.059	U
Dibenzo(a,h)anthracene	0.059	0.700	0.059	U
Dibenzofuran	0.053	0.700	0.053	U
Diethyl phthalate	0.055	0.700	0.055	U
Dimethyl phthalate	0.040	0.700	0.040	U
Fluoranthene	0.066	0.700	0.066	U
Fluorene	0.059	0.700	0.059	U
Hexachlorobenzene	0.073	0.700	0.073	U
Hexachlorobutadiene	0.040	0.700	0.040	U
Hexachlorocyclopentadiene	0.063	0.700	0.063	U
Hexachloroethane	0.028	0.700	0.028	U
Indeno(1,2,3-cd)pyrene	0.10	0.700	0.10	U
Isophorone	0.040	0.700	0.040	U
N-nitrosodiphenylamine	0.043	0.700	0.043	U
N-Nitroso-Di-n-propylamine	0.033	0.700	0.033	U
Naphthalene	0.043	0.700	0.043	U
Nitrobenzene	0.066	0.700	0.066	U
Phenanthrene	0.046	0.700	0.046	U
Pyrene	0.063	0.700	0.063	U
2,4,5-Trichlorophenol	0.092	3.3	0.092	U

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3/16/98

664 298

AFCEE
ORGANIC ANALYSES DATA SHEET 2
RESULTS

0074

Analytical Method: 8270

AAB #: A7807374

Lab Name: Recra LabNet

Contract #: F46162495080

Field Sample ID: DW7-001-02

Lab Sample ID: A7305818

Matrix: SOIL

% Solids: 99.0

Dilution: 1.00

Date Received: 3-Sep-97

Date Extracted: 4-Sep-97

Date Analyzed: 11-Sep-97

Concentration Units (ug/L or mg/kg dry weight): MG/KG

Analyte	MDL	PQL	Concentration	Qualifier
2,4,6-Trichlorophenol	0.10	0.300	0.10	U
2,4-Dichlorophenol	0.028	0.300	0.028	U
2,4-Dimethylphenol	0.055	0.300	0.055	U
2,4-Dinitrophenol	0.069	3.3	0.069	U
2-Chlorophenol	0.036	0.300	0.036	U
2-Methylphenol	0.083	0.300	0.083	U
2-Nitrophenol	0.050	0.300	0.050	U
4,6-Dinitro-2-methylphenol	0.063	3.3	0.063	U <i>R</i>
4-Chloro-3-methylphenol	0.036	1.3	0.036	U
4-Methylphenol	0.033	0.300	0.033	U
4-Nitrophenol	0.099	1.6	0.099	U
Benzoic acid	1.6	1.6	1.6	U
Pentachlorophenol	0.12	3.3	0.12	U
Phenol	0.083	0.300	0.083	U

Comments:

*SMK
3/16/97*

664 293
000019

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ORGANIC ANALYSES DATA SHEET 2
RESULTS

Analytical Method: 8330

AAB #: L7800016

Lab Name: Recra LabNet

Contract #: F46162495080

Field Sample ID: DW7-001-02

Lab Sample ID: L7001803

Matrix: SOIL

% Solids: 100.0

Dilution: 1.00

Date Received: 3-Sep-97

Date Extracted: 7-Sep-97

Date Analyzed: 10-Sep-97

Concentration Units (ug/L or mg/kg dry weight): MG/KG

Analyte	MDL	PQL	Concentration	Qualifier
2,4,6-TRINITROTOLUENE	0.18	0.250	0.18	U
2,4-DINITROTOLUENE	0.13	0.250	0.13	U
2,6-DINITROTOLUENE	0.23	0.260	0.23	U
2-NITROTOLUENE	0.28	0.250	0.28	U R
3-NITROTOLUENE	0.40	0.250	0.40	U R
4-NITROTOLUENE	0.35	0.250	0.35	U R
HEXAHYDRO-1,3,5-TRINITRO-1,3,5,7-TETRAZOCINE	0.28	1.0	0.28	U
1,3-DINITROBENZENE	0.082	0.250	0.082	U
TETRYL	0.64	0.650	0.64	U
NITROBENZENE	0.25	0.260	0.25	U
OCTAHYDRO-1,3,5,7-TETRAZOCINE	0.39	2.2	0.39	U
1,3,5-TRINITROBENZENE	0.12	0.250	0.12	U

Comments:

SMK
2/27/98

664 300

AFCEE
INORGANIC ANALYSES DATA SHEET 2
RESULTS

03 15

Analytical Method: 6010AAB #: A7807706Lab Name: Recra LabNetContract #: F46162495D80Field Sample ID: DW8-001-01Lab Sample ID: A7305819Matrix: SOIL% Solids: 96.7Dilution: 1.00Date Received: 3-Sep-97Date Extracted: 15-Sep-97Date Analyzed: 27-Sep-97Concentration Units (ug/L or mg/kg dry weight): MG/KG

Analyte	MDL	PQL	Concentration	Qualifier
Aluminum - Total	3.1	5.0	12200	B
Antimony - Total	0.83	1.0	0.89	F
Arsenic - Total	0.73	2.0	6.2	
Barium - Total	0.10	0.500	39.4	
Beryllium - Total	0.10	0.300	0.79	
Cadmium - Total	0.073	0.100	0.64	
Calcium - Total	15.6	20.0	204000	B
Chromium - Total	0.36	0.500	14.6	M 8MC
Cobalt - Total	0.21	0.200	2.8	
Copper - Total	0.36	0.500	5.3	
Iron - Total	4.1	5.0	10700	B
Manganese - Total	0.16	0.500	171	
Molybdenum - Total	0.31	0.500	1.5	
Nickel - Total	0.52	0.500	8.3	
Potassium - Total	31.1	10.0	3660	
Sodium - Total	156	100.0	751	
Vanadium - Total	0.26	0.500	25.9	
Zinc - Total	0.36	3.0	28.9	

Comments:

The Calcium result was diluted by 10 fold on 09/28/97.

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3/13/98

AFCEE
INORGANIC ANALYSES DATA SHEET 2
RESULTS

664 301

0375

Analytical Method: 6010

AAB #: A7808194

Lab Name: Recra LabNet

Contract #: F46162495080

Field Sample ID: DW8-001-01

Lab Sample ID: A7305819

Matrix: SOIL

% Solids: 96.7

Dilution: 1.00

Date Received: 3-Sep-97

Date Extracted: 29-Sep-97

Date Analyzed: 1-Oct-97

Concentration Units (ug/L or mg/kg dry weight): MG/KG

Analyte	MDL	PQL	Concentration	Qualifier
Lead - Total	0.36	1.0	13.4	
Magnesium - Total	1.5	5.0	2920	J
Selenium - Total	0.66	1.0	0.66	U R
Silver - Total	0.46	0.200	0.46	U
Thallium - Total	0.87	2.0	0.87	U

Comments:

*SMK
9/15/97*

664 302

AFCEE
INORGANIC ANALYSES DATA SHEET 2
RESULTS

0340

Analytical Method: 7471

AAB #: A7807718

Lab Name: Recra LabNet

Contract #: F46162495080

Field Sample ID: DW8-001-01

Lab Sample ID: A7305819

Matrix: SOIL

% Solids: 96.7

Dilution: 1.00

Date Received: 3-Sep-97

Date Extracted: 17-Sep-97

Date Analyzed: 17-Sep-97

Concentration Units (ug/L or mg/kg dry weight): MG/KG

Analyte	MDL	PQL	Concentration	Qualifier
Mercury - Total	0.041	0.100	0.041	U

Comments:

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3/13/98

AFCEE
ORGANIC ANALYSES DATA SHEET 2
RESULTS

664 303
000020

Analytical Method: 8330

AAB #: L7800016

Lab Name: Recre Lab/Het

Contract #: F46162495080

Field Sample ID: DW8-001-01

Lab Sample ID: L7001804

Matrix: SOIL

% Solids: 100.0

Dilution: 1.00

Date Received: 3-Sep-97

Date Extracted: 7-Sep-97

Date Analyzed: 10-Sep-97

Concentration Units (ug/L or mg/kg dry weight): MG/KG

Analyte	MDL	PQL	Concentration	Qualifier
2,4,6-TRINITROTOLUENE	0.18	0.250	0.18	U
2,4-DINITROTOLUENE	0.13	0.250	0.13	U
2,6-DINITROTOLUENE	0.23	0.260	0.23	U
2-NITROTOLUENE	0.28	0.250	0.28	U R
3-NITROTOLUENE	0.40	0.250	0.40	U R
4-NITROTOLUENE	0.35	0.250	0.35	U R
HEXAHYDRO-1,3,5-TRINITRO-1,3,5,7-TETRAZOCINE	0.28	1.0	0.28	U
1,3-DINITROBENZENE	0.081	0.250	0.081	U
TETRYL	0.63	0.650	0.63	U
NITROBENZENE	0.25	0.260	0.25	U
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOC	0.39	2.2	0.39	U
1,3,5-TRINITROBENZENE	0.12	0.250	0.12	U

Comments:

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2/1/98

664 304

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INORGANIC ANALYSES DATA SHEET 2
RESULTS

030

Analytical Method: 6010

AAB #: A7B07706

Lab Name: Recra LabNet

Contract #: F46162495D80

Field Sample ID: DW8-002-01

Lab Sample ID: A7305820

Matrix: SOIL

% Solids: 71.8

Dilution: 1.00

Date Received: 3-Sep-97

Date Extracted: 15-Sep-97

Date Analyzed: 27-Sep-97

Concentration Units (ug/L or mg/kg dry weight): MG/KG

Analyte	MOL	PQL	Concentration	Qualifier
Aluminum - Total	4.1	5.0	12400	B
Antimony - Total	1.1	1.0	1.1	U
Arsenic - Total	0.96	2.0	7.2	
Barium - Total	0.14	0.500	55.0	
Beryllium - Total	0.14	0.300	0.77	
Cadmium - Total	0.096	0.100	0.64	
Calcium - Total	20.5	20.0	219000	B
Chromium - Total	0.48	0.500	14.4	AT 8/24
Cobalt - Total	0.27	0.200	4.8	
Copper - Total	0.48	0.500	4.2	
Iron - Total	5.5	5.0	12400	B
Manganese - Total	0.20	0.500	250	
Molybdenum - Total	0.41	0.500	2.2	
Nickel - Total	0.68	0.500	9.1	
Potassium - Total	41.1	10.0	2120	
Sodium - Total	205	100.0	1130	
Vanadium - Total	0.34	0.500	31.5	
Zinc - Total	0.48	3.0	26.4	

Comments:
The Calcium result was diluted by 10 fold on 09/28/97.

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3/13/98

AFCEE
INORGANIC ANALYSES DATA SHEET 2
RESULTS

664 305

0375

Analytical Method: 6010

AAB #: A7B08194

Lab Name: Recra LabNet

Contract #: F46162495080

Field Sample ID: DW8-002-01

Lab Sample ID: A7305820

Matrix: SDIL

% Solids: 71.8

Dilution: 1.00

Date Received: 3-Sep-97

Date Extracted: 29-Sep-97

Date Analyzed: 1-Oct-97

Concentration Units (ug/L or mg/kg dry weight): MG/KG

Analyte	MDL	PQL	Concentration	Qualifier
Lead - Total	0.48	1.0	6.0	
Magnesium - Total	2.1	5.0	2680	J
Selenium - Total	0.90	1.0	0.90	J-K
Silver - Total	0.62	0.200	0.62	U
Thallium - Total	1.2	2.0	1.2	U

Comments:

Handwritten signature and date:
SMAK
9/29/97

664 306

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INORGANIC ANALYSES DATA SHEET 2
RESULTS

034

Analytical Method: 7471

AAB #: A7807718

Lab Name: Recra LabNet

Contract #: F46162495D80

Field Sample ID: DWB-002-01

Lab Sample ID: A7305820

Matrix: SOIL

% Solids: 71.8

Dilution: 1.00

Date Received: 3-Sep-97

Date Extracted: 17-Sep-97

Date Analyzed: 17-Sep-97

Concentration Units (ug/L or mg/kg dry weight): MG/KG

Analyte	MDL	PQL	Concentration	Qualifier
Mercury - Total	0.056	0.100	0.056	U

Comments:

emk
3/13/97

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ORGANIC ANALYSES DATA SHEET 2
RESULTS

664 307 000021

Analytical Method: 8330

AAS #: L7800016

Lab Name: Recra LabNet

Contract #: F46162495080

Field Sample ID: DW8-002-01

Lab Sample ID: L7001805

Matrix: SOIL

% Solids: 100.0

Dilution: 1.00

Date Received: 3-Sep-97

Date Extracted: 7-Sep-97

Date Analyzed: 10-Sep-97

Concentration Units (ug/L or mg/kg dry weight): MG/KG

Analyte	MDL	PQL	Concentration	Qualifier
2,4,6-TRINITROTOLUENE	0.18	0.250	0.18	U
2,4-DINITROTOLUENE	0.13	0.250	0.13	U
2,6-DINITROTOLUENE	0.23	0.260	0.23	U
2-NITROTOLUENE	0.28	0.250	0.28	<i>✓</i>
3-NITROTOLUENE	0.40	0.250	0.40	<i>✓</i>
4-NITROTOLUENE	0.36	0.250	0.36	<i>✓</i>
HEXAHYDRO-1,3,5-TRINITRO-1,3,5,7-TETRAZOCINE	0.29	1.0	0.29	U
1,3-DINITROBENZENE	0.082	0.250	0.082	U
TETRYL	0.64	0.650	0.64	U
NITROBENZENE	0.26	0.260	0.26	U
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOC	0.39	2.2	0.39	U
1,3,5-TRINITROBENZENE	0.12	0.250	0.12	U

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Comments:

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2/27

664 308

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INORGANIC ANALYSES DATA SHEET 2
RESULTS

0307

Analytical Method: 6010

AAB #: A7807706

Lab Name: Recra LabMet

Contract #: F46162495080

Field Sample ID: DW9-001-01

Lab Sample ID: A7305821

Matrix: SOIL

% Solids: 97.8

Dilution: 1.00

Date Received: 3-Sep-97

Date Extracted: 15-Sep-97

Date Analyzed: 27-Sep-97

Concentration Units (ug/L or mg/kg dry weight): MG/KG

Analyte	MDL	PQL	Concentration	Qualifier
Aluminum - Total	3.0	5.0	9100	B
Antimony - Total	0.81	1.0	0.99	F
Arsenic - Total	0.71	2.0	7.8	
Barium - Total	0.10	0.500	51.3	
Beryllium - Total	0.10	0.300	0.61	
Cadmium - Total	0.071	0.100	0.82	
Calcium - Total	15.2	20.0	249000	B
Chromium - Total	0.35	0.500	10.9	DAEMK
Cobalt - Total	0.20	0.200	3.7	
Copper - Total	0.35	0.500	5.1	
Iron - Total	4.0	5.0	9260	B
Manganese - Total	0.15	0.500	242	
Molybdenum - Total	0.30	0.500	1.3	
Nickel - Total	0.50	0.500	7.2	
Potassium - Total	30.4	10.0	2470	
Sodium - Total	152	100.0	883	
Vanadium - Total	0.25	0.500	31.1	
Zinc - Total	0.35	3.0	27.1	

Comments:

The Calcium result was diluted by 10 fold on 09/28/97.

SMK
9/30/98

AFCEE
INORGANIC ANALYSES DATA SHEET 2
RESULTS

664 309

0370

Analytical Method: 6010

AAS #: A7808194

Lab Name: Recre LabNet

Contract #: F46162495D80

Field Sample ID: DW9-001-01

Lab Sample ID: A7305821

Matrix: SOIL

% Solids: 97.8

Dilution: 1.00

Date Received: 3-Sep-97

Date Extracted: 29-Sep-97

Date Analyzed: 1-Oct-97

Concentration Units (ug/L or mg/kg dry weight): MG/KG

Analyte	MDL	PQL	Concentration	Qualifier
Lead - Total	0.35	1.0	8.8	
Magnesium - Total	1.5	5.0	2430	J
Selenium - Total	0.65	1.0	0.65	J R
Silver - Total	0.45	0.200	0.45	U
Thallium - Total	0.86	2.0	0.86	U

Comments:

*SMK
3/19/97*

664 310

AFCEE
INORGANIC ANALYSES DATA SHEET 2
RESULTS

03571

Analytical Method: 7471

AAB #: A7B07718

Lab Name: Recra LabNet

Contract #: F46162495D80

Field Sample ID: DW9-001-01

Lab Sample ID: A7305821

Matrix: SOIL

% Solids: 97.8

Dilution: 1.00

Date Received: 3-Sep-97

Date Extracted: 17-Sep-97

Date Analyzed: 17-Sep-97

Concentration Units (ug/L or mg/kg dry weight): MG/KG

Analyte	MDL	PQL	Concentration	Qualifier
Mercury - Total	0.041	0.100	0.041	U

Comments:

SMK
3/13/97

AFCEE
ORGANIC ANALYSES DATA SHEET 2
RESULTS

664 311 000022

Analytical Method: 8330

AAB #: L7800016

Lab Name: Recra LabHet

Contract #: F46162495D80

Field Sample ID: DW9-001-01

Lab Sample ID: L7001806

Matrix: SOIL

% Solids: 100.0

Dilution: 1.00

Date Received: 3-Sep-97

Date Extracted: 7-Sep-97

Date Analyzed: 10-Sep-97

Concentration Units (ug/L or mg/kg dry weight): MG/KG

Analyte	MDL	PQL	Concentration	Qualifier
2,4,6-TRINITROTOLUENE	0.19	0.250	0.19	U
2,4-DINITROTOLUENE	0.13	0.250	0.13	U
2,6-DINITROTOLUENE	0.24	0.260	0.24	U
2-NITROTOLUENE	0.28	0.250	0.28	U
3-NITROTOLUENE	0.40	0.250	0.40	U
4-NITROTOLUENE	0.36	0.250	0.36	U
HEXAHYDRO-1,3,5-TRINITRO-1,3,5,7-TETRAZOCINE	0.29	1.0	0.29	U
1,3-DINITROBENZENE	0.082	0.250	0.082	U
TETRYL	0.64	0.650	0.64	U
NITROBENZENE	0.26	0.260	0.26	U
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOC	0.40	2.2	0.40	U
1,3,5-TRINITROBENZENE	0.12	0.250	0.12	U

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R

Comments:

SMK
2/27/97

664 312

AFCEE
INORGANIC ANALYSES DATA SHEET 2
RESULTS

000453

Analytical Method: 6010-A98AAB #: A8800990Lab Name: Recre LabNetContract #: F46162495080Field Sample ID: SP-002-01Lab Sample ID: A8043105Matrix: SOIL% Solids: 83.7Dilution: 1.00Date Received: 14-Feb-98Date Extracted: 17-Feb-98Date Analyzed: 25-Feb-98Concentration Units (ug/L or mg/kg dry weight): MG/KG

Analyte	MOL	PQL	Concentration	Qualifier
ALUMINUM	3.6	5.0	3760	
ANTIMONY	0.96	1.0	0.96	U
ARSENIC	0.84	2.0	4.2	
BARIUM	0.12	0.500	18.4	
BERYLLIUM	0.12	0.300	0.37	
CADMIUM	0.084	0.100	0.084	U
CALCIUM	18.1	20.0	304000	
CHROMIUM	0.42	0.500	6.4	
COBALT	0.24	0.200	1.1	
COPPER	0.42	0.500	2.8	
IRON	4.8	5.0	6520	
LEAD	0.48	1.0	3.2	
MAGNESIUM	1.8	5.0	2380	
MANGANESE	0.18	0.500	215	
MOLYBDENUM	0.36	0.500	2.4	
NICKEL	0.60	0.500	4.2	
POTASSIUM	36.1	10.0	950	
SELENIUM	0.78	1.0	0.78	U
SILVER	0.54	0.200	0.54	U
SODIUM	181	100.0	1410	
THALLIUM	1.0	2.0	1.0	U
VANADIUM	0.30	0.500	14.2	
ZINC	0.42	3.0	19.5	

Comments:

SMK
1.24

664 313

000512

AFCEE
INORGANIC ANALYSES DATA SHEET 2
RESULTS

Analytical Method: 7471-A98

AAB #: A8801067

Lab Name: Recre LabNet

Contract #: F46162495D80

Field Sample ID: SP-002-01

Lab Sample ID: A8043105

Matrix: SOIL

X Solids: 83.7

Dilution: 1.00

Date Received: 14-Feb-98

Date Extracted: _____

Date Analyzed: 20-Feb-98

Concentration Units (ug/L or mg/kg dry weight): MG/KG

Analyte	MDL	PQL	Concentration	Qualifier
MERCURY	0.047	0.100	0.047	U

Comments:

SMK
7/13/98

664 311

000367

AFCEE
ORGANIC ANALYSES DATA SHEET 2
RESULTS

Analytical Method: 8081-A98AAB #: A8801048Lab Name: Recre LabNetContract #: F46162495080Field Sample ID: SP-002-01Lab Sample ID: A8043105Matrix: SOIL% Solids: 83.7Dilution: 1.00Date Received: 14-Feb-98Date Extracted: 19-Feb-98Date Analyzed: 26-Feb-98Concentration Units (ug/L or mg/kg dry weight): MG/KG

Analyte	MDL	PQL	Concentration	Qualifier
ALPHA BHC (ALPHA HEXACHLOROCYCLOHEXANE)	0.0012	0.0190	0.0012	U
BETA BHC (BETA HEXACHLOROCYCLOHEXANE)	0.00090	0.0330	0.00090	U
DELTA BHC (DELTA HEXACHLOROCYCLOHEXANE)	0.0010	0.0110	0.0010	U
GAMMA BHC (LINDANE)	0.0010	0.020	0.0010	U
ALPHA-CHLORDANE	0.00090	0.0150	0.00090	U
GAMMA-CHLORDANE	0.00085	0.0150	0.00085	U
p,p'-DDD	0.0022	0.0420	0.0022	U
p,p'-DDE	0.0020	0.0250	0.0020	U
p,p'-DDT	0.0022	0.0360	0.0022	U
ALDRIN	0.0012	0.0220	0.0012	U
DIELDRIN	0.0022	0.0350	0.0022	U
ALPHA ENDOSULFAN	0.0011	0.0210	0.0011	U
BETA ENDOSULFAN	0.0064	0.0240	0.0064	U
ENDOSULFAN SULFATE	0.0018	0.0360	0.0018	U
ENDRIN	0.0022	0.0360	0.0022	U
ENDRIN ALDEHYDE	0.0017	0.0160	0.0017	U
HEPTACHLOR	0.0011	0.020	0.0011	U
HEPTACHLOR EPOXIDE	0.00083	0.0210	0.00083	U
METHOXYCHLOR	0.015	0.0570	0.015	U
PCB-1016 (AROCHLOR 1016)	0.0066	0.700	0.0066	U
PCB-1221 (AROCHLOR 1221)	0.0090	0.700	0.0090	U
PCB-1232 (AROCHLOR 1232)	0.0090	0.700	0.0090	U
PCB-1242 (AROCHLOR 1242)	0.0090	0.700	0.0090	U
PCB-1248 (AROCHLOR 1248)	0.011	0.700	0.011	U
PCB-1254 (AROCHLOR 1254)	0.0099	0.700	0.0099	U

664 315

000368

AFCEE
ORGANIC ANALYSES DATA SHEET 2
RESULTS

Analytical Method: 8081-A98

AAB #: A8801048

Lab Name: Recre LabNet

Contract #: F46162495080

Field Sample ID: SP-002-01

Lab Sample ID: A8043105

Matrix: SOIL

% Solids: 83.7

Dilution: 1.00

Date Received: 14-Feb-98

Date Extracted: 19-Feb-98

Date Analyzed: 26-Feb-98

Concentration Units (ug/L or mg/kg dry weight): MG/KG

Analyte	MDL	PQL	Concentration	Qualifier
PCB-1260 (AROCHLOR 1260)	0.013	0.700	0.013	U
TOXAPHENE	0.064	0.570	0.064	U

Comments:

SMK
7/2/98

664 316

0011

AFCEE
ORGANIC ANALYSES DATA SHEET 2
RESULTS

Analytical Method: 8270-A98AAB #: A8B01011Lab Name: Recra LabHetContract #: F46162495080Field Sample ID: SP-002-01Lab Sample ID: A8043105Matrix: SOIL% Solids: 83.7Dilution: 1.00Date Received: 14-Feb-98Date Extracted: 18-Feb-98Date Analyzed: 26-Feb-98Concentration Units (ug/L or mg/kg dry weight): MG/KG

Analyte	MDL	PQL	Concentration	Qualifier
1,2,4-TRICHLOROBENZENE	0.13	0.700	0.13	U
1,2-DICHLOROBENZENE	0.13	0.700	0.13	U
1,3-DICHLOROBENZENE	0.13	0.700	0.13	U
1,4-DICHLOROBENZENE	0.15	0.700	0.15	U
2,4-DINITROTOLUENE	0.14	0.700	0.14	U
2,6-DINITROTOLUENE	0.14	0.700	0.14	U
2-CHLORONAPHTHALENE	0.14	0.700	0.14	U
2-METHYLNAPHTHALENE	0.11	0.700	0.11	U
2-NITROANILINE	0.13	3.3	0.13	U
3-NITROANILINE	0.12	3.3	0.12	U
3,3'-DICHLOROBENZIDINE	0.15	1.3	0.15	U
4-BROMOPHENYL PHENYL ETHER	0.17	0.700	0.17	U
4-CHLOROANILINE	0.12	1.3	0.12	U
4-CHLOROPHENYL PHENYL ETHER	0.12	0.700	0.12	U
4-NITROANILINE	0.18	3.3	0.18	U
ACENAPHTHYLENE	0.15	0.700	0.15	U
ACENAPHTHENE	0.13	0.700	0.13	U
ANTHRACENE	0.17	0.700	0.17	U
BENZO(a)ANTHRACENE	0.19	0.700	0.19	U
BENZO(a)PYRENE	0.18	0.700	0.18	U
BENZO(b)FLUORANTHENE	0.16	0.700	0.16	U
BENZO(g,h,i)PERYLENE	0.17	0.700	0.17	U
BENZYL ALCOHOL	0.14	1.3	0.14	U
bis(2-CHLOROETHOXY) METHANE	0.14	0.700	0.14	U
bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHE	0.20	0.700	0.20	U

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SMK
7/13/98

AFCEE
ORGANIC ANALYSES DATA SHEET 2
RESULTS

000210
664 317

Analytical Method: 8270-A98

AAB #: A8801011

Lab Name: Recre LabNet

Contract #: F46162495080

Field Sample ID: SP-002-01

Lab Sample ID: A8043105

Matrix: SOIL

% Solids: 83.7

Dilution: 1.00

Date Received: 14-Feb-98

Date Extracted: 18-Feb-98

Date Analyzed: 26-Feb-98

Concentration Units (ug/L or mg/kg dry weight): MG/KG

Analyte	MDL	PQL	Concentration	Qualifier
bis(2-CHLOROISOPROPYL) ETHER	0.038	0.700	0.038	U
bis(2-ETHYLHEXYL) PHTHALATE	0.19	0.700	0.19	U
BENZYL BUTYL PHTHALATE	0.17	0.700	0.17	U
CHRYSENE	0.16	0.700	0.16	U
O1-n-BUTYL PHTHALATE	0.18	0.700	0.18	U
O1-n-OCTYL PHTHALATE	0.20	0.700	0.20	U
DIBENZ(a,h)ANTHRACENE	0.18	0.700	0.18	U
DIBENZOFURAN	0.13	0.700	0.13	U
DIETHYL PHTHALATE	0.14	0.700	0.14	U
DIMETHYL PHTHALATE	0.14	0.700	0.14	U
FLUORANTHENE	0.20	0.700	0.20	U
FLUORENE	0.15	0.700	0.15	U
HEXACHLOROBENZENE	0.14	0.700	0.14	U
HEXACHLOROBUTADIENE	0.14	0.700	0.14	U
HEXACHLOROCYCLOPENTADIENE	0.073	0.700	0.073	U
HEXACHLOROETHANE	0.14	0.700	0.14	U
INDENO(1,2,3-c,d)PYRENE	0.19	0.700	0.19	U
ISOPHORONE	0.16	0.700	0.16	U
N-NITROSODIPHENYLAMINE	0.16	0.700	0.16	U
N-NITROSODI-n-PROPYLAMINE	0.12	0.700	0.12	U
NAPHTHALENE	0.13	0.700	0.13	U
NITROBENZENE	0.13	0.700	0.13	U
PHENANTHRENE	0.18	0.700	0.18	U
PYRENE	0.17	0.700	0.17	U
2,4,5-TRICHLOROPHENOL	0.24	3.3	0.24	U

*SMK
7/13/98*

664 318

AFCEE
ORGANIC ANALYSES DATA SHEET 2
RESULTS

000216-

Analytical Method: 8270-A98AAB #: A8801011Lab Name: Recra LabNetContract #: F46162495080Field Sample ID: SP-002-01Lab Sample ID: A8043105Matrix: SOIL% Solids: 83.7Dilution: 1.00Date Received: 14-Feb-98Date Extracted: 18-Feb-98Date Analyzed: 26-Feb-98Concentration Units (ug/L or mg/kg dry weight): MG/KG

Analyte	MDL	PQL	Concentration	Qualifier
2,4,6-TRICHLOROPHENOL	0.21	0.300	0.21	U
2,4-DICHLOROPHENOL	0.31	0.300	0.31	U
2,4-DIMETHYLPHENOL	0.31	0.300	0.31	U
2,4-DINITROPHENOL	0.36	3.3	0.36	U
2-CHLOROPHENOL	0.34	0.300	0.34	U
2-METHYLPHENOL (o-CRESOL)	0.35	0.300	0.35	U
2-NITROPHENOL	0.25	0.300	0.25	U
4,6-DINITRO-2-METHYLPHENOL	0.49	3.3	0.49	U
4-CHLORO-3-METHYLPHENOL	0.23	1.3	0.23	U
4-METHYLPHENOL (p-CRESOL)	0.34	0.300	0.34	U
4-NITROPHENOL	0.22	1.6	0.22	U
BENZOIC ACID	0.43	1.6	0.43	U R
PENTACHLOROPHENOL	0.33	3.3	0.33	U
PHENOL	0.33	0.300	0.33	U

Comments:

symk
7/3/98

ENVIRONMENTAL COMPANY INC, THE
EXPLOSIVES METHOD 8330 SOLID
ANALYSIS DATA SHEET

664 319

020/035

Client No.

SP-002-01

Name: Recra LabNet

Contract: F46162495D8Q

Lab Code: RECTX Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) SOIL Lab Sample ID: H8037111

Sample wt/vol: 2.00 (g/mL) G Lab File ID: _____

% Moisture: 0.0 decanted: (Y/N) N Date Samp/Recv: 02/13/98 02/14/98

Extraction: (SepF/Cont/Sonc/Soxh): SONC Date Extracted: 02/18/98

Concentrated Extract Volume: 2500 (uL) Date Analyzed: 02/20/98

Injection Volume: 150.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) N pH: - Sulfur Cleanup: (Y/N) N

CONCENTRATION UNITS:

(ug/L or ug/Kg)

MG/KG

Q

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg)	<u>MG/KG</u>	<u>Q</u>
118-96-7-----	2,4,6-TRINITROTOLUENE		0.25	U
121-14-2-----	2,4-DINITROTOLUENE		0.25	U
606-20-2-----	2,6-DINITROTOLUENE		0.26	U
88-72-2-----	2-NITROTOLUENE		0.25	U
99-08-1-----	3-NITROTOLUENE		0.25	U
-99-0-----	4-NITROTOLUENE		0.25	U
1-82-4-----	HEXAHYDRO-1,3,5-TRINITRO-1,3,5,7-TETRAZOCI		1.0	U
99-65-0-----	1,3-DINITROBENZENE		0.25	U
479-45-8-----	TETRYL		0.65	U
98-95-3-----	NITROBENZENE		0.26	U
2691-41-0-----	OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRA		2.2	U
99-35-4-----	1,3,5-TRINITROBENZENE		0.25	U

664 320

ENVIRONMENTAL COMPANY INC, THE
EXPLOSIVES METHOD 8330 SOLID
ANALYSIS DATA SHEET

Client

SP-002-01 RE

Lab Name: Recra LabNet Contract: F46162495D80

Lab Code: RECTX Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) SOIL Lab Sample ID: H8037111RE

Sample wt/vol: 2.00 (g/mL) G Lab File ID: _____

% Moisture: 0.0 decanted: (Y/N) N Date Samp/Recv: 02/13/98 02/14/98

Extraction: (SepF/Cont/Sonc/Soxh): SONC Date Extracted: 02/26/98

Concentrated Extract Volume: 9500 (uL) Date Analyzed: 03/03/98

Injection Volume: 150.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) N pH: — Sulfur Cleanup: (Y/N) N

CONCENTRATION UNITS:
(ug/L or ug/kg) MG/KG Q

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) <u>MG/KG</u>	<u>Q</u>
118-96-7-----	2,4,6-TRINITROTOLUENE	0.25	U
121-14-2-----	2,4-DINITROTOLUENE	0.25	U
606-20-2-----	2,6-DINITROTOLUENE	0.26	U
88-72-2-----	2-NITROTOLUENE	0.25	U
99-08-1-----	3-NITROTOLUENE	0.25	U
99-99-0-----	4-NITROTOLUENE	0.25	U
121-82-4-----	HEXAHYDRO-1,3,5-TRINITRO-1,3,5,7-TETRAZOCI	1.0	U
99-65-0-----	1,3-DINITROBENZENE	0.25	U
479-45-8-----	TETRYL	0.65	U
98-95-3-----	NITROBENZENE	0.26	U
2691-41-0-----	OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRA	2.2	U
99-35-4-----	1,3,5-TRINITROBENZENE	0.25	U

AFCEE
ORGANIC ANALYSES DATA SHEET 2
RESULTS

664 321 000032

Analytical Method: 8330

AAB #: L8800020

Lab Name: Recra LabNet

Contract #: F46162495080

Field Sample ID: SP00203

Lab Sample ID: L8000504

Matrix: SOIL

% Solids: 100.0

Dilution: 2.00

Date Received: 20-May-98

Date Extracted: 25-May-98

Date Analyzed: 27-May-98

Concentration Units (ug/L or mg/kg dry weight): MG/KG

Analyte	MDL	PQL	Concentration	Qualifier
2,4,6-TRINITROTOLUENE	0.36	0.250	0.36	U
2,4-DINITROTOLUENE	0.26	0.250	0.26	U
2,6-DINITROTOLUENE	0.46	0.260	0.46	✓R
2-NITROTOLUENE	0.56	0.250	0.56	✓R
3-NITROTOLUENE	0.79	0.250	0.79	U
4-NITROTOLUENE	0.70	0.250	0.70	U
HEXAHYDRO-1,3,5-TRINITRO-1,3,5,7-TETRAZOCINE	0.56	1.0	0.56	U
1,3-DINITROBENZENE	0.16	0.250	0.16	U
TETRYL	1.3	0.650	1.3	U
NITROBENZENE	0.50	0.260	0.50	U
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOC	0.77	2.2	0.77	U
1,3,5-TRINITROBENZENE	0.23	0.250	0.23	U

Comments:

smk
10/5/98

AFCEE
INORGANIC ANALYSES DATA SHEET 2
RESULTS

664 322

0331

Analytical Method: 6010

AAB #: A7807146

Lab Name: Recra LabNet

Contract #: F46162495080

Field Sample ID: A5-004-01

Lab Sample ID: A7294510

Matrix: SOIL

% Solids: 96.4

Dilution: 1.00

Date Received: 25-Aug-97

Date Extracted: 27-Aug-97

Date Analyzed: 29-Aug-97

Concentration Units (ug/L or mg/kg dry weight): MG/KG

Analyte	MDL	PQL	Concentration	Qualifier
Aluminum - Total	3.1	5.0	7170	B
Antimony - Total	0.83	1.0	0.94	F
Arsenic - Total	0.73	2.0	4.0	
Barium - Total	0.10	0.500	39.3	B
Beryllium - Total	0.10	0.300	0.23	F
Cadmium - Total	0.073	0.100	0.26	
Calcium - Total	15.6	20.0	260000	B
Chromium - Total	0.36	0.500	8.6	
Cobalt - Total	0.21	0.200	2.1	
Copper - Total	0.36	0.500	3.6	
Iron - Total	4.2	5.0	7790	
Lead - Total	0.36	1.0	6.5	
Magnesium - Total	1.6	5.0	2260	B
Manganese - Total	0.16	0.500	200	
Molybdenum - Total	0.31	0.500	0.49	F
Nickel - Total	0.52	0.500	5.8	
Potassium - Total	31.3	10.0	1300	
Selenium - Total	0.68	1.0	0.68	U
Silver - Total	0.47	0.200	0.47	U
Sodium - Total	156	100.0	378	
Thallium - Total	0.89	2.0	0.89	U
Vanadium - Total	0.26	0.500	22.9	
Zinc - Total	0.36	3.0	16.5	

Comments:

The Calcium result was diluted by 10 fold on 09/02/97.

SMZ
PAH

664 323

APLLE
INORGANIC ANALYSES DATA SHEET 2
RESULTS

0307

Analytical Method: 7471

AAB #: A7807135

Lab Name: Recre LabHet

Contract #: F46162495D80

Field Sample ID: A5-004-01

Lab Sample ID: A7294510

Matrix: SOIL

% Solids: 96.4

Dilution: 1.00

Date Received: 25-Aug-97

Date Extracted: 27-Aug-97

Date Analyzed: 27-Aug-97

Concentration Units (ug/L or mg/kg dry weight): MG/KG

Analyte	MDL	PQL	Concentration	Qualifier
Mercury - Total	0.042	0.100	0.042	U

Comments:

SML
12-11-97

AFCEE
ORGANIC ANALYSES DATA SHEET 2
RESULTS

664 324

0154

Analytical Method: 8081

AAB #: A7807128

Lab Name: Recra LabNet

Contract #: F46162495D80

Field Sample ID: A5-004-01

Lab Sample ID: A7294510

Matrix: SOIL

% Solids: 96.4

Dilution: 4.00

Date Received: 25-Aug-97

Date Extracted: 27-Aug-97

Date Analyzed: 10-Sep-97

Concentration Units (ug/L or mg/kg dry weight): MG/KG

Analyte	MDL	PQL	Concentration	Qualifier
alpha-BHC	0.0020	0.0190	0.0020	U
beta-BHC	0.0016	0.0330	0.0016	U
delta-BHC	0.0018	0.0110	0.0018	U
gamma-BHC (Lindane)	0.0018	0.020	0.0018	U
alpha-Chlordane	0.0016	0.0150	0.0016	U
gamma-Chlordane	0.0015	0.0150	0.0015	U
4,4'-DDD	0.0039	0.0420	0.0039	U
4,4'-DDE	0.0035	0.0250	0.0035	U
4,4'-DDT	0.0039	0.0360	0.0039	U
Aldrin	0.0022	0.0220	0.0022	U
Dieldrin	0.0038	0.0350	0.0038	U
Endosulfan I	0.0018	0.0210	0.0018	U
Endosulfan II	0.0029	0.0240	0.0029	U
Endosulfan Sulfate	0.0032	0.0360	0.0032	U
Endrin	0.0037	0.0360	0.0037	U
Endrin aldehyde	0.0030	0.0160	0.0030	U
Heptachlor	0.0020	0.020	0.0020	U
Heptachlor epoxide	0.0014	0.0210	0.0014	U
Methoxychlor	0.026	0.0570	0.026	U
Aroclor 1016	0.011	0.700	0.011	U
Aroclor 1221	0.016	0.700	0.016	U
Aroclor 1232	0.016	0.700	0.016	U
Aroclor 1242	0.016	0.700	0.016	U
Aroclor 1248	0.018	0.700	0.018	U
Aroclor 1254	0.017	0.700	0.017	U

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664 325

AFCEE
ORGANIC ANALYSES DATA SHEET 2
RESULTS

0155

Analytical Method: 8081

AAS #: A7807128

Lab Name: Recra LabNet

Contract #: F46162495080

Field Sample ID: A5-004-01

Lab Sample ID: A7294510

Matrix: SOIL

% Solids: 96.4

Dilution: 4.00

Date Received: 25-Aug-97

Date Extracted: 27-Aug-97

Date Analyzed: 10-Sep-97

Concentration Units (ug/L or mg/kg dry weight): MG/KG

Analyte	MDL	PQL	Concentration	Qualifier
Aroclor 1260	0.023	0.700	0.023	U
Toxaphene	0.11	0.570	0.11	U

Comments:

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12.11.97

AFCEE
ORGANIC ANALYSES DATA SHEET 2
RESULTS

664 326

0023

Analytical Method: 8270

AAB #: H7B00812

Lab Name: Recra LabNet

Contract #: F46162495080

Field Sample ID: A5-004-01

Lab Sample ID: A7294510

Matrix: SOIL

% Solids: 96.4

Dilution: 1.00

Date Received: 25-Aug-97

Date Extracted: 28-Aug-97

Date Analyzed: 4-Sep-97

Concentration Units (ug/L or mg/kg dry weight): MG/KG

Analyte	MDL	PQL	Concentration	Qualifier
1,2,4-TRICHLOROBENZENE	0.073	0.700	0.073	U
1,2-DICHLOROBENZENE	0.075	0.700	0.075	U
1,3-DICHLOROBENZENE	0.075	0.700	0.075	U
1,4-DICHLOROBENZENE	0.080	0.700	0.080	U
2,4-DINITROTOLUENE	0.082	0.700	0.082	U
2,6-DINITROTOLUENE	0.080	0.700	0.080	U
2-CHLORONAPHTHALENE	0.066	0.700	0.066	U
2-METHYLNAPHTHALENE	0.077	0.700	0.077	U
2-NITROANILINE	0.28	3.3	0.28	U
3-NITROANILINE	0.21	3.3	0.21	U
3,3'-DICHLOROBENZIDINE	0.054	1.3	0.054	U
4-BROMOPHENYL PHENYL ETHER	0.061	0.700	0.061	U
4-CHLOROANILINE	0.044	1.3	0.044	U
4-CHLOROPHENYL PHENYL ETHER	0.072	0.700	0.072	U
4-NITROANILINE	0.24	3.3	0.24	U
ACENAPHTHYLENE	0.067	0.700	0.067	U
ACENAPHTHENE	0.065	0.700	0.065	U
ANTHRACENE	0.073	0.700	0.073	U
BENZO(a)ANTHRACENE	0.084	0.700	0.084	U
BENZO(a)PYRENE	0.084	0.700	0.084	U
BENZO(b)FLUORANTHENE	0.15	0.700	0.15	U
BENZO(g,h,i)PERYLENE	0.099	0.700	0.099	U
BENZYL ALCOHOL	0.093	1.3	0.093	U
bis(2-CHLOROETHOXY) METHANE	0.066	0.700	0.066	U
bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHE	0.084	0.700	0.084	U

12/10/97

664 327

AFCEE
ORGANIC ANALYSES DATA SHEET 2
RESULTS

0024

Analytical Method: 8270AAB #: H7B00812Lab Name: Recre LabHetContract #: F46162495D80Field Sample ID: A5-004-01Lab Sample ID: A7294510Matrix: SOIL% Solids: 96.4Dilution: 1.00Date Received: 25-Aug-97Date Extracted: 28-Aug-97Date Analyzed: 4-Sep-97Concentration Units (ug/L or mg/kg dry weight): MG/KG

Analyte	MDL	PQL	Concentration	Qualifier
bis(2-CHLOROISOPROPYL) ETHER	0.10	0.700	0.10	U
bis(2-ETHYLHEXYL) PHTHALATE	0.082	0.700	0.082	U
BENZYL BUTYL PHTHALATE	0.080	0.700	0.080	U
CHRYSENE	0.10	0.700	0.10	U
DI-n-BUTYL PHTHALATE	0.074	0.700	0.074	U
DI-n-OCTYL PHTHALATE	0.098	0.700	0.098	U
O1BENZ(a,h)ANTHRACENE	0.097	0.700	0.097	U
DIBENZOFURAN	0.070	0.700	0.070	U
DIETHYL PHTHALATE	0.085	0.700	0.085	U
DIMETHYL PHTHALATE	0.074	0.700	0.074	U
FLUORANTHENE	0.10	0.700	0.10	U
FLUORENE	0.074	0.700	0.074	U
HEXACHLOROBENZENE	0.065	0.700	0.065	U
HEXACHLOROBUTADIENE	0.080	0.700	0.080	U
HEXACHLOROCYCLOPENTADIENE	0.057	0.700	0.057	U
HEXACHLOROETHANE	0.084	0.700	0.084	U
INDENO(1,2,3-c,d)PYRENE	0.097	0.700	0.097	U
ISOPHORONE	0.076	0.700	0.076	U
N-NITROSODIPHENYLAMINE	0.072	0.700	0.072	U
N-NITROSODI-n-PROPYLAMINE	0.079	0.700	0.079	U
NAPHTHALENE	0.069	0.700	0.069	U
NITROBENZENE	0.076	0.700	0.076	U
PHENANTHRENE	0.074	0.700	0.074	U
PYRENE	0.10	0.700	0.10	U
2,4,5-TRICHLOROPHENOL	0.33	3.3	0.33	U

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12/10/97

AFCEE
ORGANIC ANALYSES DATA SHEET 2
RESULTS

664 328

0025

Analytical Method: 8270

AAB #: H7B00812

Lab Name: Recre LabNet

Contract #: F46162495DB0

Field Sample ID: A5-004-01

Lab Sample ID: A7294510

Matrix: SOIL

% Solids: 96.4

Dilution: 1.00

Date Received: 25-Aug-97

Date Extracted: 28-Aug-97

Date Analyzed: 4-Sep-97

Concentration Units (ug/L or mg/kg dry weight): MG/KG

Analyte	MDL	PQL	Concentration	Qualifier
2,4,6-TRICHLOROPHENOL	0.084	0.300	0.084	U
2,4-DICHLOROPHENOL	0.029	0.300	0.029	U
2,4-DIMETHYLPHENOL	0.062	0.300	0.062	U
2,4-DINITROPHENOL	0.18	3.3	0.18	U
2-CHLOROPHENOL	0.083	0.300	0.083	U
2-METHYLPHENOL (o-CRESOL)	0.11	0.300	0.11	U
2-NITROPHENOL	0.075	0.300	0.075	U
4,6-DINITRO-2-METHYLPHENOL	0.25	3.3	0.25	U
4-CHLORO-3-METHYLPHENOL	0.086	1.3	0.086	U
4-METHYLPHENOL (p-CRESOL)	0.090	0.300	0.090	U
4-NITROPHENOL	0.29	1.6	0.29	U
BENZOIC ACID	0.080	1.6	0.080	U
PENTACHLOROPHENOL	0.22	3.3	0.22	U
PHENOL	0.092	0.300	0.092	U

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Comments:

10/97

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664 329

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ORGANIC ANALYSES DATA SHEET 2
RESULTS

000036

Analytical Method: 8330

AAS #: L7B00007

Lab Name: Recre LabNet

Contract #: F46162495D80

Field Sample ID: A5-004-01

Lab Sample ID: L7000710

Matrix: SOIL

% Solids: 100.0

Dilution: 1.00

Date Received: 25-Aug-97

Date Extracted: 26-Aug-97

Date Analyzed: 28-Aug-97

Concentration Units (ug/L or mg/kg dry weight): MG/KG

Analyte	MDL	PQL	Concentration	Qualifier
2,4,6-TRINITROTOLUENE	0.18	0.250	0.18	U
2,4-DINITROTOLUENE	0.13	0.250	0.13	U
2,6-DINITROTOLUENE	0.23	0.260	0.23	U
2-NITROTOLUENE	0.28	0.250	0.28	X R
3-NITROTOLUENE	0.40	0.250	0.40	X R
4-NITROTOLUENE	0.35	0.250	0.35	X R
HEXAHYDRO-1,3,5-TRINITRO-1,3,5,7-TETRAZOCINE	0.28	1.0	0.28	U
1,3-DINITROBENZENE	0.081	0.250	0.081	U
TETRYL	0.63	0.650	0.63	U
NITROBENZENE	0.25	0.260	0.25	U
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOC	0.39	2.2	0.39	U
1,3,5-TRINITROBENZENE	0.12	0.250	0.12	U

Comments:

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2/20/97

AFCEE
INORGANIC ANALYSES DATA SHEET 2
RESULTS

664 330

407279

Analytical Method: 6010

AAB #: A7B07439

Lab Name: Recra LabNet

Contract #: F46162495080

Field Sample ID: A5-004-02

Lab Sample ID: A7313001

Matrix: SOIL

% Solids: 93.9

Dilution: 1.00

Date Received: 5-Sep-97

Date Extracted: 8-Sep-97

Date Analyzed: 30-Sep-97

Concentration Units (ug/L or mg/kg dry weight): MG/KG

Analyte	MDL	PQL	Concentration	Qualifier
Aluminum - Total	3.2	5.0	1870	B
Antimony - Total	0.85	1.0	1.2	
Arsenic - Total	0.74	2.0	3.9	
Barium - Total	0.10	0.500	20.4	
Beryllium - Total	0.10	0.300	0.28	F
Cadmium - Total	0.074	0.100	0.20	
Calcium - Total	15.9	20.0	307000	B
Chromium - Total	0.37	0.500	4.4	
Cobalt - Total	0.21	0.200	1.2	
Copper - Total	0.37	0.500	2.6	
Iron - Total	4.2	5.0	4470	
Lead - Total	0.37	1.0	2.8	
Magnesium - Total	1.6	5.0	2290	
Manganese - Total	0.16	0.500	159	
Molybdenum - Total	0.32	0.500	2.4	
Nickel - Total	0.53	0.500	3.4	
Potassium - Total	31.8	10.0	585	
Selenium - Total	0.69	1.0	0.69	U
Silver - Total	0.48	0.200	0.48	U
Sodium - Total	159	100.0	1440	B
Thallium - Total	0.90	2.0	0.90	U
Vanadium - Total	0.26	0.500	13.7	
Zinc - Total	0.37	3.0	13.0	

Comments:

CALCIUM WAS DILUTED X10 ON 10/01/97.

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3/16/98

664 331

AFCEE
INORGANIC ANALYSES DATA SHEET 2
RESULTS

00314

Analytical Method: 7471

AAB #: A7B07718

Lab Name: Recra LabNet

Contract #: F46162495D80

Field Sample ID: A5-004-02

Lab Sample ID: A7313001

Matrix: SOIL

% Solids: 93.9

Dilution: 1.00

Date Received: 5-Sep-97

Date Extracted: 17-Sep-97

Date Analyzed: 17-Sep-97

Concentration Units (ug/L or mg/kg dry weight): MG/KG

Analyte	MDL	PQL	Concentration	Qualifier
Mercury - Total	0.043	0.100	0.043	U

Comments:

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4/6/98

AFCEE
ORGANIC ANALYSES DATA SHEET 2
RESULTS

664 332 000040

Analytical Method: 8081

AAB #: A7807574

Lab Name: Recra LabNet

Contract #: F46162495D80

Field Sample ID: A5-004-02

Lab Sample ID: A7313001

Matrix: SOIL

% Solids: 93.9

Dilution: 4.00

Date Received: 5-Sep-97

Date Extracted: 11-Sep-97

Date Analyzed: 23-Sep-97

Concentration Units (ug/L or mg/kg dry weight): MG/KG

Analyte	MDL	PQL	Concentration	Qualifier
alpha-BHC	0.0021	0.0190	0.0021	U
beta-BHC	0.0016	0.0330	0.0016	U
delta-BHC	0.0018	0.0110	0.0018	U
gamma-BHC (Lindane)	0.0018	0.020	0.0018	U
alpha-Chlordane	0.0016	0.0150	0.0016	U
gamma-Chlordane	0.0015	0.0150	0.0015	U
4,4'-OOD	0.0039	0.0420	0.0039	U
4,4'-DDE	0.0036	0.0250	0.0036	U
4,4'-DDT	0.0039	0.0360	0.0039	U
Aldrin	0.0022	0.0220	0.0022	U
Dieldrin	0.0038	0.0350	0.0038	U
Endosulfan I	0.0018	0.0210	0.0018	U
Endosulfan II	0.0029	0.0240	0.0029	U
Endosulfan Sulfate	0.0032	0.0360	0.0032	U
Endrin	0.0038	0.0360	0.0038	U
Endrin aldehyde	0.0030	0.0160	0.0030	U
Heptachlor	0.0020	0.020	0.0020	U
Heptachlor epoxide	0.0014	0.0210	0.0014	U
Methoxychlor	0.026	0.0570	0.026	U
Aroclor 1016	0.012	0.700	0.012	U
Aroclor 1221	0.016	0.700	0.016	U
Aroclor 1232	0.016	0.700	0.016	U
Aroclor 1242	0.016	0.700	0.016	U
Aroclor 1248	0.018	0.700	0.018	U
Aroclor 1254	0.017	0.700	0.017	U

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3/10/97*

664 333

AFCEE
ORGANIC ANALYSES DATA SHEET 2
RESULTS

000041

Analytical Method: 8081

AAB #: A7807574

Lab Name: Recre LabNet

Contract #: F46162495080

Field Sample ID: A5-004-02

Lab Sample ID: A7313001

Matrix: SOIL

% Solids: 93.9

Dilution: 4.00

Date Received: 5-Sep-97

Date Extracted: 11-Sep-97

Date Analyzed: 23-Sep-97

Concentration Units (ug/L or mg/kg dry weight): MG/KG

Analyte	MDL	PQL	Concentration	Qualifier
Aroclor 1260	0.023	0.700	0.023	U
Toxaphene	0.11	0.570	0.11	U

Comments:

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3/16/98

AFCEE
ORGANIC ANALYSES DATA SHEET 2
RESULTS

664 334 000238

Analytical Method: 8260

AAB #: A7B07739

Lab Name: Recra LabNet

Contract #: F46162495D80

Field Sample ID: A5-004-02

Lab Sample ID: A7313001

Matrix: SOIL

% Solids: 95.6

Dilution: 1.00

Date Received: 5-Sep-97

Date Extracted: _____

Date Analyzed: 13-Sep-97

Concentration Units (ug/L or mg/kg dry weight): MG/KG

Analyte	MDL	PQL	Concentration	Qualifier
1,1,1,2-Tetrachloroethane	0.00095	0.0030	0.00095	U
1,1,1-Trichloroethane	0.00095	0.0040	0.00095	U
1,1,2,2-Tetrachloroethane	0.00093	0.0020	0.00093	U
1,1,2-Trichloroethane	0.00077	0.0050	0.00077	U
1,1-Dichloroethane	0.0012	0.0020	0.0012	U
1,1-Dichloroethene	0.0013	0.0060	0.0013	U
1,1-Dichloropropene	0.0011	0.0050	0.0011	U
1,2,3-Trichlorobenzene	0.00067	0.0020	0.00067	U
1,2,3-Trichloropropane	0.0011	0.020	0.0011	U
1,2,4-Trichlorobenzene	0.00071	0.0020	0.00071	U
1,2,4-Trimethylbenzene	0.00085	0.0070	0.00085	U
1,2-Dichloroethane	0.00097	0.0030	0.00097	U
1,2-Dichlorobenzene	0.00089	0.0020	0.00089	U
1,2-Dibromo-3-chloropropane	0.0015	0.010	0.0015	U
1,2-Dichloropropane	0.00082	0.0020	0.00082	U
1,2-Dibromoethane	0.0011	0.0030	0.0011	U
1,3,5-Trimethylbenzene	0.0010	0.0030	0.0010	U
1,3-Dichlorobenzene	0.00078	0.0060	0.00078	U
1,3-Dichloropropane	0.00074	0.0020	0.00074	U
1,4-Dichlorobenzene	0.00066	0.0020	0.00066	U
1-Chlorohexane	0.00082	0.0030	0.00082	U
2,2-Dichloropropane	0.0013	0.020	0.0013	U
o-Chlorotoluene	0.00065	0.0020	0.00065	U
p-Chlorotoluene	0.00078	0.0030	0.00078	U
Benzene	0.00069	0.0020	0.00069	U

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3/18/97

664 335

AFCEE
ORGANIC ANALYSES DATA SHEET 2
RESULTS

007230

Analytical Method: 8260AAB #: A7B07739Lab Name: Recre LabNetContract #: F46162495D80Field Sample ID: A5-004-02Lab Sample ID: A7313001Matrix: SOIL% Solids: 95.6Dilution: 1.00Date Received: 5-Sep-97

Date Extracted: _____

Date Analyzed: 13-Sep-97Concentration Units (ug/L or mg/kg dry weight): MG/KG

Analyte	MDL	PQL	Concentration	Qualifier
Bromobenzene	0.00088	0.0020	0.00088	U
Bromochloromethane	0.00049	0.0020	0.00049	U
Bromodichloromethane	0.00062	0.0040	0.00062	U
Bromoform	0.00080	0.0060	0.00080	U
Bromomethane	0.0013	0.0050	0.0013	U
Carbon Tetrachloride	0.0013	0.010	0.0013	U
Chlorobenzene	0.00085	0.0020	0.00085	U
Chloroethane	0.0013	0.0050	0.0013	U
Chloroform	0.00078	0.0020	0.00078	U
Chloromethane	0.0010	0.0070	0.0010	U
cis-1,2-Dichloroethene	0.00084	0.0060	0.00084	U
cis-1,3-Dichloropropene	0.00065	0.0050	0.00065	U
Dibromochloromethane	0.00085	0.0030	0.00085	U
Dibromomethane	0.00038	0.010	0.00038	U
Dichlorodifluoromethane	0.0033	0.0050	0.0033	U
Ethylbenzene	0.0010	0.0030	0.0010	U
Hexachlorobutadiene	0.00069	0.0050	0.00069	U
Isopropylbenzene	0.0010	0.0080	0.0010	U
m-Xylene	0.00064	0.0030	0.00064	U
Methylene chloride	0.0011	0.0020	0.0016	BF
n-Butylbenzene	0.00073	0.0050	0.00073	U
n-Propylbenzene	0.00095	0.0020	0.00095	U
Naphthalene	0.00082	0.0020	0.00082	U
o-Xylene	0.00064	0.0050	0.00064	U
p-Cymene	0.00094	0.0060	0.00094	U

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ORGANIC ANALYSES DATA SHEET 2
RESULTS

664 336 00024

Analytical Method: 8260

AAB #: A7B07739

Lab Name: Recre LabHet

Contract #: F46162495080

Field Sample ID: A5-004-02

Lab Sample ID: A7313001

Matrix: SOIL

% Solids: 95.6

Dilution: 1.00

Date Received: 5-Sep-97

Date Extracted: _____

Date Analyzed: 13-Sep-97

Concentration Units (ug/L or mg/kg dry weight): MG/KG

Analyte	MDL	PQL	Concentration	Qualifier
p-Xylene	0.00064	0.0070	0.00064	U
sec-Butylbenzene	0.00092	0.0070	0.00092	U
Styrene	0.00098	0.0020	0.00098	U
Trichloroethene	0.0010	0.010	0.0010	U
tert-Butylbenzene	0.0011	0.0070	0.0011	U
Tetrachloroethene	0.0011	0.0070	0.0011	U
Toluene	0.0010	0.0050	0.0010	U
trans-1,2-Dichloroethene	0.0013	0.0030	0.0013	U
trans-1,3-Dichloropropene	0.00084	0.0050	0.00084	U
Trichlorofluoromethane	0.0028	0.0040	0.0028	U
Vinyl chloride	0.0011	0.0090	0.0011	U

Comments:

SMK
3/18/97

664 337

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ORGANIC ANALYSES DATA SHEET 2
RESULTS

000165

Analytical Method: 8270AAB #: A7807482Lab Name: Recra LabNetContract #: F46162495D80Field Sample ID: A5-004-02Lab Sample ID: A7313001Matrix: SOIL% Solids: 93.9Dilution: 1.00Date Received: 5-Sep-97Date Extracted: 9-Sep-97Date Analyzed: 17-Sep-97Concentration Units (ug/L or mg/kg dry weight): MG/KG

Analyte	MDL	PQL	Concentration	Qualifier
1,2,4-Trichlorobenzene	0.026	0.700	0.026	U
1,2-Dichlorobenzene	0.053	0.700	0.053	U
1,3-Dichlorobenzene	0.042	0.700	0.042	U
1,4-Dichlorobenzene	0.049	0.700	0.049	U
2,4-Dinitrotoluene	0.046	0.700	0.046	U
2,6-Dinitrotoluene	0.062	0.700	0.062	U
2-Chloronaphthalene	0.053	0.700	0.053	U
2-Methylnaphthalene	0.038	0.700	0.038	U
2-Nitroaniline	0.053	3.3	0.053	U
3-Nitroaniline	0.067	3.3	0.067	U
3,3'-Dichlorobenzidine	0.056	1.3	0.056	U
4-Bromophenyl phenyl ether	0.062	0.700	0.062	U
4-Chloroaniline	0.035	1.3	0.035	U
4-Chlorodiphenylether	0.049	0.700	0.049	U
4-Nitroaniline	0.10	3.3	0.10	U
Acenaphthylene	0.042	0.700	0.042	U
Acenaphthene	0.049	0.700	0.049	U
Anthracene	0.053	0.700	0.053	U
Benzo(a)anthracene	0.056	0.700	0.056	U
Benzo(a)pyrene	0.056	0.700	0.056	U
Benzo(b)fluoranthene	0.10	0.700	0.10	U
Benzo(ghi)perylene	0.10	0.700	0.10	U
Benzyl alcohol	0.35	1.3	0.35	U
Bis(2-chloroethoxy) methane	0.042	0.700	0.042	U
Bis(2-chloroethyl) ether	0.058	0.700	0.058	U

SMM
3/11/97

AFCEE
ORGANIC ANALYSES DATA SHEET 2
RESULTS

664 338

000166

Analytical Method: 8270

AAB #: A7B07482

Lab Name: Recra LabNet

Contract #: F46162495080

Field Sample ID: A5-004-02

Lab Sample ID: A7313001

Matrix: SOIL

% Solids: 93.9

Dilution: 1.00

Date Received: 5-Sep-97

Date Extracted: 9-Sep-97

Date Analyzed: 17-Sep-97

Concentration Units (ug/L or mg/kg dry weight): MG/KG

Analyte	MDL	PQL	Concentration	Qualifier
Bis(2-chloroisopropyl) ether	0.035	0.700	0.035	U
Bis(2-ethylhexyl) phthalate	0.077	0.700	0.077	U
Butyl benzyl phthalate	0.056	0.700	0.056	U
Chrysene	0.058	0.700	0.058	U
Di-n-butyl phthalate	0.053	0.700	0.053	U
Di-n-octyl phthalate	0.062	0.700	0.062	U
Dibenzo(a,h)anthracene	0.062	0.700	0.062	U
Dibenzofuran	0.056	0.700	0.056	U
Diethyl phthalate	0.058	0.700	0.058	U
Dimethyl phthalate	0.042	0.700	0.042	U
Fluoranthene	0.070	0.700	0.070	U
Fluorene	0.062	0.700	0.062	U
Hexachlorobenzene	0.077	0.700	0.077	U
Hexachlorobutadiene	0.042	0.700	0.042	U
Hexachlorocyclopentadiene	0.067	0.700	0.067	U
Hexachloroethane	0.030	0.700	0.030	U
Indeno(1,2,3-cd)pyrene	0.11	0.700	0.11	U
Isophorone	0.042	0.700	0.042	U
N-nitrosodiphenylamine	0.046	0.700	0.046	U
N-Nitroso-Di-n-propylamine	0.035	0.700	0.035	U
Naphthalene	0.046	0.700	0.046	U
Nitrobenzene	0.070	0.700	0.070	U
Phenanthrene	0.049	0.700	0.049	U
Pyrene	0.067	0.700	0.067	U
2,4,5-Trichlorophenol	0.098	3.3	0.098	U

SMK
3/16/97

664 339

007167

AFCEE
ORGANIC ANALYSES DATA SHEET 2
RESULTS

Analytical Method: 8270

AAB #: A7807482

Lab Name: Recra LabNet

Contract #: F46162495080

Field Sample ID: A5-004-02

Lab Sample ID: A7313001

Matrix: SOIL

% Solids: 93.9

Dilution: 1.00

Date Received: 5-Sep-97

Date Extracted: 9-Sep-97

Date Analyzed: 17-Sep-97

Concentration Units (ug/L or mg/kg dry weight): MG/KG

Analyte	MOL	PQL	Concentration	Qualifier
2,4,6-Trichlorophenol	0.11	0.300	0.11	U
2,4-Dichlorophenol	0.030	0.300	0.030	U
2,4-Dimethylphenol	0.058	0.300	0.058	U
2,4-Dinitrophenol	0.073	3.3	0.073	U R
2-Chlorophenol	0.038	0.300	0.038	U
2-Methylphenol	0.088	0.300	0.088	U
2-Nitrophenol	0.053	0.300	0.053	U
4,6-Dinitro-2-methylphenol	0.067	3.3	0.067	U
4-Chloro-3-methylphenol	0.038	1.3	0.038	U
4-Methylphenol	0.035	0.300	0.035	U
4-Nitrophenol	0.10	1.6	0.10	U
Benzoic acid	1.7	1.6	1.7	U
Pentachlorophenol	0.13	3.3	0.13	U
Phenol	0.088	0.300	0.088	U

Comments:

SMK
3/16/97

RFW Batch Number: 9709L211 Client: THE ENVIRONMENTAL CO Work Order: 70000003001 Page: 1

Cust ID: A5-004-02 BLK BLK BS

Sample Information RFW#: 001 97LLC148-MBI 97LLC148-MBI
 Matrix: SOIL SOIL SOIL
 D.F.: 1.00 1.00 1.00
 Units: ug/Kg ug/Kg ug/Kg

Sample Information	105	117	104
1,2-Dinitrobenzene	2100 U	2200 U	95
RDX	980 U	1000 U	96
1,3,5-Trinitrobenzene	240 U	250 U	92
1,3-Dinitrobenzene	240 U	250 U	94
Nitrobenzene	250 U	260 U	95
Tetryl	730 U	750 U	105
2,4,6-Trinitrotoluene	240 U	250 U	122
2,6-Dinitrotoluene	250 U	260 U	99
2,4-Dinitrotoluene	240 U	250 U	103
2-Nitrotoluene	980 U	1000 U	97
4-Nitrotoluene	2900 U	3000 U	97
3-Nitrotoluene	980 U	1000 U	98

U= Analyzed, not detected. J= Present below detection limit. B= Present in blank. NR= Not reported. NS= Not spiked.
 % = Percent recovery. D= Diluted out. I= Interference. NA= Not Applicable. * = Outside of EPA CLP CC

664-341

AFCEE
INORGANIC ANALYSES DATA SHEET 2
RESULTS

0209

Analytical Method: 6010

AAB #: A7807997

Lab Name: Recre LabNet

Contract #: F46162495D80

Field Sample ID: DW5-002-01

Lab Sample ID: A7305001

Matrix: SOIL

% Solids: 95.1

Dilution: 1.00

Date Received: 3-Sep-97

Date Extracted: 23-Sep-97

Date Analyzed: 24-Sep-97

Concentration Units (ug/L or mg/kg dry weight): MG/KG

Analyte	MDL	PQL	Concentration	Qualifier
Aluminum - Total	3.1	5.0	6670	
Antimony - Total	0.83	1.0	1.3	
Arsenic - Total	0.72	2.0	4.0	
Cadmium - Total	0.072	0.100	0.27	
Cobalt - Total	0.21	0.200	4.1	
Iron - Total	4.1	5.0	7190	
Lead - Total	0.36	1.0	10	
Magnesium - Total	1.6	5.0	1970	J
Manganese - Total	0.16	0.500	341	
Potassium - Total	31.1	10.0	1100	J
Selenium - Total	0.67	1.0	0.67	X R
Silver - Total	0.47	0.200	0.47	U
Zinc - Total	0.36	3.0	50.1	

Comments:

SMK
11/8

AFCEE
INORGANIC ANALYSES DATA SHEET 2
RESULTS

664 342 0175

Analytical Method: 6010

AAB #: A7807539

Lab Name: Regra LabWet

Contract #: F46162495080

Field Sample ID: 045-002-01

Lab Sample ID: A7305001

Matrix: SOIL

% Solids: 95.1

Dilutions: 1.00

Date Received: 3-Sep-97

Date Extracted: 10-Sep-97

Date Analyzed: 21-Sep-97

Concentration Units (ug/L or mg/kg dry weight): MG/KG

Analyte	MOL	PQL	Concentration	Qualifier
BARIUM	0.10	0.500	97.6	
BERYLLIUM	0.10	0.300	0.64	
CALCIUM	15.7	20.0	180000	
CHROMIUM	0.37	0.500	9.7	
COPPER	0.37	0.500	8.8	
MOLYBDENUM	0.31	0.500	2.0	
NICKEL	0.52	0.500	10.3	
SODIUM	157	100.0	1310	
THALLIUM	0.89	2.0	0.89	'J
VANADIUM	0.26	0.500	32.0	

Comments:
The Calcium result was diluted by 10 fold on 09/25/97.

Thallium analyzed 1/20/98

SMK
1/20/98

664 343 .

AFCEE
INORGANIC ANALYSES DATA SHEET 2
RESULTS

0158

Analytical Method: 7471

AAB #: A7807501

Lab Name: Recra LabNet

Contract #: F46162495D80

Field Sample ID: DW5-002-01

Lab Sample ID: A7305001

Matrix: SOIL

% Solids: 95.1

Dilution: 1.00

Date Received: 3-Sep-97

Date Extracted: 10-Sep-97

Date Analyzed: 10-Sep-97

Concentration Units (ug/L or mg/kg dry weight): MG/KG

Analyte	MDL	PQL	Concentration	Qualifier
Mercury - Total	0.042	0.100	0.042	U

Comments:

smk
11/97

AFCEE
ORGANIC ANALYSES DATA SHEET 2
RESULTS

664 344

0170

Analytical Method: 8081

AAB #: A7807358

Lab Name: Recra LabNet

Contract #: F46162495080

Field Sample ID: DW5-002-01

Lab Sample ID: A7305812

Matrix: SOIL

% Solids: 94.8

Dilution: 4.00

Date Received: 3-Sep-97

Date Extracted: 4-Sep-97

Date Analyzed: 17-Sep-97

Concentration Units (ug/L or mg/kg dry weight): MG/KG

Analyte	MDL	PQL	Concentration	Qualifier
alpha-BHC	0.0021	0.0190	0.0021	U
beta-BHC	0.0016	0.0330	0.0016	U
delta-BHC	0.0018	0.0110	0.0018	U
gamma-BHC (Lindane)	0.0018	0.020	0.0018	U
alpha-Chlordane	0.0016	0.0150	0.0016	U
gamma-Chlordane	0.0015	0.0150	0.0015	U
4,4'-DDD	0.0040	0.0420	0.0040	U
4,4'-DDE	0.0036	0.0250	0.0036	U
4,4'-DDT	0.0040	0.0360	0.0040	U
Aldrin	0.0022	0.0220	0.0022	U
Dieldrin	0.0039	0.0350	0.0039	U
Endosulfan I	0.0019	0.0210	0.0019	U
Endosulfan II	0.0029	0.0240	0.0029	U
Endosulfan Sulfate	0.0032	0.0360	0.0032	U
Endrin	0.0038	0.0360	0.0038	U
Endrin aldehyde	0.0030	0.0160	0.0030	U
Heptachlor	0.0020	0.020	0.0020	U
Heptachlor epoxide	0.0015	0.0210	0.0015	U
Methoxychlor	0.026	0.0570	0.026	U
Aroclor 1016	0.012	0.700	0.012	U
Aroclor 1221	0.016	0.700	0.016	U
Aroclor 1232	0.016	0.700	0.016	U
Aroclor 1242	0.016	0.700	0.016	U
Aroclor 1248	0.019	0.700	0.019	U
Aroclor 1254	0.018	0.700	0.018	U

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SMY
3

664 345

0180

AFCEE
ORGANIC ANALYSES DATA SHEET 2
RESULTS

Analytical Method: 8081

AAB #: A7807358

Lab Name: Recre LabWet

Contract #: F46162495080

Field Sample ID: DW5-002-01

Lab Sample ID: A7305812

Matrix: SOIL

% Solids: 94.8

Dilution: 4.00

Date Received: 3-Sep-97

Date Extracted: 4-Sep-97

Date Analyzed: 17-Sep-97

Concentration Units (ug/L or mg/kg dry weight): MG/KG

Analyte	MDL	PQL	Concentration	Qualifier
Aroclor 1260	0.023	0.700	0.023	U <i>R</i>
Toxaphene	0.11	0.570	0.11	U

Comments:

SMK
9/13/97

AFCEE
ORGANIC ANALYSES DATA SHEET 2
RESULTS

664 346

0073

Analytical Method: 8260

AAB #: A7B07729

Lab Name: Recra LabNet

Contract #: F46162495080

Field Sample ID: DW5-002-01

Lab Sample ID: A7305612

Matrix: SOIL

% Solids: 98.6

Dilution: 1.00

Date Received: 3-Sep-97

Date Extracted: _____

Date Analyzed: 11-Sep-97

Concentration Units (ug/L or mg/kg dry weight): MG/KG

Analyte	MDL	PQL	Concentration	Qualifier
1,1,1,2-Tetrachloroethane	0.00092	0.0030	0.00092	J
1,1,1-Trichloroethane	0.00092	0.0040	0.00092	J
1,1,2,2-Tetrachloroethane	0.00090	0.0020	0.00090	J
1,1,2-Trichloroethane	0.00076	0.0050	0.00076	J
1,1-Dichloroethane	0.0012	0.0020	0.0012	J
1,1-Dichloroethene	0.0013	0.0060	0.0013	J
1,1-Dichloropropene	0.0011	0.0050	0.0011	J
1,2,3-Trichlorobenzene	0.00066	0.0020	0.00066	J
1,2,3-Trichloropropane	0.0011	0.020	0.0011	J
1,2,4-Trichlorobenzene	0.00070	0.0020	0.00070	J
1,2,4-Trimethylbenzene	0.00082	0.0070	0.00082	J
1,2-Dichloroethane	0.00094	0.0030	0.00094	J
1,2-Dichlorobenzene	0.00086	0.0020	0.00086	J
1,2-Dibromo-3-chloropropane	0.0015	0.010	0.0015	J
1,2-Dichloropropane	0.00080	0.0020	0.00080	J
1,2-Dibromoethane	0.0011	0.0030	0.0011	J
1,3,5-Trimethylbenzene	0.00098	0.0030	0.00098	J
1,3-Dichlorobenzene	0.00076	0.0060	0.00076	J
1,3-Dichloropropane	0.00072	0.0020	0.00072	J
1,4-Dichlorobenzene	0.00065	0.0020	0.00065	J
1-Chlorohexane	0.00080	0.0030	0.00080	J
2,2-Dichloropropane	0.0013	0.020	0.0013	J
o-Chlorotoluene	0.00064	0.0020	0.00064	J
p-Chlorotoluene	0.00076	0.0030	0.00076	J
Benzene	0.00068	0.0020	0.00068	J

R
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SMK
11/10/98

664 347

AFCEE
ORGANIC ANALYSES DATA SHEET 2
RESULTS

0074

Analytical Method: B260AAB #: A7807729Lab Name: Recre LabNetContract #: F46162495080Field Sample ID: DW5-002-01Lab Sample ID: A7305612Matrix: SOIL% Solids: 98.6Dilution: 1.00Date Received: 3-Sep-97

Date Extracted: _____

Date Analyzed: 11-Sep-97Concentration Units (ug/L or mg/kg dry weight): MG/KG

Analyte	MDL	PQL	Concentration	Qualifier
Bromobenzene	0.00085	0.0020	0.00085	J
Bromochloromethane	0.00048	0.0020	0.00048	J
Bromodichloromethane	0.00061	0.0040	0.00061	J
Bromoform	0.00078	0.0060	0.00078	J
Bromomethane	0.0013	0.0050	0.0013	J
Carbon Tetrachloride	0.0013	0.010	0.0013	J
Chlorobenzene	0.00082	0.0020	0.00082	J
Chloroethane	0.0013	0.0050	0.0013	J
Chloroform	0.00076	0.0020	0.00076	J
Chloromethane	0.00099	0.0070	0.00099	J
cis-1,2-Dichloroethene	0.00082	0.0060	0.00082	J
cis-1,3-Dichloropropene	0.00064	0.0050	0.00064	J
Dibromochloromethane	0.00082	0.0030	0.00082	J
Dibromomethane	0.00037	0.010	0.00037	J
Dichlorodifluoromethane	0.0032	0.0050	0.0032	J
Ethylbenzene	0.00098	0.0030	0.00098	J
Hexachlorobutadiene	0.00068	0.0050	0.00068	J
Isopropylbenzene	0.00099	0.0080	0.00099	J
m-Xylene	0.00063	0.0030	0.00063	J
Methylene chloride	0.0011	0.0020	0.012	
n-Butylbenzene	0.00072	0.0050	0.00072	J
n-Propylbenzene	0.00092	0.0020	0.00092	J
Naphthalene	0.00080	0.0020	0.00080	J
o-Xylene	0.00063	0.0050	0.00063	J
p-Cymene	0.00091	0.0060	0.00091	J

12

SMK
11/10/98

AFCEE
ORGANIC ANALYSES DATA SHEET 2
RESULTS

664 348 0075

Analytical Method: 8260

AAB #: A7807729

Lab Name: Recre LabWet

Contract #: F46162495080

Field Sample ID: DW5-002-01

Lab Sample ID: A7305612

Matrix: SOIL

% Solids: 98.6

Dilution: 1.00

Date Received: 3-Sep-97

Date Extracted: _____

Date Analyzed: 11-Sep-97

Concentration Units (ug/L or mg/kg dry weight): MG/KG

Analyte	MDL	PQL	Concentration	Qualifier
p-Xylene	0.00063	0.0070	0.00063	U
sec-Butylbenzene	0.00089	0.0070	0.00089	U
Styrene	0.00095	0.0020	0.00095	U
Trichloroethene	0.00099	0.010	0.00099	U
tert-Butylbenzene	0.0011	0.0070	0.0011	U
Tetrachloroethene	0.0011	0.0070	0.0011	U
Toluene	0.00099	0.0050	0.0080	
trans-1,2-Dichloroethene	0.0013	0.0030	0.0013	U
trans-1,3-Dichloropropene	0.00082	0.0050	0.00082	U
Trichlorofluoromethane	0.0028	0.0040	0.0028	U
Vinyl chloride	0.0011	0.0090	0.0011	U

R ↓

Comments:

SMR
11/10/97

664 349

AFCEE
ORGANIC ANALYSES DATA SHEET 2
RESULTS

0119

Analytical Method: 8260

AAB #: A7B07732

Lab Name: Recra LabNet

Contract #: F46162495080

Field Sample ID: DW5-002-01

Lab Sample ID: A7305612R1

Matrix: SOIL

% Solids: 98.6

Dilution: 1.00

Date Received: 3-Sep-97

Date Extracted: _____

Date Analyzed: 12-Sep-97

Concentration Units (ug/L or mg/kg dry weight): MG/KG

Analyte	MDL	PQL	Concentration	Qualifier
1,1,1,2-Tetrachloroethane	0.00094	0.0030	0.00094	U
1,1,1-Trichloroethane	0.00094	0.0040	0.00094	U
1,1,2,2-Tetrachloroethane	0.00092	0.0020	0.00092	✓ R
1,1,2-Trichloroethane	0.00077	0.0050	0.00077	U
1,1-Dichloroethane	0.0012	0.0020	0.0012	U
1,1-Dichloroethene	0.0013	0.0060	0.0013	U
1,1-Dichloropropene	0.0011	0.0050	0.0011	U
1,2,3-Trichlorobenzene	0.00067	0.0020	0.00067	✓ R
1,2,3-Trichloropropane	0.0011	0.020	0.0011	✓ R
1,2,4-Trichlorobenzene	0.00071	0.0020	0.00071	✓ R
1,2,4-Trimethylbenzene	0.00084	0.0070	0.00084	✓ R
1,2-Dichloroethane	0.00096	0.0030	0.00096	U
1,2-Dichlorobenzene	0.00088	0.0020	0.00088	✓ R
1,2-Dibromo-3-chloropropane	0.0015	0.010	0.0015	✓ R
1,2-Dichloropropane	0.00081	0.0020	0.00081	U
1,2-Dibromoethane	0.0011	0.0030	0.0011	U
1,3,5-Trimethylbenzene	0.0010	0.0030	0.0010	✓ R
1,3-Dichlorobenzene	0.00078	0.0060	0.00078	✓ R
1,3-Dichloropropane	0.00074	0.0020	0.00074	U
1,4-Dichlorobenzene	0.00066	0.0020	0.00066	✓ R
1-Chlorohexane	0.00081	0.0030	0.00081	U
2,2-Dichloropropane	0.0013	0.020	0.0013	U
o-Chlorotoluene	0.00065	0.0020	0.00065	✓ R
p-Chlorotoluene	0.00078	0.0030	0.00078	✓ R
Benzene	0.00069	0.0020	0.00069	U

SMK
11/17/98

AFCEE
ORGANIC ANALYSES DATA SHEET 2
RESULTS

664 350 0120

Analytical Method: 8260

AAB #: A7807732

Lab Name: Recra LabWet

Contract #: F46162495080

Field Sample ID: DW5-002-01

Lab Sample ID: A7305612R1

Matrix: SOIL

% Solids: 98.6

Dilution: 1.00

Date Received: 3-Sep-97

Date Extracted: _____

Date Analyzed: 12-Sep-97

Concentration Units (ug/L or mg/kg dry weight): MG/KG

Analyte	MDL	PQL	Concentration	Qualifier
Bromobenzene	0.00087	0.0020	0.00087	X R
Bromochloromethane	0.00049	0.0020	0.00049	U
Bromodichloromethane	0.00062	0.0040	0.00062	U
Bromoform	0.00079	0.0060	0.00079	U
Bromomethane	0.0013	0.0050	0.0013	U
Carbon Tetrachloride	0.0013	0.010	0.0013	U
Chlorobenzene	0.00084	0.0020	0.00084	U
Chloroethane	0.0013	0.0050	0.0013	U
Chloroform	0.00078	0.0020	0.00078	U
Chloromethane	0.0010	0.0070	0.0010	U
cis-1,2-Dichloroethene	0.00083	0.0060	0.00083	U
cis-1,3-Dichloropropene	0.00065	0.0050	0.00065	U
Dibromochloromethane	0.00084	0.0030	0.00084	U
Dibromomethane	0.00038	0.010	0.00038	U
Dichlorodifluoromethane	0.0032	0.0050	0.0032	U
Ethylbenzene	0.0010	0.0030	0.0010	U
Hexachlorobutadiene	0.00069	0.0050	0.00069	Y R
Isopropylbenzene	0.0010	0.0080	0.0010	Y R
m-Xylene	0.00064	0.0030	0.00064	U
Methylene chloride	0.0011	0.0020	0.0028	
n-Butylbenzene	0.00073	0.0050	0.00073	Y R
n-Propylbenzene	0.00094	0.0020	0.00094	X R
Naphthalene	0.00082	0.0020	0.00082	X R
o-Xylene	0.00064	0.0050	0.00064	U
p-Cymene	0.00093	0.0060	0.00093	Y R

SMK
11/10/98

664 351

AFCEE
ORGANIC ANALYSES DATA SHEET 2
RESULTS

0121

Analytical Method: 8260

AAB #: A7807732

Lab Name: Recra LabNet

Contract #: F46162495D80

Field Sample ID: DW5-002-01

Lab Sample ID: A7305612R1

Matrix: SOIL

% Solids: 98.6

Dilution: 1.00

Date Received: 3-Sep-97

Date Extracted: _____

Date Analyzed: 12-Sep-97

Concentration Units (ug/L or mg/kg dry weight): MG/KG

Analyte	MDL	PQL	Concentration	Qualifier
p-Xylene	0.00064	0.0070	0.00064	U
sec-Butylbenzene	0.00091	0.0070	0.00091	X R
Styrene	0.00097	0.0020	0.00097	U
Trichloroethene	0.0010	0.010	0.0010	U
tert-Butylbenzene	0.0011	0.0070	0.0011	X R
Tetrachloroethene	0.0011	0.0070	0.0011	U
Toluene	0.0010	0.0050	0.0026	F
trans-1,2-Dichloroethene	0.0013	0.0030	0.0013	X R
trans-1,3-Dichloropropene	0.00083	0.0050	0.00083	U
Trichlorofluoromethane	0.0028	0.0040	0.0028	U
Vinyl chloride	0.0011	0.0090	0.0011	U

Comments:

SMX
1/10/97

AFCEE
ORGANIC ANALYSES DATA SHEET 2
RESULTS

664 352 0048

Analytical Method: 8270

AAB #: A7807374

Lab Name: Recra LabNet

Contract #: F46162495080

Field Sample ID: DW5-002-01

Lab Sample ID: A7305812

Matrix: SOIL

% Solids: 94.8

Dilution: 1.00

Date Received: 3-Sep-97

Date Extracted: 4-Sep-97

Date Analyzed: 10-Sep-97

Concentration Units (ug/L or mg/kg dry weight): MG/KG

Analyte	MDL	PQL	Concentration	Qualifier
1,2,4-Trichlorobenzene	0.026	0.700	0.026	U
1,2-Dichlorobenzene	0.052	0.700	0.052	U
1,3-Dichlorobenzene	0.042	0.700	0.042	U
1,4-Dichlorobenzene	0.048	0.700	0.048	U
2,4-Dinitrotoluene	0.045	0.700	0.045	U
2,6-Dinitrotoluene	0.061	0.700	0.061	U
2-Chloronaphthalene	0.052	0.700	0.052	U
2-Methylnaphthalene	0.037	0.700	0.037	U
2-Nitroaniline	0.052	3.3	0.052	U
3-Nitroaniline	0.065	3.3	0.065	U
3,3'-Dichlorobenzidine	0.055	1.3	0.055	U
4-Bromophenyl phenyl ether	0.061	0.700	0.061	U
4-Chloroaniline	0.034	1.3	0.034	U
4-Chlorodiphenylether	0.048	0.700	0.048	U
4-Nitroaniline	0.10	3.3	0.10	U
Acenaphthylene	0.042	0.700	0.042	U
Acenaphthene	0.048	0.700	0.048	U
Anthracene	0.052	0.700	0.052	U
Benzo(a)anthracene	0.055	0.700	0.055	U
Benzo(a)pyrene	0.055	0.700	0.055	U
Benzo(b)fluoranthene	0.10	0.700	0.10	U
Benzo(ghi)perylene	0.10	0.700	0.10	U
Benzyl alcohol	0.34	1.3	0.34	U
Bis(2-chloroethoxy) methane	0.042	0.700	0.042	U
Bis(2-chloroethyl) ether	0.057	0.700	0.057	U

*JMK
JLK*

664 353

AFCEE
ORGANIC ANALYSES DATA SHEET 2
RESULTS

0045

Analytical Method: B270AAB #: A7B07374Lab Name: Recra LabNetContract #: F46162495080Field Sample ID: DW5-002-01Lab Sample ID: A7305812Matrix: SOIL% Solids: 94.8Dilution: 1.00Date Received: 3-Sep-97Date Extracted: 4-Sep-97Date Analyzed: 10-Sep-97Concentration Units (ug/L or mg/kg dry weight): MG/KG

Analyte	MDL	PQL	Concentration	Qualifier
Bis(2-chloroisopropyl) ether	0.034	0.700	0.034	U
Bis(2-ethylhexyl) phthalate	0.076	0.700	0.076	U
Butyl benzyl phthalate	0.055	0.700	0.055	U
Chrysene	0.057	0.700	0.057	U
Di-n-butyl phthalate	0.052	0.700	0.052	U
Di-n-octyl phthalate	0.061	0.700	0.061	U
Dibenzo(a,h)anthracene	0.061	0.700	0.061	U
Dibenzofuran	0.055	0.700	0.055	U
Diethyl phthalate	0.057	0.700	0.057	U
Dimethyl phthalate	0.042	0.700	0.042	U
Fluoranthene	0.068	0.700	0.068	U
Fluorene	0.061	0.700	0.061	U
Hexachlorobenzene	0.076	0.700	0.076	U
Hexachlorobutadiene	0.042	0.700	0.042	U
Hexachlorocyclopentadiene	0.065	0.700	0.065	U
Hexachloroethane	0.029	0.700	0.029	U
Indeno(1,2,3-cd)pyrene	0.11	0.700	0.11	U
Isophorone	0.042	0.700	0.042	U
N-nitrosodiphenylamine	0.045	0.700	0.045	U
N-Nitroso-Di-n-propylamine	0.034	0.700	0.034	U
Naphthalene	0.045	0.700	0.045	U
Nitrobenzene	0.068	0.700	0.068	U
Phenanthrene	0.048	0.700	0.048	U
Pyrene	0.065	0.700	0.065	U
2,4,5-Trichlorophenol	0.095	3.3	0.095	U

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AFCEE
ORGANIC ANALYSES DATA SHEET 2
RESULTS

664 354

0056

Analytical Method: B270

AAB #: A7807374

Lab Name: Recre LabNet

Contract #: F46162495080

Field Sample ID: DW5-004-01

Lab Sample ID: A7305814

Matrix: SOIL

% Solids: 98.5

Dilution: 1.00

Date Received: 3-Sep-97

Date Extracted: 4-Sep-97

Date Analyzed: 10-Sep-97

Concentration Units (ug/L or mg/kg dry weight): MG/KG

Analyte	MDL	PQL	Concentration	Qualifier
2,4,6-Trichlorophenol	0.10	0.300	0.10	U
2,4-Dichlorophenol	0.028	0.300	0.028	U
2,4-Dimethylphenol	0.055	0.300	0.055	U
2,4-Dinitrophenol	0.069	3.3	0.069	U
2-Chlorophenol	0.036	0.300	0.036	U
2-Methylphenol	0.082	0.300	0.082	U
2-Nitrophenol	0.050	0.300	0.050	U
4,6-Dinitro-2-methylphenol	0.063	3.3	0.063	U R
4-Chloro-3-methylphenol	0.036	1.3	0.036	U
4-Methylphenol	0.033	0.300	0.033	U
4-Nitrophenol	0.098	1.6	0.098	U
Benzoic acid	1.6	1.6	1.6	U R
Pentachlorophenol	0.12	3.3	0.12	U
Phenol	0.082	0.300	0.082	U

Comments:

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Cust ID: DW3-002-01 DW3-003-01 DW4-001-01 DW4-002-01 DW5-001-01 DW5-002-01

Sample Information	RFM#:	007	008	009	010	011	012
Matrix:	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID
D.F.:	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Units:	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg
1,2-Dinitrobenzene		98 U	103 U	106 U	99 U	105 U	103 U
_____		2200 U	2100 U	2200 U	2200 U	2200 U	2200 U
_____		980 U	980 U	1000 U	990 U	990 U	980 U
1,3,5-Trinitrobenzene		250 U	240 U	250 U	250 U	250 U	250 U
_____		250 U	240 U	250 U	250 U	250 U	250 U
1,3-Dinitrobenzene		250 U	240 U	250 U	250 U	250 U	250 U
_____		250 U	250 U	260 U	260 U	260 U	250 U
Nitrobenzene		740 U	730 U	750 U	740 U	740 U	740 U
_____		250 U	240 U	250 U	250 U	250 U	250 U
2,4,6-Trinitrotoluene		250 U	250 U	260 U	260 U	260 U	250 U
_____		250 U	240 U	250 U	250 U	250 U	250 U
2,6-Dinitrotoluene		250 U	240 U	260 U	260 U	260 U	250 U
_____		250 U	240 U	250 U	250 U	250 U	250 U
2,4-Dinitrotoluene		980 U	980 U	1000 U	990 U	990 U	980 U
_____		2900 U	2900 U	3000 U	3000 U	3000 U	2900 U
4-Nitrotoluene		980 U	980 U	1000 U	990 U	990 U	980 U
_____		980 U	980 U	1000 U	990 U	990 U	980 U
3-Nitrotoluene		980 U	980 U	1000 U	990 U	990 U	980 U

U= Analyzed, not detected. J= Present below detection limit. B= Present in blank. NR= Not reported. NS= Not spiked.
 % = Percent recovery. D= Diluted out. I= Interference. NA= Not Applicable. * = Outside of EPA CLP QC

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INORGANIC ANALYSES DATA SHEET 2
RESULTS

664 356

021

Analytical Method: 6010

AAB #: A7B07997

Lab Name: Recra LabNet

Contract #: F46162495D80

Field Sample ID: DW6-001-01

Lab Sample ID: A7305004

Matrix: SOIL

% Solids: 89.8

Dilution: 1.00

Date Received: 3-Sep-97

Date Extracted: 23-Sep-97

Date Analyzed: 24-Sep-97

Concentration Units (ug/L or mg/kg dry weight): MG/KG

Analyte	MDL	PQL	Concentration	Qualifier
Aluminum - Total	3.4	5.0	11300	
Antimony - Total	0.90	1.0	0.96	F
Arsenic - Total	0.78	2.0	5.2	
Cadmium - Total	0.078	0.100	0.29	
Cobalt - Total	0.22	0.200	4.2	
Iron - Total	4.5	5.0	10000	
Lead - Total	0.39	1.0	14.6	
Magnesium - Total	1.7	5.0	2460	J
Manganese - Total	0.17	0.500	435	
Potassium - Total	33.6	10.0	1600	J
Selenium - Total	0.73	1.0	0.73	Y R
Silver - Total	0.50	0.200	0.50	U
Zinc - Total	0.39	3.0	61.8	

Comments:

smk
1/8/97

664 357

AFCEE
INORGANIC ANALYSES DATA SHEET 2
RESULTS

1000 1184

0178

Analytical Method: 6010

AAB #: A7807539

Lab Name: Recrs LabNet

Contract #: F66162495080

Field Sample ID: DU6-001-01

Lab Sample ID: A7305006

Matrix: SOIL

% Solids: 89.8

Dilution: 1.00

Date Received: 3-Sep-97

Date Extracted: 10-Sep-97

Date Analyzed: 21-Sep-97

Concentration Units (ug/L or mg/kg dry weight): MG/KG

Analyte	MCL	PQL	Concentration	Qualifier
BARIUM	0.11	0.500	86.0	
BERYLLIUM	0.11	0.300	0.52	
CALCIUM	16.7	20.0	19400	
CHROMIUM	0.39	0.500	9.4	
COPPER	0.39	0.500	13.7	
MOLYBDENUM	0.33	0.500	0.95	
NICKEL	0.56	0.500	9.9	
SODIUM	167	100.0	1030	
THALLIUM	0.95	2.0	0.95	U
VANADIUM	0.28	0.500	23.0	

Comments:

The Calcium result was diluted by 10 fold on 09/25/97.

Thallium analyzed 1/20/98

SMK
11/8/98

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INORGANIC ANALYSES DATA SHEET 2
RESULTS

664 358

016

Analytical Method: 7471

AAB #: A7807501

Lab Name: Recre LabNet

Contract #: F46162495080

Field Sample ID: DW6-001-01

Lab Sample ID: A7305004

Matrix: SOIL

% Solids: 89.8

Dilution: 1.00

Date Received: 3-Sep-97

Date Extracted: 10-Sep-97

Date Analyzed: 10-Sep-97

Concentration Units (ug/L or mg/kg dry weight): MG/KG

Analyte	MDL	PQL	Concentration	Qualifier
Mercury - Total	0.045	0.100	0.045	U

Comments:

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11/8/97

664 359

AFCEE
ORGANIC ANALYSES DATA SHEET 2
RESULTS

0185

Analytical Method: 8081AAB #: A7B07358Lab Name: Recre LabNetContract #: F46162495080Field Sample ID: DW6-001-01Lab Sample ID: A7305815Matrix: SOIL% Solids: 87.7Dilution: 4.00Date Received: 3-Sep-97Date Extracted: 4-Sep-97Date Analyzed: 17-Sep-97Concentration Units (ug/L or mg/kg dry weight): MG/KG

Analyte	MDL	PQL	Concentration	Qualifier
alpha-BHC	0.0023	0.0190	0.0023	U
beta-BHC	0.0017	0.0330	0.0017	U
delta-BHC	0.0020	0.0110	0.0020	U
gamma-BHC (Lindane)	0.0020	0.020	0.0020	U
alpha-Chlordane	0.0017	0.0150	0.0017	U
gamma-Chlordane	0.0016	0.0150	0.0016	U
4,4'-DDD	0.0043	0.0420	0.0043	U
4,4'-DDE	0.0039	0.0250	0.0039	✓
4,4'-DDT	0.0043	0.0360	0.0043	✓
Aldrin	0.0024	0.0220	0.0024	U
Dieldrin	0.0042	0.0350	0.0042	U
Endosulfan I	0.0020	0.0210	0.0020	U
Endosulfan II	0.0032	0.0240	0.0032	U
Endosulfan Sulfate	0.0035	0.0360	0.0035	U
Endrin	0.0041	0.0360	0.0041	U
Endrin aldehyde	0.0033	0.0160	0.0033	U
Heptachlor	0.0022	0.020	0.0022	U
Heptachlor epoxide	0.0016	0.0210	0.0016	U
Methoxychlor	0.028	0.0570	0.028	U
Aroclor 1016	0.013	0.700	0.013	U
Aroclor 1221	0.017	0.700	0.017	U
Aroclor 1232	0.017	0.700	0.017	U
Aroclor 1242	0.017	0.700	0.017	U
Aroclor 1248	0.020	0.700	0.020	U
Aroclor 1254	0.019	0.700	0.019	U

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ORGANIC ANALYSES DATA SHEET 2
RESULTS

664 360

0186

Analytical Method: 8081

AAB #: A7807358

Lab Name: Recre LabNet

Contract #: F46162495080

Field Sample ID: DW6-001-01

Lab Sample ID: A7305815

Matrix: SOIL

% Solids: 87.7

Dilution: 4.00

Date Received: 3-Sep-97

Date Extracted: 4-Sep-97

Date Analyzed: 17-Sep-97

Concentration Units (ug/L or mg/kg dry weight): MG/KG

Analyte	MDL	PQL	Concentration	Qualifier
Aroclor 1260	0.025	0.700	0.025	✓
Toxaphene	0.12	0.570	0.12	U

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Comments:

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3/13/97

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ORGANIC ANALYSES DATA SHEET 2
RESULTS

016

Analytical Method: 8260AAB #: A7807736Lab Name: Recre LabWetContract #: F46162495080Field Sample ID: DW6-001-01Lab Sample ID: A7305615RIMatrix: SOIL% Solids: 91.1Dilution: 1.00Date Received: 3-Sep-97

Date Extracted: _____

Date Analyzed: 12-Sep-97Concentration Units (ug/L or mg/kg dry weight): MG/KG

Analyte	MDL	PQL	Concentration	Qualifier
1,1,1,2-Tetrachloroethane	0.0010	0.0030	0.0010	U
1,1,1-Trichloroethane	0.0010	0.0040	0.0010	U
1,1,2,2-Tetrachloroethane	0.00098	0.0020	0.00098	X R
1,1,2-Trichloroethane	0.00082	0.0050	0.00082	U
1,1-Dichloroethane	0.0013	0.0020	0.0013	U
1,1-Dichloroethene	0.0014	0.0060	0.0014	U
1,1-Dichloropropene	0.0012	0.0050	0.0012	U
1,2,3-Trichlorobenzene	0.00071	0.0020	0.00071	X R
1,2,3-Trichloropropane	0.0012	0.020	0.0012	X R
1,2,4-Trichlorobenzene	0.00075	0.0020	0.00075	X R
1,2,4-Trimethylbenzene	0.00089	0.0070	0.00089	X R
1,2-Dichloroethane	0.0010	0.0030	0.0010	U
1,2-Dichlorobenzene	0.00094	0.0020	0.00094	X R
1,2-Dibromo-3-chloropropane	0.0016	0.010	0.0016	X R
1,2-Dichloropropane	0.00086	0.0020	0.00086	U
1,2-Dibromoethane	0.0012	0.0030	0.0012	U
1,3,5-Trimethylbenzene	0.0011	0.0030	0.0011	X R
1,3-Dichlorobenzene	0.00083	0.0060	0.00083	X R
1,3-Dichloropropane	0.00078	0.0020	0.00078	U
1,4-Dichlorobenzene	0.00070	0.0020	0.00070	X R
1-Chlorohexane	0.00086	0.0030	0.00086	U
2,2-Dichloropropane	0.0014	0.020	0.0014	U
o-Chlorotoluene	0.00069	0.0020	0.00069	X R
p-Chlorotoluene	0.00083	0.0030	0.00083	X R
Benzene	0.00073	0.0020	0.00073	U

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ORGANIC ANALYSES DATA SHEET 2
RESULTS

664 362 0167

Analytical Method: 8260

AAB #: A7B07736

Lab Name: Recra LabNet

Contract #: F46162495D80

Field Sample ID: DW6-001-01

Lab Sample ID: A7305615RI

Matrix: SOIL

% Solids: 91.1

Dilution: 1.00

Date Received: 3-Sep-97

Date Extracted: _____

Date Analyzed: 12-Sep-97

Concentration Units (ug/L or mg/kg dry weight): MG/KG

Analyte	MDL	PQL	Concentration	Qualifier
Bromobenzene	0.00092	0.0020	0.00092	✓ R
Bromochloromethane	0.00052	0.0020	0.00052	U
Bromodichloromethane	0.00066	0.0040	0.00066	U
Bromoform	0.00084	0.0060	0.00084	U
Bromomethane	0.0014	0.0050	0.0014	✓ R
Carbon Tetrachloride	0.0014	0.010	0.0014	U
Chlorobenzene	0.00089	0.0020	0.00089	U
Chloroethane	0.0014	0.0050	0.0014	✓ R
Chloroform	0.00083	0.0020	0.00083	U
Chloromethane	0.0011	0.0070	0.0011	U
cis-1,2-Dichloroethene	0.00088	0.0060	0.00088	U
cis-1,3-Dichloropropene	0.00069	0.0050	0.00069	U
Dibromochloromethane	0.00089	0.0030	0.00089	U
Dibromomethane	0.00040	0.010	0.00040	U
Dichlorodifluoromethane	0.0034	0.0050	0.0034	U
Ethylbenzene	0.0011	0.0030	0.0011	U
Hexachlorobutadiene	0.00073	0.0050	0.00073	✓ R
Isopropylbenzene	0.0011	0.0080	0.0011	✓ R
m-Xylene	0.00068	0.0030	0.00068	U
Methylene chloride	0.0012	0.0020	0.0044	
n-Butylbenzene	0.00078	0.0050	0.00078	✓ R
n-Propylbenzene	0.0010	0.0020	0.0010	✓ R
Naphthalene	0.00087	0.0020	0.00087	✓ R
o-Xylene	0.00068	0.0050	0.00068	U
p-Cymene	0.00099	0.0060	0.00099	U

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ORGANIC ANALYSES DATA SHEET 2
RESULTS

0164

Analytical Method: 8260

AAB #: A7B07736

Lab Name: Recra LabNet

Contract #: F46162495D80

Field Sample ID: DW6-001-01

Lab Sample ID: A7305615RI

Matrix: SOIL

% Solids: 91.1

Dilution: 1.00

Date Received: 3-Sep-97

Date Extracted: _____

Date Analyzed: 12-Sep-97

Concentration Units (ug/L or mg/kg dry weight): MG/KG

Analyte	MDL	PQL	Concentration	Qualifier
p-Xylene	0.00068	0.0070	0.00068	U
sec-Butylbenzene	0.00097	0.0070	0.00097	U R
Styrene	0.0010	0.0020	0.0010	U
Trichloroethene	0.0011	0.010	0.0011	U
tert-Butylbenzene	0.0012	0.0070	0.0012	U R
Tetrachloroethene	0.0012	0.0070	0.0012	U
Toluene	0.0011	0.0050	0.033	
trans-1,2-Dichloroethene	0.0014	0.0030	0.0014	U
trans-1,3-Dichloropropene	0.00088	0.0050	0.00088	U
Trichlorofluoromethane	0.0030	0.0040	0.0030	U
Vinyl chloride	0.0012	0.0090	0.0012	U

Comments:

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ORGANIC ANALYSES DATA SHEET 2
RESULTS

664 364

0125

Analytical Method: 8260

AAB #: A7B07732

Lab Name: Recre LabNet

Contract #: F46162495080

Field Sample ID: DW6-001-01

Lab Sample ID: A7305615

Matrix: SOIL

% Solids: 91.1

Dilution: 1.00

Date Received: 3-Sep-97

Date Extracted: _____

Date Analyzed: 12-Sep-97

Concentration Units (ug/L or mg/kg dry weight): MG/KG

Analyte	MDL	PQL	Concentration	Qualifier
1,1,1,2-Tetrachloroethane	0.0010	0.0030	0.0010	U
1,1,1-Trichloroethane	0.0010	0.0040	0.0010	U
1,1,2,2-Tetrachloroethane	0.0010	0.0020	0.0010	U
1,1,2-Trichloroethane	0.00083	0.0050	0.00083	U
1,1-Dichloroethane	0.0013	0.0020	0.0013	U
1,1-Dichloroethene	0.0014	0.0060	0.0014	U
1,1-Dichloropropene	0.0012	0.0050	0.0012	U
1,2,3-Trichlorobenzene	0.00072	0.0020	0.00072	U
1,2,3-Trichloropropane	0.0012	0.020	0.0012	U
1,2,4-Trichlorobenzene	0.00077	0.0020	0.00077	U
1,2,4-Trimethylbenzene	0.00091	0.0070	0.00091	U
1,2-Dichloroethane	0.0010	0.0030	0.0010	U
1,2-Dichlorobenzene	0.00096	0.0020	0.00096	U
1,2-Dibromo-3-chloropropane	0.0016	0.010	0.0016	U
1,2-Dichloropropane	0.00088	0.0020	0.00088	U
1,2-Dibromoethane	0.0012	0.0030	0.0012	U
1,3,5-Trimethylbenzene	0.0011	0.0030	0.0011	U
1,3-Dichlorobenzene	0.00084	0.0060	0.00084	U
1,3-Dichloropropane	0.00080	0.0020	0.00080	U
1,4-Dichlorobenzene	0.00071	0.0020	0.00071	U
1-Chlorohexane	0.00088	0.0030	0.00088	U
2,2-Dichloropropane	0.0014	0.020	0.0014	U
o-Chlorotoluene	0.00070	0.0020	0.00070	U
p-Chlorotoluene	0.00084	0.0030	0.00084	U
Benzene	0.00075	0.0020	0.00075	U

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ORGANIC ANALYSES DATA SHEET 2
RESULTS

0126

Analytical Method: 8260AAB #: A7807732Lab Name: Recra LabNetContract #: F46162495D80Field Sample ID: DW6-001-01Lab Sample ID: A7305615Matrix: SOIL% Solids: 91.1Dilution: 1.00Date Received: 3-Sep-97

Date Extracted: _____

Date Analyzed: 12-Sep-97Concentration Units (ug/L or mg/kg dry weight): MG/KG

Analyte	MDL	PQL	Concentration	Qualifier
Bromobenzene	0.00094	0.0020	0.00094	U
Bromochloromethane	0.00053	0.0020	0.00053	U
Bromodichloromethane	0.00067	0.0040	0.00067	U
Bromoform	0.00086	0.0060	0.00086	U
Bromomethane	0.0014	0.0050	0.0014	U
Carbon Tetrachloride	0.0014	0.010	0.0014	U
Chlorobenzene	0.00091	0.0020	0.00091	U
Chloroethane	0.0014	0.0050	0.0014	U
Chloroform	0.00084	0.0020	0.00084	U
Chloromethane	0.0011	0.0070	0.0011	U
cis-1,2-Dichloroethene	0.00090	0.0060	0.00090	U
cis-1,3-Dichloropropene	0.00070	0.0050	0.00070	U
Dibromochloromethane	0.00091	0.0030	0.00091	U
Dibromomethane	0.00041	0.010	0.00041	U
Dichlorodifluoromethane	0.0035	0.0050	0.0035	U
Ethylbenzene	0.0011	0.0030	0.0011	U
Hexachlorobutadiene	0.00075	0.0050	0.00075	U
Isopropylbenzene	0.0011	0.0080	0.0011	U
m-Xylene	0.00069	0.0030	0.00069	U
Methylene chloride	0.0012	0.0020	0.0028	U
n-Butylbenzene	0.00079	0.0050	0.00079	U
n-Propylbenzene	0.0010	0.0020	0.0010	U
Naphthalene	0.00089	0.0020	0.00089	U
o-Xylene	0.00069	0.0050	0.00069	U
p-Cymene	0.0010	0.0060	0.0010	U

SMK
11/07/98

AFCEE
ORGANIC ANALYSES DATA SHEET 2
RESULTS

664 366

Analytical Method: 8260

AAB #: A7807732

Lab Name: Recre LabNet

Contract #: F46162495080

Field Sample ID: DW6-001-01

Lab Sample ID: A7305615

Matrix: SOIL

% Solids: 91.1

Dilution: 1.00

Date Received: 3-Sep-97

Date Extracted: _____

Date Analyzed: 12-Sep-97

Concentration Units (ug/L or mg/kg dry weight): MG/KG

Analyte	MDL	PQL	Concentration	Qualifier
p-Xylene	0.00069	0.0070	0.00069	U
sec-Butylbenzene	0.00099	0.0070	0.00099	U
Styrene	0.0010	0.0020	0.0010	U
Trichloroethene	0.0011	0.010	0.0011	U
tert-Butylbenzene	0.0012	0.0070	0.0012	U
Tetrachloroethene	0.0012	0.0070	0.0012	U
Toluene	0.0011	0.0050	0.042	
trans-1,2-Dichloroethene	0.0014	0.0030	0.0014	U
trans-1,3-Dichloropropene	0.00090	0.0050	0.00090	U
Trichlorofluoromethane	0.0031	0.0040	0.0031	U
Vinyl chloride	0.0012	0.0090	0.0012	U



Comments:

Smr
11/10

664 367

AFCEE
ORGANIC ANALYSES DATA SHEET 2
RESULTS

0057

Analytical Method: 8270AAB #: A7807374Lab Name: Recra LabNetContract #: F46162495D80Field Sample ID: DW6-001-01Lab Sample ID: A7305815Matrix: SOIL% Solids: 87.7Dilution: 1.00Date Received: 3-Sep-97Date Extracted: 4-Sep-97Date Analyzed: 11-Sep-97Concentration Units (ug/L or mg/kg dry weight): MG/KG

Analyte	MOL	PQL	Concentration	Qualifier
1,2,4-Trichlorobenzene	0.028	0.700	0.028	U
1,2-Dichlorobenzene	0.056	0.700	0.056	U
1,3-Dichlorobenzene	0.045	0.700	0.045	U
1,4-Dichlorobenzene	0.051	0.700	0.051	U
2,4-Dinitrotoluene	0.048	0.700	0.048	U
2,6-Dinitrotoluene	0.066	0.700	0.066	U
2-Chloronaphthalene	0.056	0.700	0.056	U
2-Methylnaphthalene	0.040	0.700	0.040	U
2-Nitroaniline	0.056	3.3	0.056	U
3-Nitroaniline	0.070	3.3	0.070	U
3,3'-Dichlorobenzidine	0.059	1.3	0.059	U
4-Bromophenyl phenyl ether	0.066	0.700	0.066	U
4-Chloroaniline	0.037	1.3	0.037	U
4-Chlorodiphenylether	0.051	0.700	0.051	U
4-Nitroaniline	0.11	3.3	0.11	U
Acenaphthylene	0.045	0.700	0.045	U
Acenaphthene	0.051	0.700	0.051	U
Anthracene	0.056	0.700	0.056	U
Benzo(a)anthracene	0.059	0.700	0.059	U
Benzo(a)pyrene	0.059	0.700	0.059	U
Benzo(b)fluoranthene	0.11	0.700	0.11	U
Benzo(ghi)perylene	0.11	0.700	0.11	U
Benzyl alcohol	0.37	1.3	0.37	U
Bis(2-chloroethoxy) methane	0.045	0.700	0.045	U
Bis(2-chloroethyl) ether	0.062	0.700	0.062	U

SMK
3/16/11

AFCEE
ORGANIC ANALYSES DATA SHEET 2
RESULTS

664 368 0058

Analytical Method: 8270

AAB #: A7807374

Lab Name: Recra LabNet

Contract #: F46162495080

Field Sample ID: DW6-001-01

Lab Sample ID: A7305815

Matrix: SOLL

% Solids: 87.7

Dilution: 1.00

Date Received: 3-Sep-97

Date Extracted: 4-Sep-97

Date Analyzed: 11-Sep-97

Concentration Units (ug/L or mg/kg dry weight): MG/KG

Analyte	MOL	PQL	Concentration	Qualifier
Bis(2-chloroisopropyl) ether	0.037	0.700	0.037	U
Bis(2-ethylhexyl) phthalate	0.082	0.700	0.082	U
Butyl benzyl phthalate	0.059	0.700	0.059	U
Chrysene	0.062	0.700	0.062	U
Di-n-butyl phthalate	0.056	0.700	0.056	U
Di-n-octyl phthalate	0.066	0.700	0.066	U
Dibenzo(a,h)anthracene	0.066	0.700	0.066	U
Dibenzofuran	0.059	0.700	0.059	U
Diethyl phthalate	0.062	0.700	0.062	U
Dimethyl phthalate	0.045	0.700	0.045	U
Fluoranthene	0.074	0.700	0.074	U
Fluorene	0.066	0.700	0.066	U
Hexachlorobenzene	0.082	0.700	0.082	U
Hexachlorobutadiene	0.045	0.700	0.045	U
Hexachlorocyclopentadiene	0.070	0.700	0.070	U
Hexachloroethane	0.031	0.700	0.031	U
Indeno(1,2,3-cd)pyrene	0.12	0.700	0.12	U
Isophorone	0.045	0.700	0.045	U
N-nitrosodiphenylamine	0.048	0.700	0.048	U
N-Nitroso-Di-n-propylamine	0.037	0.700	0.037	U
Naphthalene	0.048	0.700	0.048	U
Nitrobenzene	0.074	0.700	0.074	U
Phenanthrene	0.051	0.700	0.051	U
Pyrene	0.070	0.700	0.070	U
2,4,5-Trichlorophenol	0.10	3.3	0.10	U

Handwritten initials/signature

664 369

0053

AFCEE
ORGANIC ANALYSES DATA SHEET 2
RESULTS

Analytical Method: 8270

AAB #: A7B07374

Lab Name: Recre LabNet

Contract #: F46162495D80

Field Sample ID: DW6-001-01

Lab Sample ID: A7305815

Matrix: SOIL

% Solids: 87.7

Dilution: 1.00

Date Received: 3-Sep-97

Date Extracted: 4-Sep-97

Date Analyzed: 11-Sep-97

Concentration Units (ug/L or mg/kg dry weight): MG/KG

Analyte	MDL	PQL	Concentration	Qualifier
2,4,6-Trichlorophenol	0.11	0.300	0.11	U
2,4-Dichlorophenol	0.031	0.300	0.031	U
2,4-Dimethylphenol	0.062	0.300	0.062	U
2,4-Dinitrophenol	0.077	3.3	0.077	U
2-Chlorophenol	0.040	0.300	0.040	U
2-Methylphenol	0.093	0.300	0.093	U
2-Nitrophenol	0.056	0.300	0.056	U
4,6-Dinitro-2-methylphenol	0.070	3.3	0.070	U <i>R</i>
4-Chloro-3-methylphenol	0.040	1.3	0.040	U
4-Methylphenol	0.037	0.300	0.037	U
4-Nitrophenol	0.11	1.6	0.11	U
Benzoic acid	1.8	1.6	1.8	U
Pentachlorophenol	0.14	3.3	0.14	U
Phenol	0.093	0.300	0.093	U

Comments:

*SMK
3/16/97*

Regra LabNet - Lincolnville Laboratory
Explosives by HPLC / Method 8330

Report Date: 09/10/97 11:13

Client: THE ENVIRONMENTAL CO. Work Order: 7000003001 Page: 3

RFW Batch Number: 9708L019

Cust ID: DMS-003-01 DMS-004-01 DW6-001-01 DW6-002-01 DW6-002-01 DW6-002-01

Sample Information	RFW#	013	014	015	016	016 MS	016 MSD
	Matrix:	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID
	D.F.:	1.00	1.00	1.00	1.00	1.00	1.00
	Units:	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
1,2-Dinitrobenzene		104	109	112	105	105	105
		2200 U	2200 U	2200 U	2200 U	89	87
		980 U	1000 U	990 U	1000 U	90	89
1,3,5-Trinitrobenzene		250 U	250 U	250 U	250 U	98	98
1,3-Dinitrobenzene		250 U	250 U	250 U	250 U	98	98
Nitrobenzene		250 U	260 U	260 U	260 U	96	97
Tetryl		740 U	750 U	740 U	750 U	117	115
2,4,6-Trinitrotoluene		250 U	250 U	250 U	250 U	118	122
2,6-Dinitrotoluene		250 U	260 U	260 U	260 U	108	103
2,4-Dinitrotoluene		250 U	250 U	250 U	250 U	105	98
2-Nitrotoluene		980 U	1000 U	990 U	1000 U	104	102
4-Nitrotoluene		2900 U	3000 U	3000 U	3000 U	99	100
3-Nitrotoluene		980 U	1000 U	990 U	1000 U	102	102

U= Analyzed, not detected. J= Present below detection limit. B= Present in blank. NR= Not reported. NS= Not spiked.
% = Percent recovery. D= Diluted out. I= Interference. NA= Not Applicable. * = Outside of EPA CLP QC

664-371

AFCEE
INORGANIC ANALYSES DATA SHEET 2
RESULTS

021

Analytical Method: 6010

AAB #: A7B07997

Lab Name: Recre LabNet

Contract #: F46162495080

Field Sample ID: DW6-002-01

Lab Sample ID: A7305005

Matrix: SDLL

% Solids: 90.1

Dilution: 1.00

Date Received: 3-Sep-97

Date Extracted: 23-Sep-97

Date Analyzed: 24-Sep-97

Concentration Units (ug/L or mg/kg dry weight): MG/KG

Analyte	MDL	PQL	Concentration	Qualifier
Aluminum - Total	3.3	5.0	10700	
Antimony - Total	0.89	1.0	1.1	
Arsenic - Total	0.78	2.0	4.9	
Cadmium - Total	0.078	0.100	0.30	
Cobalt - Total	0.22	0.200	3.2	
Iron - Total	4.4	5.0	10900	
Lead - Total	0.39	1.0	13.8	
Magnesium - Total	1.7	5.0	2300	J
Manganese - Total	0.17	0.500	298	
Potassium - Total	33.4	10.0	1590	J
Selenium - Total	0.72	1.0	0.72	J R
Silver - Total	0.50	0.200	0.50	u
Zinc - Total	0.39	3.0	42.7	

Comments:

SMR
1/8/97

AFCEE
INORGANIC ANALYSES DATA SHEET 2
RESULTS

664 372 0179

Analytical Method: 6010

AAB #: A7807339

Lab Name: Recre LabNet

Contract #: F46162495080

Field Sample ID: DL6-002-01

Lab Sample ID: A7305005

Matrix: SOIL

% Solids: 99.1

Dilution: 1.00

Date Received: 3-Sep-97

Date Extracted: 10-Sep-97

Date Analyzed: 21-Sep-97

Concentration Units (ug/L or mg/kg dry weight): MG/KG

Analyte	MDL	PQL	Concentration	Qualifier
BARIUM	0.11	0.500	74.6	
BERYLLIUM	0.11	0.300	0.63	
CALCIUM	16.6	20.0	143000	
CHROMIUM	0.39	0.500	10.4	
COPPER	0.39	0.500	10.2	
MOLYBDENUM	0.33	0.500	1.0	
NICKEL	0.55	0.500	9.7	
SODIUM	166	100.0	1250	
THALLIUM	0.94	2.0	0.94	U
VANADIUM	0.28	0.300	22.5	

Comments:
The Calcium result was diluted by 10 fold on 09/25/97.

Thallium analyzed 1/22/98

SMA
117

664 373

AFCEE
INORGANIC ANALYSES DATA SHEET 2
RESULTS

016

Analytical Method: 7471

AAS #: A7B07501

Lab Name: Recra LabWet

Contract #: F46162495080

Field Sample ID: 046-002-01

Lab Sample ID: A7305005

Matrix: SOIL

% Solids: 90.1

Dilution: 1.00

Date Received: 3-Sep-97

Date Extracted: 10-Sep-97

Date Analyzed: 10-Sep-97

Concentration Units (ug/L or mg/kg dry weight): MG/KG

Analyte	MDL	PQL	Concentration	Qualifier
Mercury - Total	0.044	0.100	0.044	U

Comments:

SMK
1/8/97

AFCEE
ORGANIC ANALYSES DATA SHEET 2
RESULTS

664 374

0187

Analytical Method: 8081

AAB #: A7807358

Lab Name: Recre LabNet

Contract #: F46162495080

Field Sample ID: DW6-002-01

Lab Sample ID: A7305816

Matrix: S01L

% Solids: 85.2

Dilution: 4.00

Date Received: 3-Sep-97

Date Extracted: 4-Sep-97

Date Analyzed: 17-Sep-97

Concentration Units (ug/L or mg/kg dry weight): MG/KG

Analyte	MDL	PQL	Concentration	Qualifier
alpha-BHC	0.0023	0.0190	0.0023	U
beta-BHC	0.0018	0.0330	0.0018	U
delta-BHC	0.0020	0.0110	0.0020	U
gamma-BHC (Lindane)	0.0020	0.020	0.0020	U
alpha-Chlordane	0.0018	0.0150	0.0018	U
gamma-Chlordane	0.0017	0.0150	0.0017	U
4,4'-DDB	0.0044	0.0420	0.0044	U
4,4'-DDE	0.0040	0.0250	0.0040	X R
4,4'-DDT	0.0044	0.0360	0.0044	X R
Aldrin	0.0025	0.0220	0.0025	U
Dieldrin	0.0044	0.0350	0.0044	U
Endosulfan I	0.0021	0.0210	0.0021	U
Endosulfan II	0.0033	0.0240	0.0033	U
Endosulfan Sulfate	0.0036	0.0360	0.0036	U
Endrin	0.0043	0.0360	0.0043	U
Endrin aldehyde	0.0034	0.0160	0.0034	U
Heptachlor	0.0022	0.020	0.0022	U
Heptachlor epoxide	0.0016	0.0210	0.0016	U
Methoxychlor	0.030	0.0570	0.030	U
Aroclor 1016	0.013	0.700	0.013	U
Aroclor 1221	0.018	0.700	0.018	U
Aroclor 1232	0.018	0.700	0.018	U
Aroclor 1242	0.018	0.700	0.018	U
Aroclor 1248	0.021	0.700	0.021	U
Aroclor 1254	0.020	0.700	0.020	U

SJK
3/13/97

664 375

AFCEE
ORGANIC ANALYSES DATA SHEET 2
RESULTS

0188

Analytical Method: 8081

AAB #: A7807358

Lab Name: Recra LabNet

Contract #: F46162495D80

Field Sample ID: DW6-002-01

Lab Sample ID: A7305816

Matrix: SOIL

% Solids: 85.2

Dilution: 4.00

Date Received: 3-Sep-97

Date Extracted: 4-Sep-97

Date Analyzed: 17-Sep-97

Concentration Units (ug/L or mg/kg dry weight): MG/KG

Analyte	MDL	PQL	Concentration	Qualifier
Aroclor 1260	0.026	0.700	0.026	<i>✓</i>
Toxaphene	0.13	0.570	0.13	U

R

Comments:

*SMK
9/27/97*

AFCEE
ORGANIC ANALYSES DATA SHEET 2
RESULTS

664 376 0128

Analytical Method: B260

AAB #: A7807732

Lab Name: Recra LabNet

Contract #: F46162495D80

Field Sample ID: DW6-002-01

Lab Sample ID: A7305616

Matrix: SOIL

% Solids: 73.2

Dilution: 1.00

Date Received: 3-Sep-97

Date Extracted: _____

Date Analyzed: 12-Sep-97

Concentration Units (ug/L or mg/kg dry weight): MG/KG

Analyte	MDL	PQL	Concentration	Qualifier
1,1,1,2-Tetrachloroethane	0.0013	0.0030	0.0013	U
1,1,1-Trichloroethane	0.0013	0.0040	0.0013	U
1,1,2,2-Tetrachloroethane	0.0012	0.0020	0.0012	Y R
1,1,2-Trichloroethane	0.0010	0.0050	0.0010	U
1,1-Dichloroethane	0.0016	0.0020	0.0016	U
1,1-Dichloroethene	0.0018	0.0060	0.0018	U
1,1-Dichloropropene	0.0015	0.0050	0.0015	U
1,2,3-Trichlorobenzene	0.00090	0.0020	0.00090	Y R
1,2,3-Trichloropropane	0.0015	0.020	0.0015	Y R
1,2,4-Trichlorobenzene	0.00096	0.0020	0.00096	Y R
1,2,4-Trimethylbenzene	0.0011	0.0070	0.0011	Y R
1,2-Dichloroethane	0.0013	0.0030	0.0013	U
1,2-Dichlorobenzene	0.0012	0.0020	0.0012	Y R
1,2-Dibromo-3-chloropropane	0.0020	0.010	0.0020	Y R
1,2-Dichloropropane	0.0011	0.0020	0.0011	U
1,2-Dibromoethane	0.0015	0.0030	0.0015	U
1,3,5-Trimethylbenzene	0.0014	0.0030	0.0014	Y R
1,3-Dichlorobenzene	0.0010	0.0060	0.0010	Y R
1,3-Dichloropropane	0.0010	0.0020	0.0010	U
1,4-Dichlorobenzene	0.00089	0.0020	0.00089	Y R
1-Chlorohexane	0.0011	0.0030	0.0011	U
2,2-Dichloropropane	0.0018	0.020	0.0018	U
o-Chlorotoluene	0.00087	0.0020	0.00087	Y R
p-Chlorotoluene	0.0010	0.0030	0.0010	Y R
Benzene	0.00093	0.0020	0.00093	U

SMX
11/10/97

664 377.

AFCEE
ORGANIC ANALYSES DATA SHEET 2
RESULTS

0129

Analytical Method: 8260AAB #: A7B07732Lab Name: Recre LabNetContract #: F46162495D80Field Sample ID: 0W6-002-01Lab Sample ID: A7305616Matrix: SOIL% Solids: 73.2Dilution: 1.00Date Received: 3-Sep-97

Date Extracted: _____

Date Analyzed: 12-Sep-97Concentration Units (ug/L or mg/kg dry weight): MG/KG

Analyte	MDL	PQL	Concentration	Qualifier
Bromobenzene	0.0012	0.0020	0.0012	✓ R
Bromochloromethane	0.00066	0.0020	0.00066	u M
Bromodichloromethane	0.00083	0.0040	0.00083	u
Bromoform	0.0011	0.0060	0.0011	u
Bromomethane	0.0018	0.0050	0.0018	u M
Carbon Tetrachloride	0.0018	0.010	0.0018	u
Chlorobenzene	0.0011	0.0020	0.0011	u
Chloroethane	0.0018	0.0050	0.0018	u
Chloroform	0.0010	0.0020	0.0010	u
Chloromethane	0.0014	0.0070	0.0014	u
cis-1,2-Dichloroethene	0.0011	0.0060	0.0011	u
cis-1,3-Dichloropropene	0.00087	0.0050	0.00087	✓ u M
Dibromochloromethane	0.0011	0.0030	0.0011	u
Dibromomethane	0.00050	0.010	0.00050	u
Dichlorodifluoromethane	0.0044	0.0050	0.0044	u
Ethylbenzene	0.0014	0.0030	0.0014	u
Hexachlorobutadiene	0.00093	0.0050	0.00093	✓ R
Isopropylbenzene	0.0014	0.0080	0.0014	✓ R
m-Xylene	0.00086	0.0030	0.00086	u
Methylene chloride	0.0015	0.0020	0.0021	
n-Butylbenzene	0.00098	0.0050	0.00098	✓ R
n-Propylbenzene	0.0013	0.0020	0.0013	✓ R
Naphthalene	0.0011	0.0020	0.0011	✓ R
o-Xylene	0.00086	0.0050	0.00086	u
p-Cymene	0.0012	0.0060	0.0012	✓ R

SMK
11/10/98

AFCEE
ORGANIC ANALYSES DATA SHEET 2
RESULTS

664 378

0130

Analytical Method: 8260

AAB #: A7807732

Lab Name: Recra LabNet

Contract #: F46162495080

Field Sample ID: DW6-D02-01

Lab Sample ID: A7305616

Matrix: SOIL

% Solids: 73.2

Dilution: 1.00

Date Received: 3-Sep-97

Date Extracted: _____

Date Analyzed: 12-Sep-97

Concentration Units (ug/L or mg/kg dry weight): MG/KG

Analyte	MOL	PQL	Concentration	Qualifier
p-Xylene	0.00086	0.0070	0.00086	U
sec-Butylbenzene	0.0012	0.0070	0.0012	✓ R
Styrene	0.0013	0.0020	0.0013	U
Trichloroethene	0.0014	0.010	0.0014	U
tert-Butylbenzene	0.0015	0.0070	0.0015	✓ R
Tetrachloroethene	0.0015	0.0070	0.0015	U
Toluene	0.0014	0.0050	0.0014	U
trans-1,2-Dichloroethene	0.0018	0.0030	0.0018	✓ R
trans-1,3-Dichloropropene	0.0011	0.0050	0.0011	U
Trichlorofluoromethane	0.0038	0.0040	0.0038	U
Vinyl chloride	0.0015	0.0090	0.0015	U

Comments:

SMK
1/10/97

664 379

AFCEE
ORGANIC ANALYSES DATA SHEET 2
RESULTS

0060

Analytical Method: 8270AAB #: A7B07374Lab Name: Recra LabNetContract #: F46162495D80Field Sample ID: DW6-002-01Lab Sample ID: A7305816Matrix: SOIL% Solids: 85.2Dilution: 1.00Date Received: 3-Sep-97Date Extracted: 4-Sep-97Date Analyzed: 11-Sep-97Concentration Units (ug/L or mg/kg dry weight): MG/KG

Analyte	MDL	PQL	Concentration	Qualifier
1,2,4-Trichlorobenzene	0.029	0.700	0.029	U
1,2-Dichlorobenzene	0.058	0.700	0.058	U
1,3-Dichlorobenzene	0.046	0.700	0.046	U
1,4-Dichlorobenzene	0.053	0.700	0.053	U
2,4-Dinitrotoluene	0.050	0.700	0.050	U
2,6-Dinitrotoluene	0.068	0.700	0.068	U
2-Chloronaphthalene	0.058	0.700	0.058	U
2-Methylnaphthalene	0.042	0.700	0.042	U
2-Nitroaniline	0.058	3.3	0.058	U
3-Nitroaniline	0.073	3.3	0.073	U
3,3'-Dichlorobenzidine	0.062	1.3	0.062	U
4-Bromophenyl phenyl ether	0.068	0.700	0.068	U
4-Chloroaniline	0.038	1.3	0.038	U
4-Chlorodiphenylether	0.053	0.700	0.053	U
4-Nitroaniline	0.11	3.3	0.11	U
Acenaphthylene	0.046	0.700	0.046	U
Acenaphthene	0.053	0.700	0.053	U
Anthracene	0.058	0.700	0.058	U
Benzo(a)anthracene	0.062	0.700	0.062	U
Benzo(a)pyrene	0.062	0.700	0.062	U
Benzo(b)fluoranthene	0.11	0.700	0.11	U
Benzo(ghi)perylene	0.11	0.700	0.11	U
Benzyl alcohol	0.38	1.3	0.38	U
Bis(2-chloroethoxy) methane	0.046	0.700	0.046	U
Bis(2-chloroethyl) ether	0.064	0.700	0.064	U

SMK
2/16/97

AFCEE
ORGANIC ANALYSES DATA SHEET 2
RESULTS

664 380

0061

Analytical Method: 8270

AAB #: A7B07374

Lab Name: Recra LabNet

Contract #: F46162495D80

Field Sample ID: DW6-002-01

Lab Sample ID: A7305816

Matrix: SOIL

% Solids: 85.2

Dilution: 1.00

Date Received: 3-Sep-97

Date Extracted: 4-Sep-97

Date Analyzed: 11-Sep-97

Concentration Units (ug/L or mg/kg dry weight): MG/KG

Analyte	MDL	PQL	Concentration	Qualifier
Bis(2-chloroisopropyl) ether	0.038	0.700	0.038	U
Bis(2-ethylhexyl) phthalate	0.085	0.700	0.085	U
Butyl benzyl phthalate	0.062	0.700	0.062	U
Chrysene	0.064	0.700	0.064	U
Di-n-butyl phthalate	0.058	0.700	0.058	U
Di-n-octyl phthalate	0.068	0.700	0.068	U
Dibenzo(a,h)anthracene	0.068	0.700	0.068	U
Dibenzofuran	0.062	0.700	0.062	U
Diethyl phthalate	0.064	0.700	0.064	U
Dimethyl phthalate	0.046	0.700	0.046	U
Fluoranthene	0.077	0.700	0.077	U
Fluorene	0.068	0.700	0.068	U
Hexachlorobenzene	0.085	0.700	0.085	U
Hexachlorobutadiene	0.046	0.700	0.046	U
Hexachlorocyclopentadiene	0.073	0.700	0.073	U
Hexachloroethane	0.032	0.700	0.032	U
Indeno(1,2,3-cd)pyrene	0.12	0.700	0.12	U
Isophorone	0.046	0.700	0.046	U
N-nitrosodiphenylamine	0.050	0.700	0.050	U
N-Nitroso-Di-n-propylamine	0.038	0.700	0.038	U
Naphthalene	0.050	0.700	0.050	U
Nitrobenzene	0.077	0.700	0.077	U
Phenanthrene	0.053	0.700	0.053	U
Pyrene	0.073	0.700	0.073	U
2,4,5-Trichlorophenol	0.11	3.3	0.11	U

*SMK
3/16/97*

664 381

AFCEE
ORGANIC ANALYSES DATA SHEET 2
RESULTS

0062

Analytical Method: 8270

AAB #: A7807374

Lab Name: Recra LabNet

Contract #: F46162495080

Field Sample ID: DW6-002-01

Lab Sample ID: A7305816

Matrix: SOIL

% Solids: 85.2

Dilution: 1.00

Date Received: 3-Sep-97

Date Extracted: 4-Sep-97

Date Analyzed: 11-Sep-97

Concentration Units (ug/L or mg/kg dry weight): MG/KG

Analyte	MDL	PQL	Concentration	Qualifier
2,4,6-Trichlorophenol	0.12	0.300	0.12	U
2,4-Dichlorophenol	0.032	0.300	0.032	U
2,4-Dimethylphenol	0.064	0.300	0.064	U
2,4-Dinitrophenol	0.080	3.3	0.080	U
2-Chlorophenol	0.042	0.300	0.042	U
2-Methylphenol	0.096	0.300	0.096	U
2-Nitrophenol	0.058	0.300	0.058	U
4,6-Dinitro-2-methylphenol	0.073	3.3	0.073	U R
4-Chloro-3-methylphenol	0.042	1.3	0.042	U
4-Methylphenol	0.038	0.300	0.038	U
4-Nitrophenol	0.11	1.6	0.11	U
Benzoic acid	1.8	1.6	1.8	U
Pentachlorophenol	0.14	3.3	0.14	U
Phenol	0.096	0.300	0.096	U

Comments:

*SHK
3/16/97*

AFCEE
ORGANIC ANALYSES DATA SHEET 2
RESULTS

664 382

000015

Analytical Method: 8330

AAB #: L7B00016

Lab Name: Recre LabNet

Contract #: F46162495080

Field Sample ID: DW6-002-01

Lab Sample ID: L7001801

Matrix: SOIL

% Solids: 100.0

Dilution: 1.00

Date Received: 3-Sep-97

Date Extracted: 7-Sep-97

Date Analyzed: 10-Sep-97

Concentration Units (ug/L or mg/kg dry weight): MG/KG

Analyte	MDL	PQL	Concentration	Qualifier
2,4,6-TRINITROTOLUENE	0.18	0.250	0.18	U
2,4-DINITROTOLUENE	0.13	0.250	0.13	U
2,6-DINITROTOLUENE	0.23	0.260	0.23	U
2-NITROTOLUENE	0.28	0.250	0.28	X
3-NITROTOLUENE	0.40	0.250	0.40	X
4-NITROTOLUENE	0.35	0.250	0.35	X
HEXAHYDRO-1,3,5-TRINITRO-1,3,5,7-TETRAZOCINE	0.28	1.0	0.28	U
1,3-DINITROBENZENE	0.081	0.250	0.081	U
TETRYL	0.63	0.650	0.63	U
NITROBENZENE	0.25	0.260	0.25	U
OCTAHYDRO-1,3,5,7-TETRAHITRO-1,3,5,7-TETRAZOC	0.39	2.2	0.39	U
1,3,5-TRINITROBENZENE	0.12	0.250	0.12	U

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Comments:

SMX
2/02/97

664 383

AFCEE
INORGANIC ANALYSES DATA SHEET 2
RESULTS

0300

Analytical Method: 6010AAB #: A7807706Lab Name: Recra LabNetContract #: F46162495080Field Sample ID: DW7-001-01Lab Sample ID: A7305817Matrix: SOIL% Solids: 99.4Dilution: 1.00Date Received: 3-Sep-97Date Extracted: 15-Sep-97Date Analyzed: 27-Sep-97Concentration Units (ug/L or mg/kg dry weight): MG/KG

Analyte	MDL	PQL	Concentration	Qualifier
Aluminum - Total	3.0	5.0	4400	B
Antimony - Total	0.81	1.0	0.89	F
Arsenic - Total	0.71	2.0	3.5	
Barium - Total	0.10	0.500	20.7	
Beryllium - Total	0.10	0.300	0.38	
Cadmium - Total	0.071	0.100	0.46	
Calcium - Total	15.2	20.0	304000	B
Chromium - Total	0.35	0.500	8.3	W
Cobalt - Total	0.20	0.200	1.5	
Copper - Total	0.35	0.500	3.2	
Iron - Total	4.0	5.0	5700	B
Manganese - Total	0.15	0.500	260	
Molybdenum - Total	0.30	0.500	2.4	
Nickel - Total	0.50	0.500	5.1	
Potassium - Total	30.3	10.0	1400	
Sodium - Total	152	100.0	1100	
Vanadium - Total	0.25	0.500	21.1	
Zinc - Total	0.35	3.0	20.0	

Comments:

The Calcium result was diluted by 10 fold on 09/28/97.

SML
3/13/94

AFCEE
INORGANIC ANALYSES DATA SHEET 2
RESULTS

664 384

037.

Analytical Method: 6010

AAB #: A7B08194

Lab Name: Recra LabNet

Contract #: F46162495D80

Field Sample ID: DW7-001-01 Lab Sample ID: A7305817

Matrix: SOIL

% Solids: 99.4

Dilution: 1.00

Date Received: 3-Sep-97 Date Extracted: 29-Sep-97

Date Analyzed: 1-Oct-97

Concentration Units (ug/L or mg/kg dry weight): MG/KG

Analyte	MDL	PQL	Concentration	Qualifier
Lead - Total	0.35	1.0	4.8	
Magnesium - Total	1.5	5.0	2280	J
Selenium - Total	0.64	1.0	0.64	y R
Silver - Total	0.44	0.200	0.44	U
Thallium - Total	0.84	2.0	0.84	U

Comments:

SMK
3/13/97

664-385

AFCEE
INORGANIC ANALYSES DATA SHEET 2
RESULTS

0345

Analytical Method: 7471

AAB #: A7807718

Lab Name: Recra LabNet

Contract #: F46162495080

Field Sample ID: DW7-001-01

Lab Sample ID: A7305817

Matrix: SOIL

% Solids: 99.4

Dilution: 1.00

Date Received: 3-Sep-97

Date Extracted: 17-Sep-97

Date Analyzed: 17-Sep-97

Concentration Units (ug/L or mg/kg dry weight): MG/KG

Analyte	MDL	PQL	Concentration	Qualifier
Mercury - Total	0.040	0.100	0.040	U

Comments:

SMK
3/1/97

AFCEE
ORGANIC ANALYSES DATA SHEET 2
RESULTS

664 386

01

Analytical Method: B081

AAB #: A7B07358

Lab Name: Recra LabNet

Contract #: F46162495080

Field Sample ID: DW7-001-01

Lab Sample ID: A7305817

Matrix: SOIL

% Solids: 99.4

Dilution: 4.00

Date Received: 3-Sep-97

Date Extracted: 4-Sep-97

Date Analyzed: 17-Sep-97

Concentration Units (ug/L or mg/kg dry weight): MG/KG

Analyte	MDL	PQL	Concentration	Qualifier
alpha-BHC	0.0020	0.0190	0.0020	U
beta-BHC	0.0015	0.0330	0.0015	U
delta-BHC	0.0017	0.0110	0.0017	U
gamma-BHC (Lindane)	0.0017	0.020	0.0017	U
alpha-Chlordane	0.0015	0.0150	0.0015	U
gamma-Chlordane	0.0014	0.0150	0.0014	U
4,4'-DDD	0.0038	0.0420	0.0038	U
4,4'-DDE	0.0034	0.0250	0.0034	✓ R
4,4'-DDT	0.0038	0.0360	0.0038	✓ R
Aldrin	0.0021	0.0220	0.0021	U
Dieldrin	0.0037	0.0350	0.0037	U
Endosulfan I	0.0018	0.0210	0.0018	U
Endosulfan II	0.0028	0.0240	0.0028	U
Endosulfan Sulfate	0.0031	0.0360	0.0031	U
Endrin	0.0036	0.0360	0.0036	U
Endrin aldehyde	0.0029	0.0160	0.0029	U
Heptachlor	0.0019	0.020	0.0019	U
Heptachlor epoxide	0.0014	0.0210	0.0014	U
Methoxychlor	0.025	0.0570	0.025	U
Aroclor 1016	0.011	0.700	0.011	U
Aroclor 1221	0.015	0.700	0.015	U
Aroclor 1232	0.015	0.700	0.015	U
Aroclor 1242	0.015	0.700	0.015	U
Aroclor 1248	0.018	0.700	0.018	U
Aroclor 1254	0.017	0.700	0.017	U

SMK
3/15/97

664 387

AFCEE
ORGANIC ANALYSES DATA SHEET 2
RESULTS

0194

Analytical Method: 8081

AAB #: A7807358

Lab Name: Recre LabNet

Contract #: F46162495D80

Field Sample ID: DW7-001-01

Lab Sample ID: A7305817

Matrix: SOIL

% Solids: 99.4

Dilution: 4.00

Date Received: 3-Sep-97

Date Extracted: 4-Sep-97

Date Analyzed: 17-Sep-97

Concentration Units (ug/L or mg/kg dry weight): MG/KG

Analyte	MDL	PQL	Concentration	Qualifier
Aroclor 1260	0.022	0.700	0.022	<input checked="" type="checkbox"/>
Toxaphene	0.11	0.570	0.11	U

Comments:

SMK
3/12/97

FINAL PAGE

ADMINISTRATIVE RECORD

FINAL PAGE