FINAL CORRECTIVE ACTION PLAN FOR LEAKING PETROLEUM STORAGE TANK 91568
NAS FORT WORTH TX
8/15/2001
THE ENVIRONMENTAL COMPANY

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NAVAL AIR STATION
FORT WORTH JRB
CARSWELL FIELD
TEXAS

ADMINISTRATIVE RECORD
COVER SHEET

AR File Number 606

Final Corrective Action Plan For Leaking Petroleum Storage Tank (LPST) 91568 At Offsite Weapons Storage Area

Naval Air Station Fort Worth
Joint Reserve Base (JRB)
Carswell Field, Texas

Contract No. F41624-95-D-8002
Delivery Order 0009

August 15, 2001

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

The Environmental Company, Inc.

FINAL

CORRECTIVE ACTION PLAN FOR LEAKING PETROLEUM STORAGE TANK (LPST) 91568

AT

OFFSITE WEAPONS STORAGE AREA

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

August 15, 2001

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This Corrective Action Plan describes the methods to be used to complete the soil removal action associated with LPST 91568 located at the Offsite Weapons Storage Area at Naval Air Station Fort Worth, Joint Reserve Base, Carswell Field, Texas

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PREFACE

A diesel fuel leak associated with an underground storage tank (UST) was reported to TRNCC and subsequently registered as Leaking Petroleum Storage Tank (LPST) 91568. LPST 91568 is located near Building 8514 at the Offsite Weapons Storage Area (WSA), Naval Air Station (NAS) Fort Worth Joint Reserve Base, Carswell Field, Texas. A site assessment was conducted in 1988 by Radian Corporation (Radian, 1988), which indicated the presence of limited total petroleum hydrocarbon (TPH) contamination. Corrective action activities necessary for closure of this tank is the subject of this corrective action plan (CAP).

This 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. Glenn Metzler, 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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NOTICE

This report has been prepared for the United States Air Force (USAF) by The Environmental Company, Inc. (TEC) in support of base closure activities completed under the USAF 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 close the LPST site in order to facilitate this effort.

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, in conjunction 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 USAF 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

AFB	Air Force Base
AFBCA	Air Force Base Conversion Agency
AFCEE	Air Force Center for Environmental Excellence
bgs	below ground surface
BTEX	benzene, toluene, ethylbenzene, xylene
Bldg	Building
CAP	Corrective Action Plan
cm/sec	centimeters per second
DTIC	Defense Technical Information Center
ERB	Environmental Restoration Branch
FSP	Field Sampling Plan
IDW	investigation derived wastes
IRP	Installation Restoration Program
JRB	Joint Reserve Base
LPST	Leaking Petroleum Storage Tank
mg/kg	milligrams per kilogram
msl	mean sea level
NAS	Naval Air Station
NRCS	Natural Resource Conservation Service
PAHs	polynuclear aromatic hydrocarbons
PID	photoionization detector
PSTD	Petroleum Storage Tank Division
RCRA	Resource Conservation and Recovery Act
RFI	RCRA Facility Investigation

LIST OF ACRONYMS AND ABBREVIATIONS (CONTINUED)

TAC	Texas Administrative Code
TCG	target cleanup goals
TCLP	Toxicity Characteristic Leachate Procedure
TEC	The Environmental Company, Inc.
TWC	Texas Water Commission
TNRCC	Texas Natural Resources Conservation Commission
TPH	total petroleum hydrocarbon
USAF	United States Air Force
USDA	United States Department of Agriculture
UST	underground storage tank
WSA	Weapons Storage Area

1.0 INTRODUCTION

This corrective action plan (CAP) was prepared by The Environmental Company, Inc. (TEC) under contract No. F41624-95-D-8002, Delivery Order 0009, prepared for Project No. 96-8117 to address activities associated with closure of a TNRCC-registered Leaking Petroleum Storage Tank (LPST) 91568, located at the Offsite Weapons Storage Area (WSA) at Naval Air Station (NAS) Fort Worth Joint Reserve Base, Carswell Field, Texas.

LPST 91568 was a 1,000-gallon underground storage tank (UST) located approximately 40 feet east of Building (Bldg.) 8514. Reportedly, a release from the UST may have occurred in 1987 when the vent pipe was damaged during landscape maintenance activities. This release was subsequently investigated in 1988 by Radian Corporation (Radian, 1988). The investigation demonstrated that contamination was limited to the backfill soil along the west wall of the tank hold pit. No contamination was identified beyond the tank hold pit and groundwater was not encountered. The methods and findings of this study are further discussed in Section 3 0.

The closure activities proposed in this CAP include excavation of existing backfill from the tank hold pit, chemical analysis to confirm cleanup in accordance with Texas Natural Resources Conservation Commission Petroleum Storage Tank Division (TNRCC PSTD) requirements, and offsite disposal of any contaminated soil. The objective of these activities is to close LPST 91568 without land use restrictions or institutional controls. To accomplish this goal, soils will be characterized to support a Plan A Evaluation (TNRCC, 1995) and removed until Plan A Target Concentrations are met.

Because remedial technologies are not proposed for this LPST site, CAP worksheets, as described in TNRCC (1996a), were not prepared for this plan.

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2.0 SITE-SPECIFIC GEOLOGY AND HYDROGEOLOGY

2.1 SUBSURFACE CONDITIONS OF LPST 91568 TANK HOLD

Drilling logs generated during the Radian (1988) investigation indicated the LPST 91568 tank (formerly known as WSA-1 Site) was in a pit excavated in the limestone to a depth of 7 to 8 feet below ground surface (bgs). The backfill material in the tank hold consists of rock, sand, silt, and clay and is generally dark brown with a moderate to stiff consistency (Radian, 1988) The backfill material and surrounding soil is underlain by dense fossiliferous limestone occurs (Radian, 1988). The dimensions of the pit are illustrated on Figure 4-2 in Appendix A These dimensions were determined by inspection of the land surface, as well as the geologic logs of closely-spaced borings near the tank (Radian, 1988). Directly west of the tank was a reinforced concrete pad approximately 12 inches thick. Geologic cross-sections of the LPST 91568 site, which illustrate that the tank hold pit was constructed in the limestone, are provided on Figures 4-3 and 4-4 in Appendix A.

Groundwater was not encountered in the soil borings installed during the Radian (1988) investigation.

2.2 OFFSITE WSA SOILS

The Soil Survey of Tarrant County (Ressel, 1981) shows 10 distinct soil units in and around the Offsite WSA (see Figure 2-1). 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 (TEC, 1999). Alluvial materials are found only along stream channels of Live Oak Creek and its northern tributary.

2.3 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 2-2 and 2-3).

Cretaceous bedrock is exposed both in and near the Offsite WSA. Goodland Limestone crops out west of the Offsite WSA property boundary. 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 at the Offsite WSA (JEG, 1997).

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 at the Offsite

WSA (JEG, 1997). 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.

2.4 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 2-2 and 2-3).

Although the Walnut Formation can contain groundwater in shallow weathered zones, it generally functions as an aquitard. During the Offsite WSA Background Study (JEG, 1997), 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 (JEG, 1997). 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 (JEG, 1997). 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.

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 (JEG, 1997) and during this RFI confirm a strong eastward flow component in the Paluxy Aquifer.

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 Group (JEG) 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.

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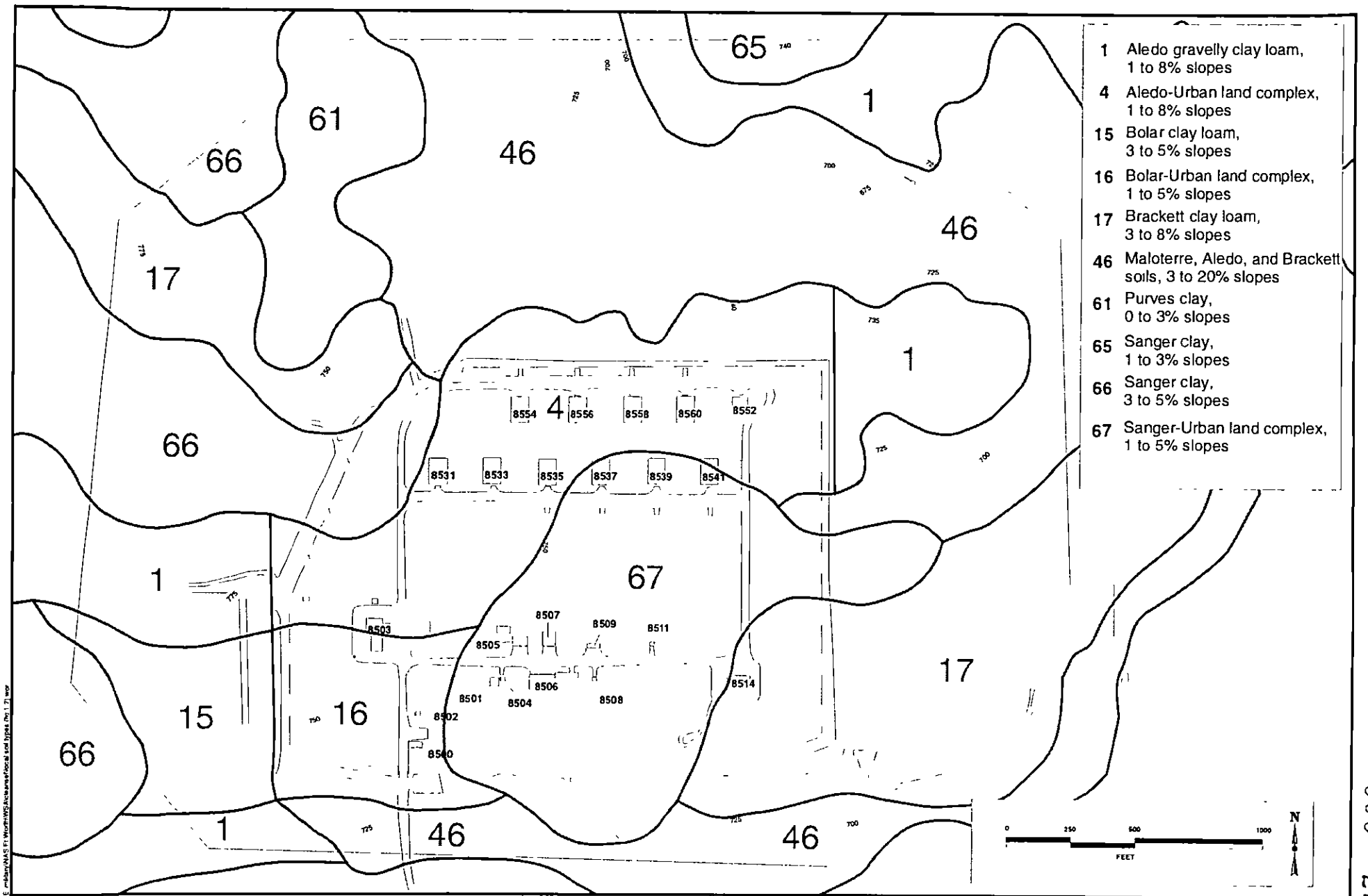

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Figure 2-1 -- Local Soil Types

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

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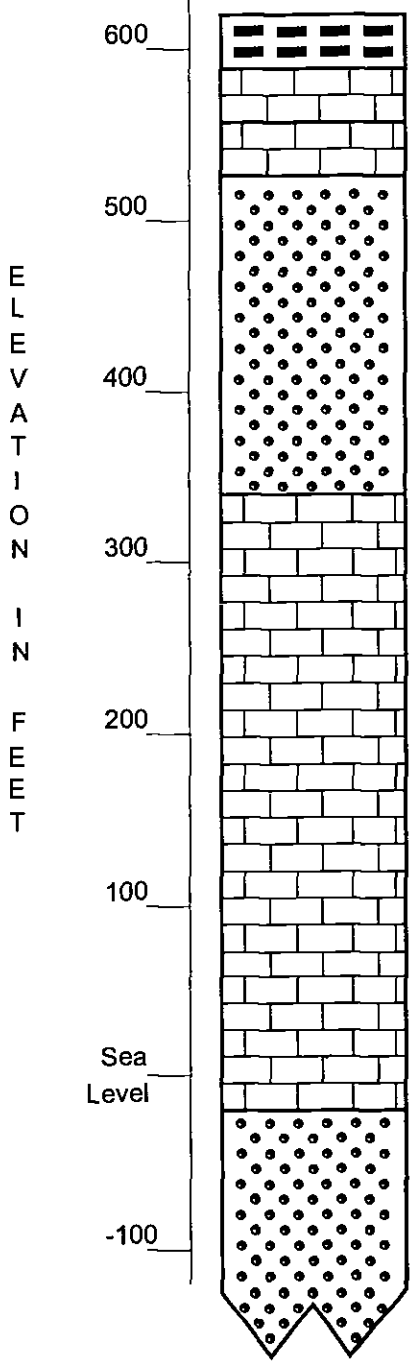

Unit Name	Description	Hydrogeology
Quaternary Materials	Fill, Alluvial deposits	Aquifer
Goodland Limestone	Fossiliferous limestone	Aquitard
Walnut Formation	Shell-agglomerate limestone	Aquitard
Paluxy Formation	Poorly cemented sandstone with interbeds of shale and claystone	Major aquifer
Glen Rose Formation	Fine-grained limestone with shale, marl, and sandstone	Aquitard
Twin Mountains Formation	Sandstone with interbedded shales	Major aquifer

Drawing Name: Figure 1-6 Generalized Strat. Column.dwg Viewname: Fig1-6

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Figure 2-2 -- Generalized Regional Stratigraphic Column

Date March 1999
Project Manager B Duffner
Prepared By LLM/DAL
Project No 3109

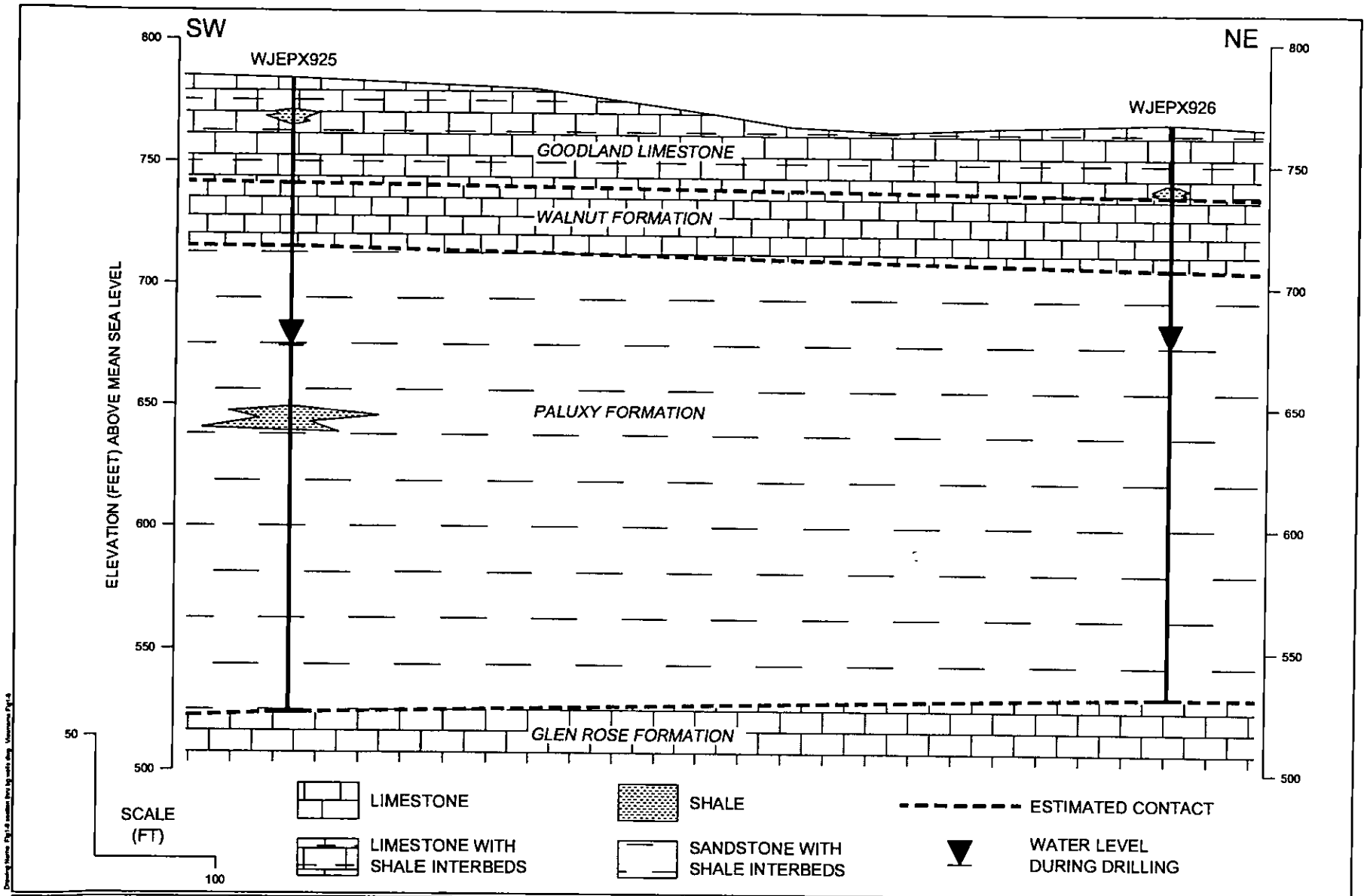

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Figure 2-3 -- Geologic Cross - Section Through Background Monitoring Wells

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

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3.0 SITE ASSESSMENT HISTORY

According to TNRCC's *Guidance for Risk-Based Assessments at LPST Sites in Texas* (TNRCC, 1995), the following tasks must be, at a minimum, completed for site assessments:

- identify potential receptors, exposure pathways and immediate and long-term hazards;
- identify contaminant areas and maximum contaminant concentrations of all affected media;
- delineate the vertical extent of affected media exceeding risk-based concentrations;
- provide permanent well points when groundwater is affected; and
- identify site conditions that affect or limit contaminant movement.

Identification of potential receptors and exposure pathways for the entire Offsite WSA site was completed as part of the Offsite WSA RFI. The results of the receptor evaluation and exposure pathway analysis are described in the RFI report (TEC, 1999). With the exception of providing well points, the remaining tasks were accomplished by Radian in 1988 The results of these tasks are described in the following paragraphs. As indicated in Section 3.1, soil contamination did not extend into the bedrock formation; therefore, groundwater was not impacted and permanent well points were not installed.

3.1 SOILS

In December 1987, a release of diesel fuel was reported to the TNRCC Region 4 office (formerly Texas Water Commission [TWC], District 4). Reportedly, the release occurred when the vent pipe to a 1,000-gallon UST was damaged during landscape maintenance activities. The UST was located east of Bldg. 8514 adjacent to the concrete drive (see Appendix A). The release site (referenced as 1,000-gallon UST, Bldg. 8514, Carswell AFB, Offsite WSA) was assigned LPST ID number 91568 by TNRCC PSTD. The incident report related to this release is provided in Appendix B.

The release was investigated in October 1988 by Radian Corporation (Radian, 1988). Radian installed ten soil borings (WSA-1 through WSA-10) to a maximum depth of 10 feet bgs within and adjacent to the 1,000-gallon UST (Figures 4-2 to 4-4 in Appendix A). Groundwater was not encountered during borehole drilling. Soil samples were collected from the boreholes at various depths and analyzed for benzene, toluene, ethylbenzene, xylene (BTEX), and total petroleum hydrocarbon (TPH) Method 418.1.

Analytical results of two closely-spaced boreholes (WSA-7 and WSA-9) indicated that TPH was present in the backfill material, but did not extend under or away from the tank hold (Table 3-1). These boreholes were installed along the west wall of the tank hold pit adjacent to a 12-foot thick concrete pad (Appendix A). Two TPH results from these boreholes, 750 ug/g (WSA-7) and 1,300 ug/g (WSA-9), exceeded the TNRCC screening level for TPH middle distillate releases (500 ug/g). These TPH results were identified in soil intervals of 4 to 6 feet bgs and 6 to 9 feet bgs, respectively. A sample collected from 9 feet bgs in WSA-9 had a TPH concentration of 20 ug/g, which is well below the

screening level and demonstrates that the vertical extent of TPH is limited to the backfill material within the tank hold pit. All other samples had TPH and BTEX levels below the detection limits or screening levels (Table 3-1). The analytical method used for BTEX was SW-846 8240 which included all target analytes specified in that method. Several other volatile organic compounds were detected in samples WSA-7B (4-6 feet depth) and WSA-9B (6-9 feet depth). Sample WSA 7B contained 0.055 mg/kg 1,1,2,2-tetrachloroethane, 0.057 mg/kg 4-methyl-2-pentanone, 0.015 mg/kg methyl ethyl ketone, and 0.0056 mg/kg xylenes. Sample WSA-9B contained 0.0036 mg/kg 1,1,2,2-tetracloroethane. Polynuclear aromatic hydrocarbons (PAHs) were not analyzed during the Radian investigation.

Because groundwater was not encountered during boring installation and TPH occurrence was limited to the backfill material, Radian (1988) recommended a corrective action to remove the tank, excavate the backfill material, and replace with clean soil. During this effort, Radian recommended that soil samples should be collected from the base of the pit and the west tank hold pit wall (where WSA-7 and WSA-9 were drilled) to confirm that soil containing TPH is removed.

According to TNRCC Region 4 records in Arlington, Texas, Eagle Construction (see Appendix B) removed the 1,000-gallon UST and eight additional USTs from Carswell Field, Texas. However, neither documentation of investigation activities during the tank removal nor the analytical results of the soil samples collected during the tank removal were available in the TNRCC Region 4 records.

3.2 GROUNDWATER

As discussed in Section 3.1, detections of TPH were limited to soil less than 9 feet bgs and groundwater was not encountered during assessment of LPST 91568. In addition, the Paluxy aquifer was shown to not be impacted during the Offsite WSA RFI (TEC, 1999). The Walnut Formation aquitard, which is 25 to 30 feet thick (JEG, 1997), is present between the TPH contamination and the aquitard and the water level in the aquifer is another 25 feet below the Walnut Formation (see Figure 2-3).

Table 3-1. Summary of Soil Analytical Results for LPST 91568

Location Number	Date	Depth (feet-bgs)	Benzene	Toluene	Ethyl-Benzene	Xylene	Total BTEX	TPH (418.1)
WSA-1	8-4-88	0-1	NA	NA	NA	NA	NA	<19.0
	8-4-88	1-2	<0.002	<0.002	<0.002	<0.002	<0.002	<19.0
WSA-2	8-4-88	0-2	NA	NA	NA	NA	NA	<20.0
	8-4-88	4-5	<0.002	<0 002	<0.002	<0.002	<0.002	<20.0
	8-4-88	5-6	NA	NA	NA	NA	NA	<20.0
WSA-3	8-4-88	0-1	<0.002	<0.002	<0.002	<0.002	<0.002	<19.0
	8-4-88	1-5	NA	NA	NA	NA	NA	<17.0
WSA-4	8-4-88	0-1	<0.002	<0.002	<0.002	<0.002	<0.002	<18.0
	8-4-88	2-3	NA	NA	NA	NA	NA	28.0
	8-4-88	5-7	NA	NA	NA	NA	NA	<18 0
WSA-5	8-4-88	0-2	<0.002	<0.002	<0.002	<0.002	<0.002	<17.0
WSA-6	8-4-88	0-2	NA	NA	NA	NA	NA	270.0
	8-4-88	0-2	NA	NA	NA	NA	NA	150.0
	8-4-88	2-4	<0 002	<0.002	<0.002	<0.002	<0.002	<19.0
	8-4-88	4-6	NA	NA	NA	NA	NA	<19.0
	8-4-88	4-6	NA	NA	NA	NA	NA	<15.0
WSA-7	8-5-88	2-4	NA	NA	NA	NA	NA	<20..0
	8-5-88	4-6	<0.002	<0 002	<0.002	<0.002	0.0056	**750.0**
WSA-8	8-5-88	0-1	NA	NA	NA	NA	NA	<19.0
	8-5-88	3-7	<0.002	<0 002	<0.002	<0.002	<0.002	<19.0
	8-5-88	7	NA	NA	NA	NA	NA	<20.0
WSA-9	8-5-88	2-4	NA	NA	NA	NA	NA	<20.0
	8-5-88	2-4	NA	NA	NA	NA	NA	40.0
	8-5-88	6-9	<0.002	<0 002	<0.002	<0.002	<0.002	**1300.0**
	8-5-88	9	NA	NA	NA	NA	NA	20.0
WSA-10	8-5-88	0-1	<0.002	<0.002	<0.002	<0.002	<0.002	<19.0

Notes.
Source· Radian (1988)
Units in milligram per kilogram (mg/kg)
Bold Values exceed TNRCC screening levels for a middle distillate release.
Screening Levels:

Benzene	0 5 mg/kg	Ethylbenzene	10 mg/kg
Toluene	20 mg/kg	TPH	500 mg/kg
Xylenes	70 mg/kg		

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4.0 PLAN A RISK EVALUATION

To accomplish the objective of the corrective action described in Section 1.0, soils will be characterized to support a Plan A Evaluation (TNRCC, 1995) and removed until Plan A Target Concentrations are met. These concentrations, based on groundwater beneficial use category "soils only affected" (TNRCC Site Assessment Report Form 0562), are shown in Table 4-1 for the proposed indicator analytes (BTEX and PAHs). The beneficial use category assignment is based on the results of previous subsurface investigations conducted in 1988 and 1999 demonstrating that groundwater is not impact by releases from the sites at the Offsite WSA (Radian, 1988 and TEC, 1999).

Sampling and Plan A Evaluation results will be documented on TNRCC's Assessment Report Form (TNRCC-0562) with appropriate attachments, as specified on the form's table of contents. Information to be provided on this form include:

- site and land use descriptions,
- a receptor survey,
- a water well inventory,
- the site assessment history,
- a tank system characterization,
- a soil assessment, and
- a comparison of analytical results with the Plan A concentrations.

Information pertaining to the first two items will be obtained from results of the Offsite WSA RCRA Facility Investigation (RFI) (TEC, 1999), in which a comprehensive investigation and risk assessment were completed for all sites located within the Offsite WSA. TEC will rely on the RFI report and an Environmental Data Resource (EDR) report to identify any wells located within 0.5-mile radius of the site. The site assessment history, which is detailed in Section 3.0, will be summarized on Worksheet 5.0 Site Assessment History. The majority of the data for the tank system characterization, to be presented on Worksheet 6.0, will be based on the site assessment prepared by Radian (1988). The soil assessment and Plan A evaluation worksheets (No. 7.0 and 11.0, respectively) will be completed using data collected during the current site assessment and corrective action.

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Table 4-1. Plan A Target Concentrations for LPST 91568 Site Soil

Analyte	Target Concentrations[a] (mg/kg)
BTEX	
Benzene	0.13
Ethylbenzene	160
Toluene	69
Xylene	568
PAHs	
Acenaphthene	314
Anthracene	13
Benzo(a)anthracene	0.877
Benzo(b)fluoranthene	0.877
Benzo(k)fluoranthene	8.77
Benzo(a)pyrene	8.77e-02
Chrysene	7.2
Dibenz(a,h)anthracene	8.77e-02
Fluoranthene	156
Fluorene	247
Indeno(1,2,3-cd)pyrene	0.877
Naphthalene	389
Pyrene	99

[a] Source: Table A-1 of TNRCC (1994)

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5.0 SOIL REMOVAL AND DISPOSAL

5.1 OBJECTIVE

The closure activities proposed in this CAP include excavation and disposal of existing backfill from the tank hold pit, chemical analysis to confirm cleanup, and offsite disposal of any contaminated soil. The objective of the soil removal and disposal action is to remove soil exceeding the risk-based TCGs provided in Table 4-1, such that the site may be closed under TNRCC LPST regulations.

5.2 EXTENT OF REMOVAL

No additional chemical characterization will be performed prior to removal of soil associated with the LPST 91568 site because contamination is well-defined, as described in Section 3.0. Instead, confirmation samples will be collected after soils are excavated and removed to ensure no soils remain with analyte concentrations above the risk-based TCGs. Excavation will be based on observed tank pit dimensions within the limestone bedrock, photoionization detector (PID) field screening, and visual observations.

To meet the risk-based TCGs at the LPST 91568 site, the tank hold pit will be over-excavated by approximately 1 foot around the perimeter and at the base of the pit. The excavation will include the backfill material. The materials generated from the excavation will be stockpiled at an onsite location near the tank hold pit until all soils with PID readings above background are removed.

5.3 COLLECTION OF CONFIRMATION SAMPLES AND CHEMICAL ANALYSIS

Once the tank hold pit materials are removed as described above, soil samples will be collected from the excavated tank hold materials and from each wall and the bottom of the excavation. A total of eight soil samples, plus one field duplicate, will be collected from the pit. Based on the Radian site assessment, the tank pit is believed to be approximately 20 feet wide along the east and west walls, ten feet wide along north and south walls and 7 to 8 feet deep. In order to confirm the site assessment results, one sample each will be collected from the north, south, and east walls and at the base of the tank pit. One sample will be collected from the center of the tank pit floor. Four additional samples will be collected from the west wall. Two west wall samples will be collected at the mid depth between the ground surface and base of the pit. Two additional west wall samples will be collected along the base of the pit.

Because the release was identified as diesel fuel, the soil samples will be analyzed for the indicator analytes, BTEX (EPA Method 8020) and PAHs (EPA Method 8310), as well as TPH (TNRCC Method 1005 Revision 03), as specified in TNRCC's *Total Petroleum Hydrocarbons, TNRCC Method 1005 Revision 03* (TNRCC, 2001).

Because several other volatile organic compounds were detected in tank hold backfill material in the previous investigation (Radian, 1988), two of the samples collected will be tested for volatiles with EPA Method 8260. The samples tested with this method will be the one from the tank bottom and one of the west wall samples at the base of the pit.

Results of these analyses will be compared to the risk-based Plan A target concentrations for LPST sites and results for non-BTEX volatiles will be compared to Texas Risk Reduction Standards Number 2 for residential use (30 TAC 333.558) to verify that excavation has resulted in removal of soils with chemical concentrations in excess of these criteria. If concentrations are still in excess of the criteria specified above, the affected tank pit soils will be excavated and the remaining soils will be resampled. The samples will be analyzed for the chemicals exceeding the criteria. Removal and sampling will be accomplished *until* the Plan A target concentrations are met.

Soil samples will be collected, handled, prepared, and shipped in accordance with procedures specified in the Draft Field Sampling Plan (FSP) (TEC, 1996).

5.4 SOIL REMOVAL AND MANAGEMENT OF WASTE

Soil excavated from the LPST 91568 will be stored onsite while waste characterization proceeds. Waste management will involve the following components:

- waste type determination;
- storage of waste; and
- transportation, and disposal.

At the time of excavation, the approximate quantity of soil waste will be inventoried at the end of each field day. Information on soil waste will be recorded on container labels and on a Waste Inventory Tracking Form (Appendix C). This information will include the following:

- Date generated,
- Location of origin;
- Container number;
- TEC field personnel and phone numbers;
- IDW media (i.e., soil);
- Analytes; and
- Carswell AFB contact name and phone number.

Soil removal will be completed using a backhoe or excavator, whichever is determined to be most appropriate, and placed on a plastic lined concrete pad with a lined berm around its perimeter. Plastic sheeting will be secured over the top of the pile. Any potentially contaminated excavated material, as indicated by PID screening, will be stored separately from tank pit materials believed to be contaminant free.

Samples collected for waste determination will be collected in the following manner. A minimum of one composite sample will be collected from each 50 cubic yards of soil. Each composite sample will consist of individual subsamples, each representing a maximum of approximately 10 cubic yards (e.g., a minimum of 5 subsamples will be composited into one sample to characterize approximately 50 cubic yards of soil).

Waste characterization samples will be submitted for BTEX, PAHs, and TPH. Analyses of IDW samples collected at similar UST sites at the Offsite WSA, thus far have

indicated that the contaminated soil is not considered a hazardous waste under Texas Administrative Code (TAC) Chapter 335, Subchapter R (TNRCC, 1996). However, the actual waste classification of the removed soil will be determined. Waste will be stored for no longer than 90 days. Decontamination procedures and disposal of investigation derived waste (IDW) will be performed as described in Sections 5.12 and 5.13 of the Draft FSP (TEC, 1996).

The soil will remain onsite in the secured Offsite WSA until characterization is completed in support of its off-site disposal. Soil determined to have no contamination above risk-based TCGs will be backfilled onsite. Soil with contaminant levels above risk-based TCGs will be disposed off-site at a permitted facility in accordance with TAC 335 Subchapter A.

5.5 RESTORATION

Following excavation and backfilling activities, sites will be regraded to its original surface elevation If needed, surface soils from offsite storage area locations demonstrated to contain no contamination above background will be used as borrow material (TEC, 1999)

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6.0 REFERENCES

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Barnes, V.E. 1972, Revised 1988. *Geologic Atlas of Texas, Dallas Sheet.* Bureau of Economic Geology, University of Texas at Austin.

Jacobs Engineering Group (JEG). 1997 (January). *Draft, NAS Fort Worth JRB, Texas (Formerly Carswell AFB, Texas), Basewide Background Study, Volume I.* Contract No. F41624-94-D-8046, Delivery Order 0021. Jacobs Engineering Group, Denver, CO.

Radian Corporation. 1988 (October). *Installation Restoration Program Stage 1 Draft Report Weapons Storage Site WSA-1.*

Ressel, 1981 (June). *Soil Survey of Tarrant County, Texas.* United States Department of Agriculture Conservation Service in cooperation with Texas Agricultural Experiment Station.

The Environmental Company, Inc. (TEC), 1999. *Final RCRA Facility Investigation of the Offsite Weapons Storage Area at Naval Air Station Forth Worth, Joint Reserve Base, Carswell Field, Texas.* Contract No. F41624-95-D-8002, Delivery Order 0009. The Environmental Company, Inc., Seattle, WA.

TEC, 1996 (December). *Draft Sampling and Analysis Plan (Field Sampling Plan, Quality Assurance Project Plan) RCRA Facility Investigation (RFI) of the Offsite Weapons Storage Area, Naval Air Station (NAS) Fort Worth, Joint Reserve Base (JRB), Fort Worth, Texas.* Contract No. F41624-95-D-8002, Delivery Order 009. The Environmental Company, Charlottesville, VA.

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TNRCC, 1996b (March). *Subchapter R: Waste Classification, Texas Natural Resource Conservation Commission, Chapter 335-Industrial Solid Waste and Municipal Hazardous Waste.* Texas Natural Resource Conservation Commission, Austin, TX.

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APPENDIX A

1988 RADIAN INVESTIGATION FIGURES

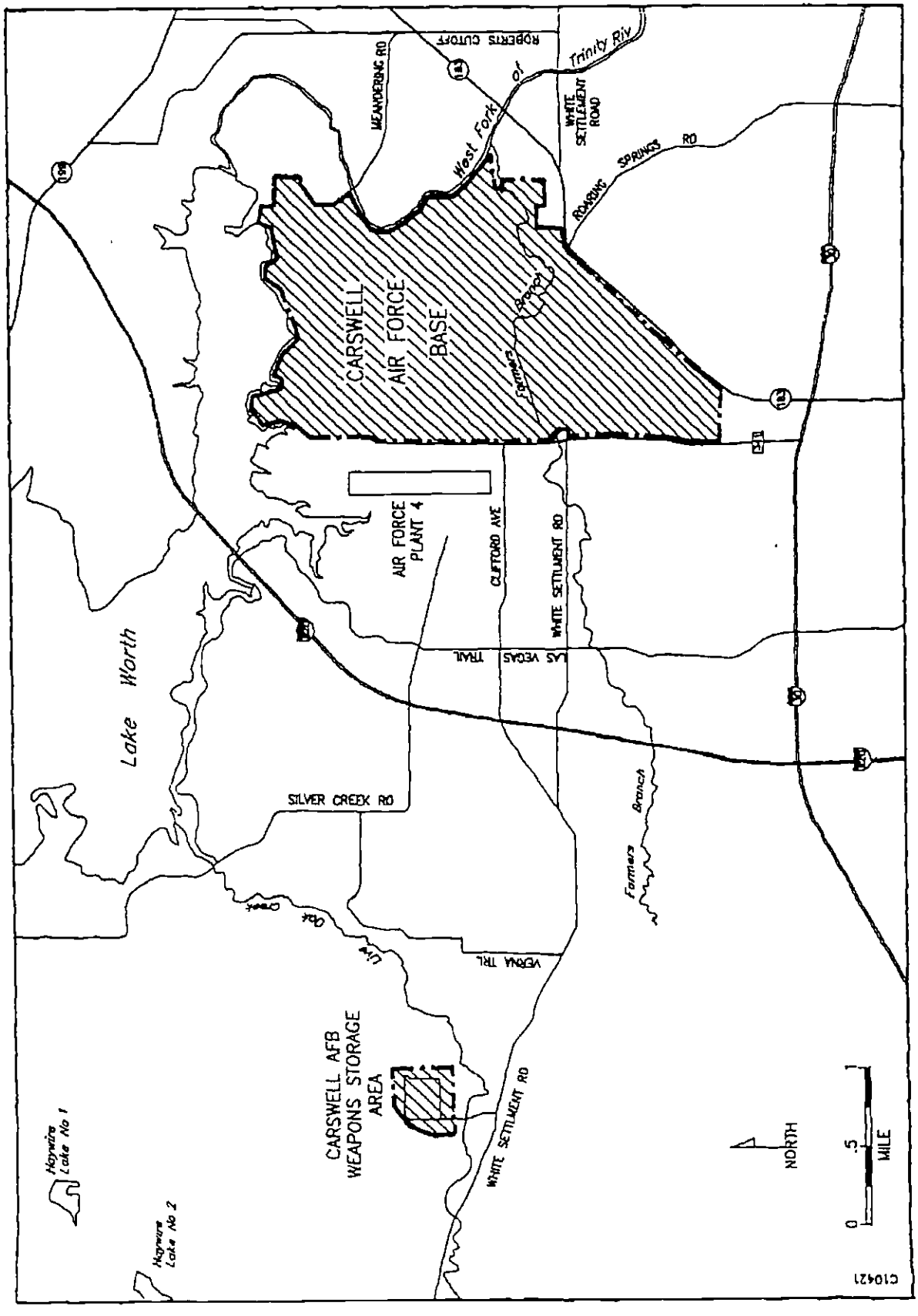


Figure 1-1. Location of Carswell AFB and the Weapons Storage Area, Fort Worth Area, Texas

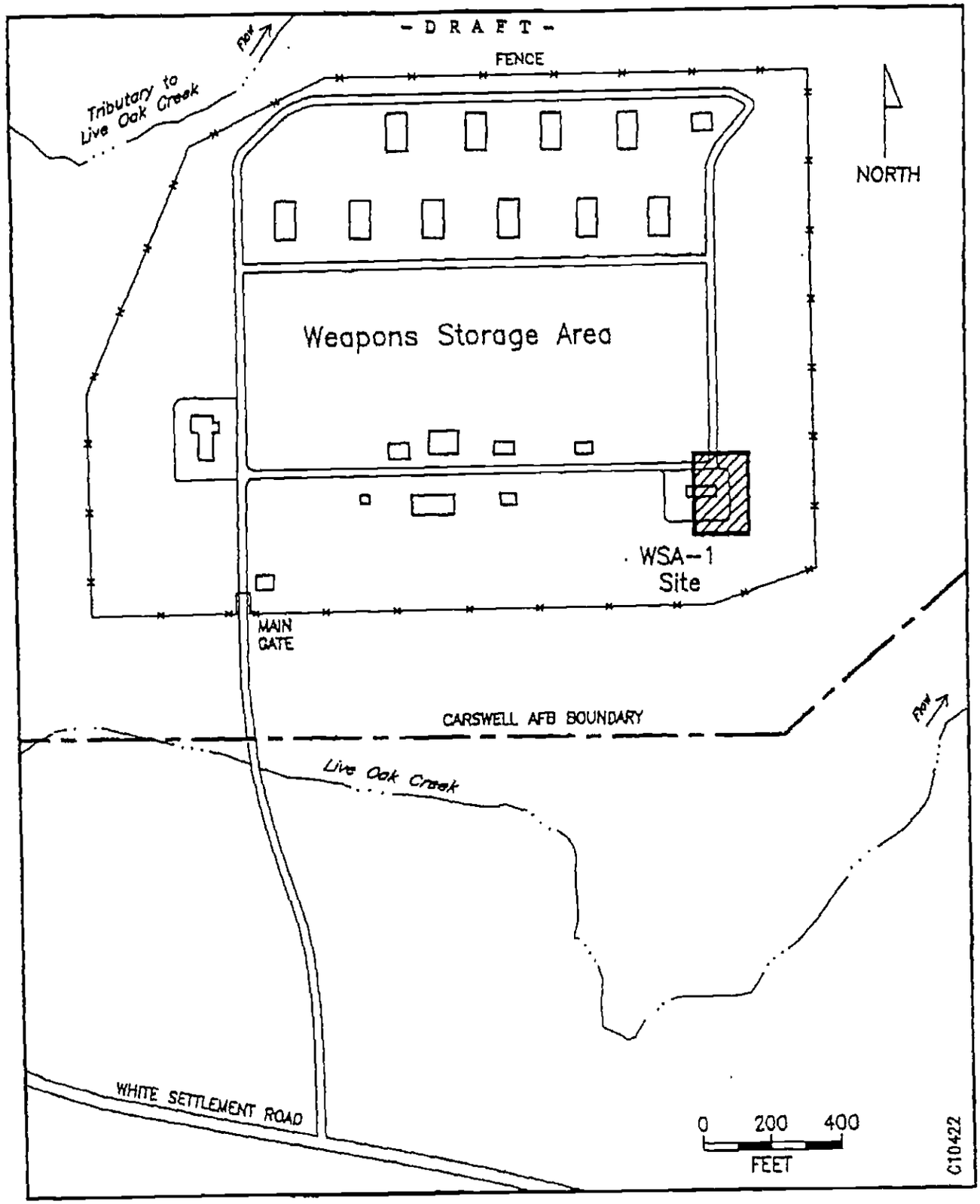


Figure 1-2. Location of WSA-1 Site at Weapons Storage Area, Carswell AFB, Texas

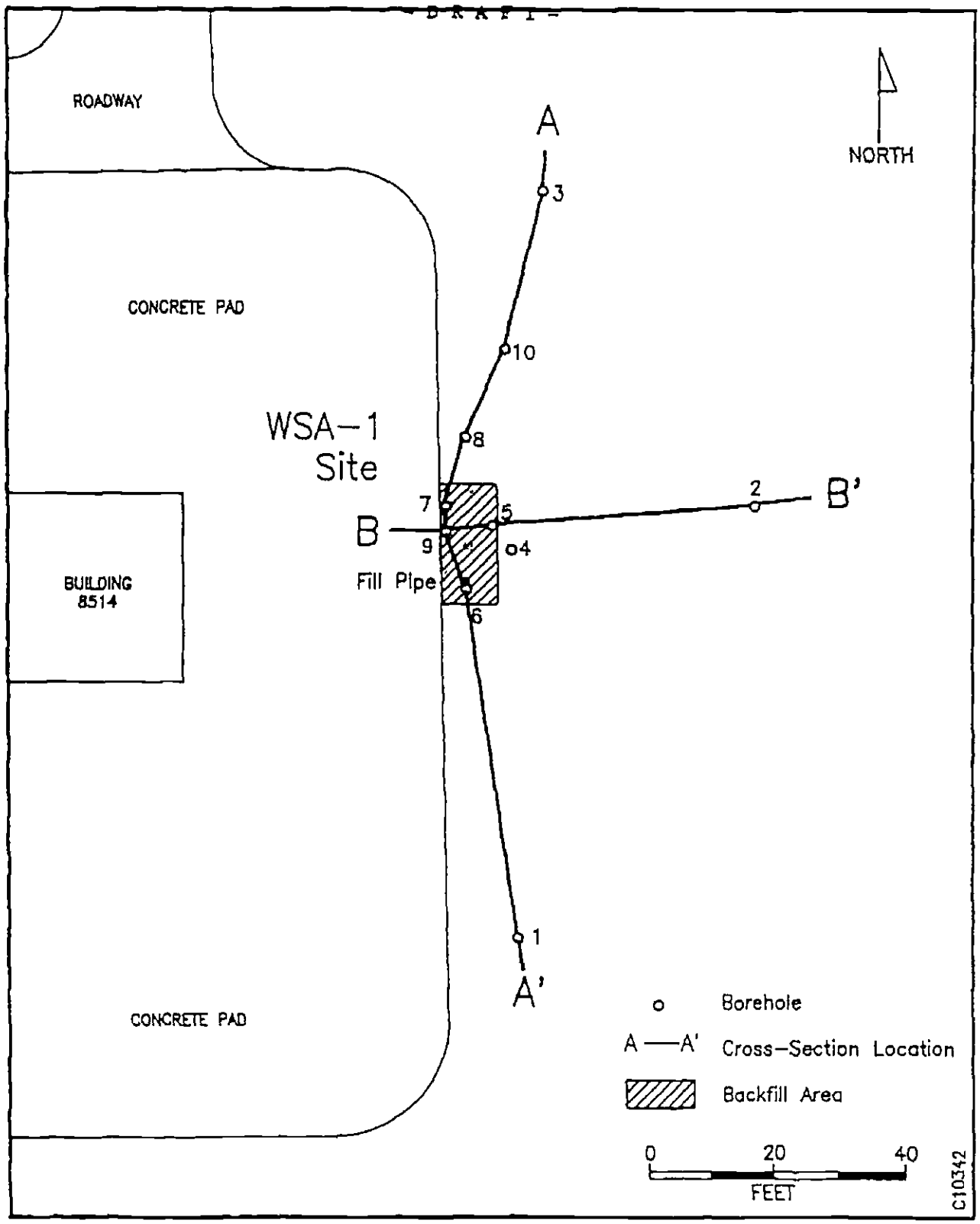


Figure 4-1. Location of Boreholes at WSA-1 Site, Carswell AFB, Texas

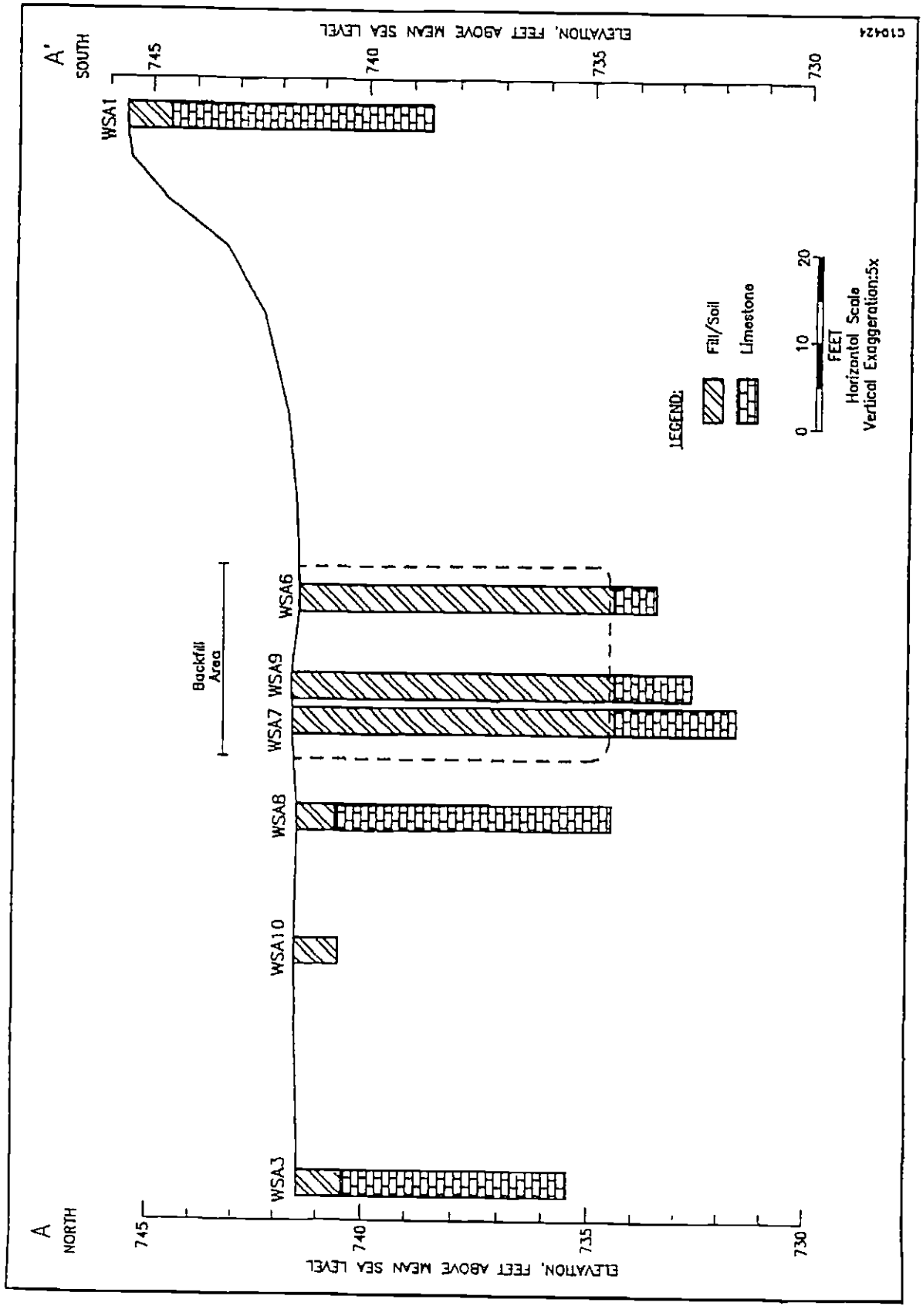


Figure 4-2. Geologic Cross-Section A-A', WSA-1 Site, Carswell AFB, Texas

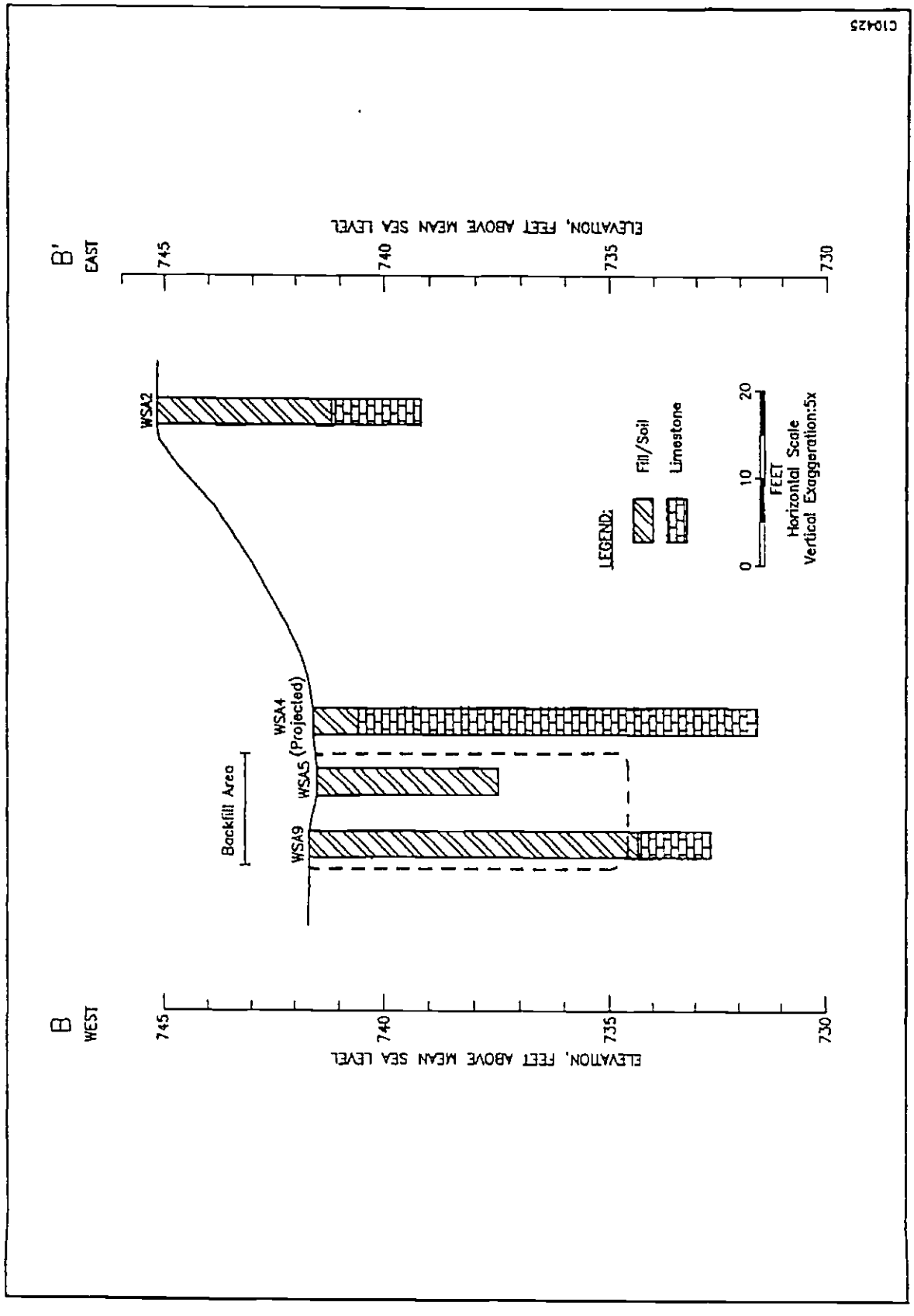


Figure 4-3. Geologic Cross-Section B-B', WSA-1 Site, Carswell AFB, Texas

APPENDIX B

LPST 91568 RELEASE AND TANK REMOVAL DOCUMENTATION

✓ interim 606 47 TEXAS WATER COMMISSION

final

LEAKING UNDERGROUND STORAGE TANK

INCIDENT REPORT

71568 Hist
LUST ID. NO.

SOL.WST.REG.NO. (if applicable)

Work # 2603

Telephone Hotline

STATUS INFORMATION

UST REGISTRATION: _____ LUST PRIORITY 4

LUST DISCOVERY DATE: 12-14-87 TWC NOTIFICATION DATE: 12-15-87

REPORTED BY: RAJ SHETH PHONE: (817) 782-6261

REPRESENTING: Carswell Airforce Base

REPORTED TO: DAN AIREY C.O./DISTRICT: C.O

SUBSTANCES RELEASED

PETROLEUM PRODUCT(S) RELEASED: DIESEL EST.VOL. UNK gal.s max 700gals

HAZARDOUS SUBSTANCE RELEASED: _____ EST.VOL. _____ gal.s

RELEASE COMMENTS: 1000gal Tank, BROKEN VENT PIPE

RELEASE DETECTION METHOD: PERSON SMELLED DIESEL VAPORS & Noticed
(Routine Monitor, Tank Test, Closure; Specify if other)
pipe was not straight (VERTICAL)

LOCATION OF RELEASE

NAME OF FACILITY: CARSWELL AIRFORCE BASE Building No. 8514

FACILITY ADDRESS: WSA CARSWELL AIRFORCE BASE PHONE: (817) 782-6261

FACILITY CITY: FT. WORTH COUNTY: TARRANT ZIP CODE: 76127

OTHER LOCATION INFO: Tank is very Rarely, used to heat Building

RESPONSIBLE PARTY

TANK OWNER/COMPANY: CARSWELL AIRFORCE BASE

MAILING ADDRESS: 7CSG/BEEV BUILDING 1215

CITY: FT WORTH STATE: Texas

PHONE: (817) 782-6261 ZIP CODE: 76127-5000

CONTACT (NAME/TITLE): RAJ SHETH - ENVIRONMENTAL COORDINAT

AFFECTED WATERS

606 48

GROUND WATER AFFECTED: UNK (Yes, No, Unknown) SURFACE WATER AFFECTED: NO (Yes, No, Unknown)

GROUND WATER STATUS: (Usable, Non-usable, Unknown) SURFACE WATER STATUS: (Usable, Non-usable, Unknown)

AFFECTED WATERS COMMENTS: Water well [redacted] within several Hundred feet & is not used for DRINKING PURPOSES

RELEASE DATA

RELEASE ORIGIN: PROB. @ BROKEN VENT PIPE (Tank, Lines, Overfill, Intentional Release; Specify if other)

RELEASE CAUSE: UNKnown (Corrosion, Equip. Failure, Human Error, Improper Installation, Other)

AFFECTED MEDIA: SOIL & POSS. GW. (Soil, Subsurface Utilities, Habitations, Other)

RELEASE DESCRIPTION (incl. health & envir. impacts): [redacted]

ANTICIPATED HAZARDS 30

HAZARDS/THREATS DESCRIPTION: NONE

TWC DIRECTIVES: PERFORM SITE ASSESSMENT, make sure old water well is checked for Gasoline Contamination

INITIAL AND CURRENT RESPONSE-BY WHOM: Will send [redacted] NOW. DRAINED 500gals out of Tank. DRAIN The rest of [redacted] fluid out of Tank.

Tank is fairly old. He is not sure how old.

MANAGEMENT DATA

INSPECTION BY TWC: No (Yes or No/Date) INSPECTOR NAME:

UST UNIT COORDINATOR: DAN AIREY DIST. COORDINATOR: M. WHELAN

OTHER AUTHORITIES INVOLVED:

ERU NOTIFICATION: ___ (Check when complete)

SIGNED BY: R. E. Ely DATE SIGNED: 12-16-87

APPROVED BY: dlf DATE APPROVED: 12/16

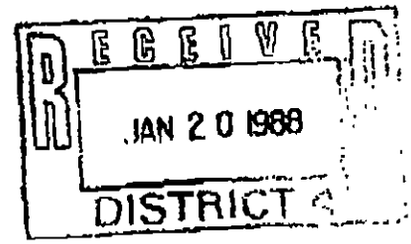
X will

TEXAS WATER COMMISSION

606 49

January 18, 1988

CERTIFIED MAIL



Mr. Raj Sheth, Environmental Coordinator
Carswell Air Force Base
7CSG/DEEV Building 1215
Forth Worth, Texas 76127-5000

Re: Subsurface Release of Diesel at the Carswell Air Force Base Building No. 8514, WSA Carswell Air Force Base, Fort Worth, Texas
(LUST ID No. 91568)

Dear Mr. Sheth:

As per a telephone conversation on December 15, 1987 between you and Mr. Dan Airey of our Underground Storage Tank Enforcement Unit, we have been made aware of the above-referenced incident. At that time you indicated that an unattached vent pipe was observed on a 1000 gallon underground storage tank at the above-referenced location. You also indicated that it appears that water infiltrated the tank through this breach causing displacement of the diesel fuel and its subsequent release through the opening into the surrounding soil. Please be advised that any measures necessary to abate a continuing release or prevent the subsurface migration of free product must be immediately implemented if such action has not already been initiated. Pursuant to Section 26.351 of the Texas Water Code, you are directed to prepare a detailed report for submittal to this Office which includes the following information:

1) A description of the cause of the incident and all actions taken to abate the release of diesel from underground storage tanks or associated piping.
2) An estimate of the total volume of product lost and a description of the basis upon which this estimate is made.
3) A definitive assessment of both the degree and the vertical and horizontal extent of subsurface contamination and the procedures utilized to perform the assessment. Please be advised that the term "subsurface contamination" includes not only the presence of free product, but also any dissolved- product contamination of ground water and residual contamination of soils.

4) A description of all remedial activities pursued or completed to date which address contamination both on and off site including an account of the disposition of contaminated soils and water, recovered product, or any other associated wastes.
5) A description of the affected soils and general information regarding the occurrence, availability, and quality of ground water in the area. If any ground water is threatened or has already been impacted, then the report must provide an in-depth hydrogeological profile including a water-table gradient map and water well inventory. This inventory must locate, on a map, all wells within a one-half mile radius of the site and provide all available information pertaining to each well.
6) A site map drawn to scale indicating the location of the source of the release, the entire underground storage tank system, and all nearby buried utilities, structures, and roads. The map should also indicate the location of any excavated areas and the collection points for all soil and water samples.
7) The results of all sample analyses and a description of all representative sampling and analytical procedures utilized. Only EPA-approved methods will be accepted for sample collection procedures and verification analyses.
8) A U.S.G.S. topographic map of the area depicting the specific location of the facility.
9) Photographs, as applicable, for documentation of facility location, observable impacts, excavations, stockpiled soils, and any on-site treatment activities.
10) A proposal for the completion of site decontamination and remediation.

Our records indicate that the tanks at this facility have not been registered with this agency. Section 9002 of the federal Resource Conservation and Recovery Act (RCRA), as amended, requires owners of underground tanks used to store petroleum or hazardous substances to notify the Texas Water Commission of their existence. The statutory deadline for notification of existing tanks was May 8, 1986. Please provide this office with a copy of your facility's notification form or submit the necessary information and indicate why notification was not made.

Please be advised that all on-site treatment to reduce contaminant levels of affected soils and/or water must receive approval from this Office prior to initiation. Additionally, all vapor emissions associated with the release must be controlled and monitored in order to protect human health and safety.

You are encouraged to secure the services of a qualified environmental consultant knowledgeable in hydrogeology to assist you in your preparation of this report. Your response must be submitted to this Office within thirty (30) days of the date of this letter. Provided that all of the above information cannot be obtained and reported within this timeframe, then your written response must include a schedule for its expeditious submittal.

Copies of all correspondence with this Office must be provided to our District 4 Field Office in Duncanville to the attention of Mr. Michael Whelan. You are also required to notify Mr. Whelan at 214/298-6171 at least forty-eight (48) hours in advance of any significant on-site remediation activities including excavation and soil borings.

Should you have any questions regarding this letter, please contact Mr. Airey at 512/463-7972. Your cooperation in this matter will be appreciated.

Sincerely,

Dwight C. Russell

Dwight C. Russell, Chief
Underground Storage Tank Section
Water Rights & Uses Division

DEA/jdh
novs:carswell/91568

cc: TWC District 4 Field Office - Mr. Michael Whelan
(1019 North Duncanville Road, Duncanville, Texas 75116-2201)

606 52 mw

DEPARTMENT OF THE AIR FORCE
HEADQUARTERS 7TH COMBAT SUPPORT GROUP (SAC)
CARSWELL AIR FORCE BASE, TEXAS, 76127-5000

12 FEB 1988

DEE

Subsurface Release of Diesel at Carswell Air Force Base Building No 8514, WSA Carswell Air Force Base, Fort Worth Texas (LUST ID No. 91568(Your Ltr, 18 Jan 88)

Underground Storage Tank Section
Water Rights & Uses Division
Texas Water Commission
Attn: Mr Dwight C. Russell, Chief
P.O. Box 13087 Capitol Station
1700 North Congress Ave
Austin, TX 78711-3087

1. In response to your letter the following information is provided for your review:

a. Subject subsurface release of diesel occurred when a piece of grounds keeping equipment knocked over a vent pipe on subject tank. This created a hole at the point where the vent pipe was attached to the tank. Water seeped into the tank through the hole displacing no more that 700 gallons of diesel. Immediate remedial actions were not taken as the diesel had already seeped into the ground by the time the leak was discovered. On 16 December 1987 about 500 gallons of water were pumped out, and on 18 December 1987 the tank was pumped dry.

b. Since we could not locate any record of amount of diesel in the tank, levels of both water and diesel were measured. Assuming the worst case, the maximum amount of diesel that may have been released was assumed to be the amount of water in the tank, which we determined to be less than 700 gallons.

c. We have an ongoing Installation Restoration Program (IRP) to assess contamination from past disposal practices. An independent contractor is currently employed on this program. We have spoken to this contractor and on his advice, we plan to modify his contract to include subject LUST tank.

d. The source of contamination was removed on 18 December 1987 by pumping the tank completely dry. All future remedial activities will be pursued after the extent of contamination has been determined and a recommendation made by the contractor. Your office will be kept informed of the study results and all actions which might be undertaken.

e. A description of the affected soils and general information regarding the occurrence, availability, and quality of ground water in the area will be provided when the contractor collects and makes such information available to us. We do not have reason to suspect that groundwater is threatened.

f. A site map drawn to scale is attached. Since there are no as-built drawings, we are unable to furnish all the details of the underground storage tank system at this time. This information will be made available to you in conjunction with the contractor's study.

Peace . . is our Profession

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DISTRICT 4

g. Upon receipt from the contractor, we will furnish the results of sample analysis and pertinent details. EPA methodology will be utilized.

h. A base topographic map of the area depicting the specific location of the area is attached.

i. Photographs, as applicable, for documentation will be provided in the future when excavation and other activities are undertaken.

j. A proposal for the completion of site decontamination and remediation will be furnished when our contractor completes the site survey.

2. Additional information is that the capacity of subject tank is 1,000 gallons, and it is used solely for heating the adjacent building which belongs to Carswell AFB. Therefore, subject tank is exempt from registration requirements of the Texas Water Commission.

3. Please direct any comments to Mr Raj Sheth, 7 CSG/DEEV, at (817) 782-6261.

James A. Fester

JAMES A. FESTER, GM-13
Chief, Engineering and
Environmental Planning

2 Atch
1. Site Map
2. Topographic Map

cc: Mr Michael Whelan
TWC District 4 Field Office
1019 North Duncanville Road
Duncanville TX 75116-2201

TEXAS WATER COMMISSION

606 54

MT

September 28, 1988

CERTIFIED MAIL

Mr. Raj Sheth
Environmental Coordinator
Carswell Air Force Base
7CSG Building 1215
Fort Worth, Texas 76127-5000

Re: Subsurface Release of Diesel at the Carswell Air Force Base Building Number 8614, WSA Carswell Air Force Base, Ft. Worth, Texas
(LUST ID No. 91568)

Dear Mr. Sheth:

Reference is made to our letter of January 18, 1988 and to a telephone conversation on May 31, 1988 between you and Mr. Dan Airey of my staff regarding the above-referenced incident. Mr. Airey reminded you that your response to our letter did not sufficiently address all the items listed in our original correspondence on this incident (letter dated February 22, 1988). Because the severity of the release at your facility is unknown, we strongly encourage you to supply us with a schedule for the immediate implementation of a subsurface contaminant investigation.

We request that you provide the requested information as well as documentation that activities have been implemented to stabilize the immediate threats presented by this release within ten (10) days of the date of this letter. Failure to do so may result in the initiation of formal enforcement action by this Office.

A copy of all correspondence with this Office must be provided to Mr. Michael Delaney of our District 4 Field Office in Duncanville.

Should you have any questions, please contact Mr. Airey at 512/463-7786. Your prompt attention to this matter will be appreciated.

Respectfully,

Daniel J. McClellan

Daniel J. McClellan, Head
Underground Storage Tank Enforcement Unit
Underground Storage Tank Section

DEA/jdh
03:91568.od

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SEP 30 1988
DISTRICT 4

cc: TWC District 4 Field Office - Mr. Michael Delaney
(1019 North Duncanville Road, Duncanville, Texas 75116-2201)

606 55

ATD
MT

DEPARTMENT OF THE AIR FORCE
HEADQUARTERS 7TH COMBAT SUPPORT GROUP (SAC)
CARSWELL AIR FORCE BASE TEXAS 76127-5000

13 OCT 1988

DE

Subsurface Release of Diesel at Carswell Air Force Base Building Number 8514, WSA Area, Carswell Air Force Base, Fort Worth, Texas (LUST ID No. 91568) (Your Ltr, 28 Sep 88)

Texas Water Commission
ATTN: Mr Daniel J. McClellan, Head
Underground Storage Tank Enforcement Unit
Underground Storage Tank Section
P.O. Box 13087 Capitol Station
1700 North Congress Avenue
Austin, TX 78711-3087

1. As per conversation with you and our Mr Raj Sheth on 11 Oct 88, we request an extension until 28 Oct 88 to submit complete report on the subject.

2. Carswell AFB already has completed ten soil borings at the site and, at this time, there is no indication of any groundwater contamination. This investigative work is being performed by Radian Corporation in Austin. As explained to you by Mr Sheth, we should be receiving a complete report from Radian Corp by 20 Oct 88. As soon as we receive this report, we will forward it to you.

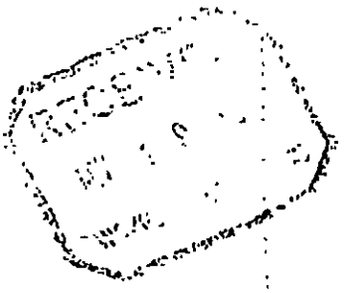
3. Your cooperation is highly appreciated. Please direct any questions to Mr Sheth, 7 CSG/DEEV, (817) 244-9224.

CHARLES A. JACKSON, Lt Colonel, USAF
Base Civil Engineer

cc: TWC District 4 Field Office
ATTN: Mr Michael Delaney
1019 N. Duncanville Rd
Duncanville, TX 75116-2201

EAGLE CONSTRUCTION & ENVIRONMENTAL SERVICES, INC.

November 15, 1990



Texas Water Commission
Underground Storage Tank Section
P. O. Box 13087, Capitol Station
Austin, Texas 78711-3087

Gentlemen:

Please amend this original construction notification to include an additional UST, ID # 0009697 - USD 0109025, in the Ammo Storage area in Building 8514 on Carswell AFB.

We would appreciate permission to proceed immediately as personnel, equipment, and materials are already on site, and a TWC representative, Ms. Terri Hurley, has inspected portions of the already completed work.

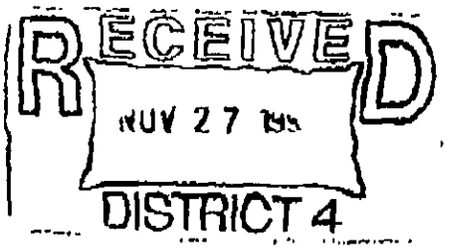
Thank you for your assistance.

Sincerely,

Oren Webb
Project Manager

OW/km

cc: Texas Water Commission
Duncanville, Texas



P.O BOX 872 • EASTLAND, TEXAS 76448-0872 • PHONE 817-629-1718 • FAX 817-629-8625

606 57

TEXAS WATER COMMISSION
UNDERGROUND STORAGE TANK (UST) CONSTRUCTION NOTIFICATION FORM

This form is provided to assist UST owners in complying with the construction notification requirements of TWC Rules, 31 TAC Chapter 334. The completion and filing of this form within the prescribed time should satisfy these requirements.

1. TYPE OF CONSTRUCTION: (Indicate all that apply.)

___ Installation ___ Addition X Removal ___ Other (Specify) ___

___ Replacement ___ Improvement ___ Abandonment ___

2. FACILITY LOCATION INFORMATION:

Facility Name: Carswell AFB

Address/Location: Carswell AFB
Fort Worth, Texas

County: Tarrant City: Fort Worth

UST Facility No. (If known): CRP000209

Telephone: 817-629-1718

3. OWNER INFORMATION:

Owner: United States of America

Representative: Donald C. Moore

Title: Contracting Officer

Address: P. O. Box 872

City/State/Zip: Carswell AFB, Texas 76127-5320

Telephone:

4. UST CONSULTANT INFORMATION:

Company:

Representative:

Address:

City/State/Zip:

Telephone:

5. UST CONTRACTOR INFORMATION:

Company: EAGLE CONSTRUCTION AND ENVIRONMENTAL SERVICES, INC.

Representative: Oren Webb

Address: P. O. Box 872

City/State/Zip: Eastland, Texas 76448

Telephone: 817-629-1718

6. GENERAL DESCRIPTION OF PROPOSED UST ACTIVITY: (Describe all new or replacement tanks and other UST system components. Include closure procedures for UST abandonments or removals. Attach additional information as appropriate.)
Eight UST locations will be assessed, grid mapped, and excavated to 2' below tank level. All procedures will be as per Local, State, and Federal Rules and Regulations and legal method of closure of UST location per Title 31, Texas Administration Code, Chapter 334, API Recommended Practice # 1604, and Guidance Manual for LPST, TWC 1990.

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DISTRICT 4

7. SCHEDULE/DATES FOR PROPOSED CONSTRUCTION:

September 4, 1990 - October 26, 1990

8. SUBMITTED BY: Oren Webb DATE: August 28, 1990

Title & Company: Project Engineer - Eagle Construction and Environmental Services, Inc.

9. MAIL COMPLETED FORM TO:

Texas Water Commission
Underground Storage Tank Section
P. O. Box 13087, Capitol Station
Austin, Texas 78711-3087

FOR TWC STAFF USE ONLY

Date Rec'd: ___ Type Notice: ___
District: ___ Dist. Rep.: ___
Remarks: ___

Logged by: ___ Date: ___

606 58

TEXAS WATER COMMISSION
UNDERGROUND STORAGE TANK (UST) CONSTRUCTION NOTIFICATION FORM

This form is provided to assist UST owners in complying with the construction notification requirements of TWC Rules, 31 TAC Chapter 334. The completion and filing of this form within the prescribed time should satisfy these requirements.

1. TYPE OF CONSTRUCTION: (Indicate all that apply.)

___ Installation ___ Addition X Removal ___ Other (Specify) _____

___ Replacement ___ Improvement ___ Abandonment

2. FACILITY LOCATION INFORMATION:

Facility Name: Carswell AFB

Address/Location: Carswell AFB
Fort Worth, Texas

County: Tarrant City: Fort Worth

UST Facility No. (If known): ~~CR1000209~~ 09697

Telephone: 817-629-1718

3. OWNER INFORMATION:

Owner: United States of America

Representative: Donald C. Moore

Title: Contracting Officer

Address: P. O. Box 872

City/State/Zip: Carswell AFB, Texas 76127-5320

Telephone:

4. UST CONSULTANT INFORMATION:

Company:

Representative:

Address:

City/State/Zip:

Telephone:

5. UST CONTRACTOR INFORMATION:

Company: EAGLE CONSTRUCTION AND ENVIRONMENTAL SERVICES, INC.

Representative: Oren Webb

Address: P. O. Box 872

City/State/Zip: Eastland, Texas 76448

Telephone: 817-629-1718

6. GENERAL DESCRIPTION OF PROPOSED UST ACTIVITY: (Describe all new or replacement tanks and other UST system components. Include closure procedures for UST abandonments or removals. Attach additional information as appropriate.)
Eight UST locations will be assessed, grid mapped, and excavated to 2' below tank level. All procedures will be as per Local, State, and Federal Rules and Regulations and legal method of closure of UST location per Title 31, Texas Administration Code, Chapter 334, API Recommended Practice # 1604, and Guidance Manual for LPST, TWC 1990.

RECEIVED
NOV 27 1990

7. SCHEDULE/DATES FOR PROPOSED CONSTRUCTION:

~~September 4, 1990 - October 26, 1990~~ Nov. 16, 1990 DISTRICT 4 pm 11-16

8. SUBMITTED BY: Oren Webb DATE: August 28, 1990

Title & Company: Project Engineer - Eagle Construction and Environmental Services, Inc.

9. MAIL COMPLETED FORM TO:

Texas Water Commission
Underground Storage Tank Section
P. O. Box 13087, Capitol Station
Austin, Texas 78711-3087

FOR TWC STAFF USE ONLY

Date Rec'd: 11-19 Type Notice: _____

District: 4 Dist. Rep.: _____

Remarks: REM / After the fact

9011190 09

Logged by: DS Date: _____

APPENDIX C

WASTE INVENTORY TRACKING FORM

WASTE INVENTORY TRACKING FORM

LOCATION : _____

PROJECT NAME:_____

ACTIVITIES: _____

Date Waste Generated	Activity Generating Waste (borehole # / well #)	Description of Waste	Field Evidence of Contamination	Estimated Volume	Type of Container (storage ID#)	Location of Container	Waste Characterization	Comments

Note: Describe whether soil or water samples have been collected for waste characterization, include date, if known

Signature: _____

FINAL PAGE

ADMINISTRATIVE RECORD

FINAL PAGE