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FINAL REMOVAL AND CLOSURE OF FUEL HYDRANT SYSTEM TECHNICAL REPORT ENVIRONMENTAL SITE CHARACTERIZATION SUMMARY REPORT AND APPENDIX A NAS FORT WORTH TX

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FORT WORTH JRB
CARSWELL FIELD
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United States Air Force
Air Force Base
Conversion Agency

FINAL

NAS Fort Worth JRB, Texas
(Formerly Carswell AFB, Texas)

REMOVAL/CLOSURE OF THE
FUEL HYDRANT SYSTEM

ENVIRONMENTAL SITE
CHARACTERIZATION SUMMARY
AND
APPENDICES A, C, AND D

DECEMBER 1995

368 2

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NAS Fort Worth JRB, Texas
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ENVIRONMENTAL SITE CHARACTERIZATION SUMMARY AND APPENDICES A, C, AND D

CAR-J03-10K70100-O6-0002

DECEMBER 1995

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ACRONYMS AND ABBREVIATIONS

AFB	Air Force Base
AFCEE	Air Force Center for Environmental Excellence
bgs	below ground surface
BTEX	benzene, toluene, ethylbenzene, xylene
COE	U.S. Army Corps of Engineers
EPA	U.S. Environmental Protection Agency
IRA	interim remedial action
IRP	Installation Restoration Program
I-30	Interstate Highway 30
Jacobs	Jacobs Engineering Group Inc.
JRB	Joint Reserve Base
LNAPL	light nonaqueous phase liquid
mg/kg	milligrams per kilogram
NAS	Naval Air Station
NAS Fort Worth	Naval Air Station Fort Worth Joint Reserve Base, Carswell Field
nd	not detected
NE	northeast
NW	northwest
PAH	polycyclic aromatic hydrocarbon
ppb	parts per billion
ppm	parts per million
QC	quality control
SE	southeast
St. Dev.	standard deviation
SW	southwest
TNRCC	Texas Natural Resource Conservation Commission
TPH	total petroleum hydrocarbons
UST	underground storage tank
>	greater than
<	less than
µg/kg	micrograms per kilogram

1.0 INTRODUCTION

This Environmental Site Characterization Summary Report presents a description of the sampling events conducted as part of the removal/closure of the fuel hydrant system at Naval Air Station (NAS) Fort Worth Joint Reserve Base (JRB), Carswell Field, Fort Worth, Texas (NAS Fort Worth). This work was performed by Jacobs Engineering Group Inc. (Jacobs) under contract number F41624-94-D-8116, Delivery Order 0002, issued by the Air Force Center for Environmental Excellence (AFCEE), located at Brooks Air Force Base (AFB), Texas.

Section 1.0 of this report presents a brief discussion of the location and history of NAS Fort Worth and of the fuel hydrant system, a summary of the local stratigraphy and aquifers, and an outline of the project objectives. Section 2.0 of the report describes sampling activities conducted along the pipeline using the Geoprobe, within the underground storage tank (UST) excavation and in the soil stockpile. Both onsite immunoassay screening and offsite analytical laboratory procedures are also discussed in this section. Section 3.0 presents a summary of soil types encountered, a description of potentially contaminated areas, and a comparison of immunoassay field screening results with offsite laboratory confirmation samples. Section 4.0 presents conclusions, and Section 5.0 includes references used to prepare this report. There are four appendices to this report: Appendix A contains all of the immunoassay analytical results; Appendix B contains all of the offsite laboratory analytical results; Appendix C contains copies of the chain-of-custody forms used for submittal of samples to the offsite laboratory; and Appendix D contains boring logs for the Geoprobe borings.

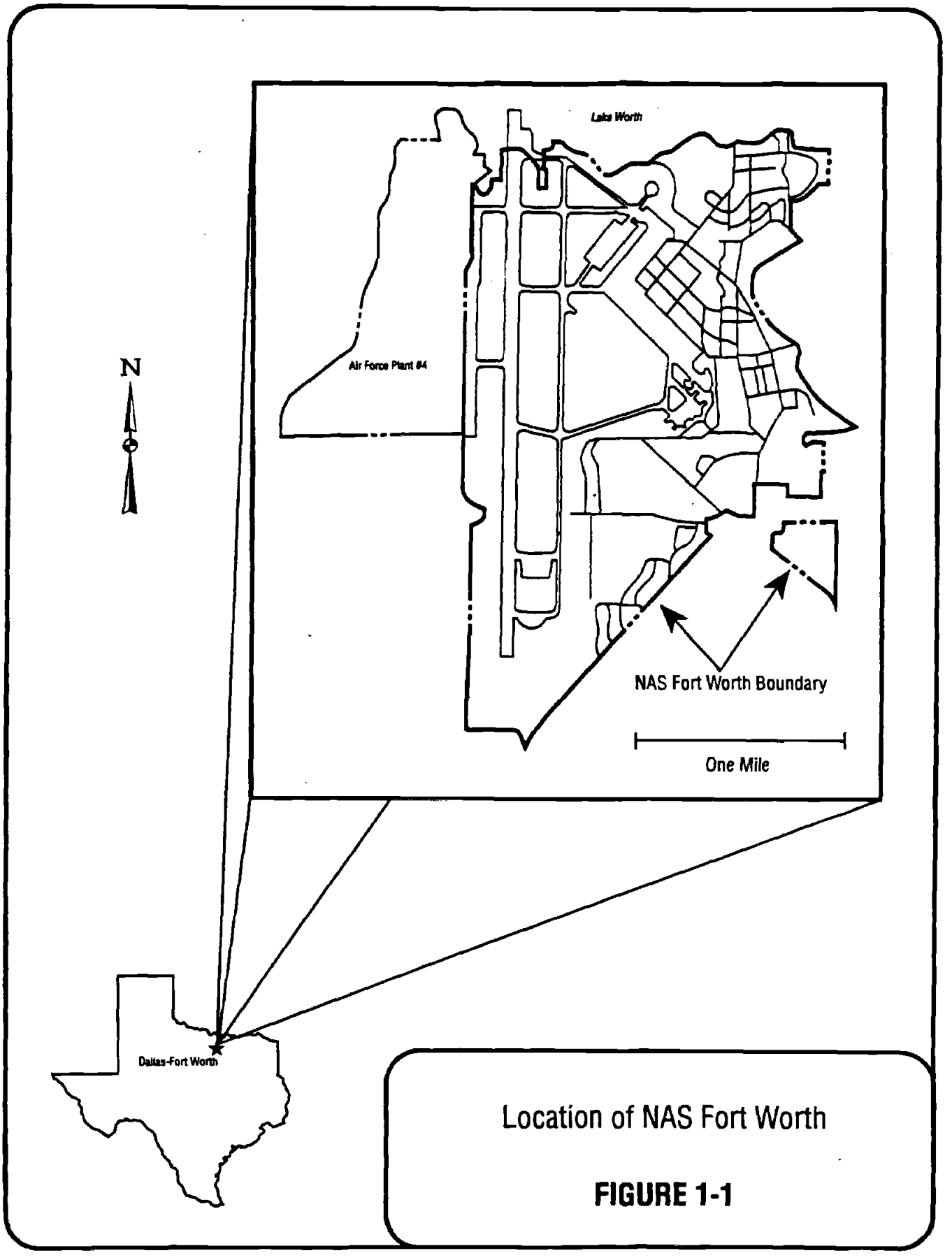
This report addresses only the sampling activities conducted during the removal and closure of the fuel hydrant system. A description of the removal and closure activities can be found in the Technical Report (Jacobs 1995a) that is a companion document to this Environmental Site Characterization Summary. Each report has been prepared as

a stand-alone document. Color photographs of all activities may be found as Appendix A to the Technical Report.

1.1 LOCATION AND HISTORY OF NAS FORT WORTH JRB

NAS Fort Worth JRB is located in north-central Texas in Tarrant County, 8 miles west of downtown Fort Worth (Figure 1-1). The area surrounding the station is mostly suburban, including the residential areas of the cities of Fort Worth, Westworth Village, and White Settlement. The main station totals 2,264 acres and is bordered on the north by Lake Worth, on the east by the Trinity River and Westworth Village, on the northeast and southeast by Fort Worth, on the west and southwest by White Settlement, and on the west by Air Force Plant 4.

The existing land uses in the immediate vicinity of the station include industrial, commercial, residential, and recreational. The land uses west of the station are primarily industrial as a result of industrial complexes at Air Force Plant 4 and in White Settlement. Additional uses to the west include residential and some supporting commercial. South of the station are commercial areas at the interchange of Interstate Highway I-30 (I-30) and State Highway 183. This area includes a regional shopping mall, a discount shopping center, and a smaller convenience center. Both single-family and multifamily residential development dominate the area southeast and east of the station and north of I-30. The area north of the station is predominantly composed of recreational and public facilities. Public access to the south shore of Lake Worth is restricted because of the presence of NAS Fort Worth and Air Force Plant 4, but the lake is open for recreation. A fish hatchery, a YMCA camp, and private recreational land border the West Fork of the Trinity River northeast of the station. The area surrounding the Offsite Weapons Storage Area is primarily rural, although a residential development is located south of White Settlement Road.



Location of NAS Fort Worth

FIGURE 1-1

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NAS Fort Worth was originally a modest dirt runway built to service the aircraft manufacturing plant now called Air Force Plant 4. The installation was established in 1942 and was referred to as the Tarrant Field Airdrome. Its mission was to provide training for B-24 bomber pilots. The Strategic Air Command assumed control of the installation in 1946. In 1948, the base was renamed Carswell AFB in honor of Fort Worth native Major Horace S. Carswell. Carswell AFB became host base for its first B-52s and KC-135s in 1956.

Pursuant to the Defense Base Closure and Realignment Act of 1990, Carswell AFB was selected for closure and associated property disposal during Round II Base Closure Commission deliberations. This announcement initiated the closure and disposal and reuse planning process. Drawdown activities were initiated in 1992, and all aircraft were relocated by January 1993. The base officially closed on 30 September 1993. On 01 October 1994, the U.S. Navy assumed control of Carswell AFB; the base was renamed NAS Fort Worth.

1.2 LOCATION AND HISTORY OF THE FUEL HYDRANT SYSTEM

The fuel hydrant system at NAS Fort Worth was installed when the station was originally constructed and was expanded during the past 50 years of Air Force activity. The system consisted of five pumping stations, each with six 25,000-gallon USTs, a filtering system, a delivery pump, a shelter at each pumping station, and approximately 20,000 feet of 3-, 6-, and 8-inch diameter steel pipeline. Each station served several refueling hydrants on the edge of the Alert Apron.

In 1984, the Installation Restoration Program (IRP) was initiated at NAS Fort Worth with a records search by CH2M Hill, Inc. that identified 15 sites requiring further evaluation (CH2M Hill 1984). Several other IRP studies have been conducted at the station that included the fuel hydrant system, including a 1989 Resource Conservation and Recovery Act Facility Assessment by A.T. Kearney, Inc. (A.T. Kearney, Inc.

1989) and a 1990 investigation by Maxim Engineers, Inc. on a potential JP-4 fuel leak called "Spot 35" (Maxim Engineers, Inc. 1990). The latter study documented that both soil and groundwater had been contaminated and that additional investigations would be necessary to delineate the extent of contamination. No other investigations have been conducted under the IRP of the fuel hydrant system.

Interim remedial action (IRA) at the fuel hydrant system began in 1992 when pumping station E and its associated piping were removed by the U.S. Army Corps of Engineers (COE). Fuel-contaminated soil was encountered during the removal of the tanks, but no soil was removed from the site and the area of contamination was not delineated. During the summer of 1994, the COE removed pumping stations A, B, and D under a second IRA project (WC Environmental Group 1994).

1.3 LOCAL GEOLOGY AND HYDROGEOLOGY

NAS Fort Worth is located on unconsolidated alluvium, called the Terrace Alluvium, immediately beneath which is a sequence of Cretaceous bedrock formations. Only a brief description of bedrock geology and hydrogeology is presented because the scope of this investigation is limited to the unconsolidated alluvium. For additional details regarding bedrock geology and hydrogeology refer to COE (1986), Radian Corporation (1991), and Hargis and Associates, Inc. (1989). Bedrock units from shallowest to deepest are the Goodland Formation, composed of limestone with a few thin shale beds; the Walnut Formation, a shelly limestone bed interbedded with thin shales and sandy clays; the Paluxy Formation, a poorly to moderately cemented sandstone with shale interbeds; and the Glen Rose Formation, composed principally of limestone.

Groundwater is present within the unconsolidated Terrace Alluvium and there are up to three aquifers present in the Paluxy Formation, separated by interbedded shale

layers. The Middle Paluxy aquifer is important because it provides the city of White Settlement some of its municipal water supply.

The unconsolidated Terrace Alluvium is Quaternary in age, and was deposited by the Trinity River. The alluvium consists of floodplain and fluviatile terrace deposits of sand, gravel, clay, and silt. The alluvium is a relatively thin veneer deposited on the eroded surface of the Goodland Formation. Locally, much deeper paleochannels may be incised in the bedrock surface such as in the "Window" area in the east parking lot of Air Force Plant 4 where unconsolidated alluvium is deposited directly on the Walnut Formation (Hargis and Associates 1989). Previous drilling at NAS Fort Worth indicates that the thickness of the Terrace Alluvium ranges from a few feet to greater than 45 feet (Radian 1991).

This investigation along the pipeline at NAS Fort Worth showed that depth to bedrock in this area ranges from 4 feet to greater than 22 feet. In general, the upper 5 to 10 feet of the Terrace Alluvium are silt and clay with variable amounts of sand and gravel. Underlying the silt and clay, sand and gravel interbedded with clay generally predominate. More detailed geologic descriptions are provided as results of this investigation.

Groundwater recharge to the Terrace Alluvium is from local rainfall and infiltration from streams and drainage ditches. The direction of groundwater flow is generally controlled by bedrock topography of the Goodland Formation. In the flightline area groundwater flows toward Farmers Branch (Radian 1991). The area north of the flightline area has not been investigated. Hydraulic conductivities determined from pump tests conducted in groundwater monitoring wells LF04-02 and LF04-03 averaged 784 feet per day. This value is within the typical range for clean sand and gravel deposits (U.S. Geological Survey 1989).

1.4 PROJECT OBJECTIVES

The objective of the overall project was to abandon the fuel pipeline, demolish pumping station C, and remove the associated USTs. Further discussion of these field activities can be found in the Technical Report (Jacobs 1995a).

The primary objectives of the sampling program conducted as part of the removal and closure of the fuel hydrant system were as follows:

- to collect soil samples along the entire length of the pipeline at 100-foot intervals, and screen these samples for benzene, toluene, ethylbenzene, and xylenes (BTEX) and polycyclic aromatic hydrocarbons (PAHs), and identify potential areas of concern requiring further investigation and delineation;
- to perform field screening analysis of the above samples using immunoassay techniques, and to confirm the field screening results with offsite laboratory analysis of 10 percent of the samples;
- to collect soil samples within the UST excavation in accordance with Texas Natural Resource Conservation Commission (TNRCC) requirements to determine if hydrocarbons are present in the soils; and
- to collect soil samples from soil removed from the UST excavation to determine disposal options in accordance with TNRCC requirements.

2.0 SITE INVESTIGATION

The following sections describe the procedures used to perform soil probes, collect soil samples, abandon the holes, and dispose of waste materials generated during sampling.

2.1 GEOPROBE ACTIVITIES

Soil samples were collected along the portions of the fuel hydrant system to qualitatively determine areas in which fuel hydrocarbons may be present in the soil. Soil samples were collected using a Geoprobe drive-point sampler at discrete intervals. Samples were then subjected to screening for BTEX and PAHs using immunoassay analytical techniques.

2.1.1 Geoprobe Description

The soil probe rig consisted of a Geoprobe unit mounted on the rear of a Kawasaki "Mule," a four-wheel drive, all-terrain vehicle. The Geoprobe is hydraulically powered to push or hammer a sampling probe to the desired depth. The conical drive-point is then retracted into the sampler, and the sample probe is advanced an additional 2 feet into the soil to fill a clear plastic sample liner in the sampling probe. The sample liner was 24 inches long and 1 inch in diameter and provided sufficient material for all analytical needs and lithologic logging. Only new sample liners that had previously been decontaminated were used for sampling. After sampling, the probe was withdrawn from the hole and the sample and liner removed from the probe. As many as three soil samples were collected at different depths from each probe location. The maximum depth sampled was 23 feet below the surface. The probes were driven to 20 feet at most locations. At some locations the drive-point depth was limited by shallow bedrock, refusal due to unknown obstructions, or because of shallow groundwater. Samples were not collected from below the water table if possible, because the fuel

constituents are light nonaqueous phase liquids (LNAPLs). The highest concentrations of LNAPLs are expected to be found just above or at the water table.

2.1.2 Probe Locations, Criteria, and Limitations

Drive-point sampling was conducted at approximately 100-foot intervals along the entire length of the fuel hydrant system to be abandoned and at changes in pipeline direction. Probe locations were frequently adjusted in the field because of the proximity of underground utilities or surface obstructions. Because of these adjustments, some probe intervals may be less than or greater than 100 feet. To avoid damage to concrete runway surfaces, drive-point samples were not collected from portions of the pipeline that were covered by these surfaces. Samples were also collected at stained areas or at locations specifically requested by station personnel. Drive-point locations are shown on Plate 1. At least one immunoassay BTEX sample was collected at every drive-point location. Immunoassay PAH samples were collected at every other drive-point location, and at changes in pipeline direction. Immunoassay PAH samples were also collected at locations where HNu photoionization detector readings indicated the potential presence of hydrocarbons. Drive-point samples were collected from a total of 180 locations.

2.1.3 Logging and Sampling Protocols

After removal from the drive-point probe, the sample was examined through the clear plastic liner for staining, gross lithology, and stratigraphy. The plastic liner was then cut into 6-inch or smaller segments for immunoassay BTEX and PAH analysis. After each section of liner was cut, the exposed soil was monitored using an HNu. The exposed ends were then immediately capped, the sample liner was labeled, and the sample was placed in a cooler and chilled to 4 degrees Celsius. Soil samples selected for offsite laboratory analysis were removed from the sample liner and placed in 4-

ounce glass jars. The jars were completely filled; however, because of the stiff, plastic consistency of some of the soils, it was impossible to entirely eliminate air pockets.

Soil materials were classified according to the Unified Soil Classification System and color characterized using a Munsell color chart.

2.1.4 Hole Abandonment

Each drive-point hole was abandoned after sampling was completed to the desired depth. Fine bentonite chips, 1/8- to 3/8-inch in size, were poured slowly down the hole to prevent bridging. The bentonite was hydrated with water after the hole had been filled to the surface. If the hole was driven through asphalt, the surface was repaired the day following abandonment by removing bentonite to the base of the asphalt and then applying asphalt cold patch to the hole.

2.1.5 Waste Handling

The only waste materials generated during the Geoprobe sampling activities consisted of excess soil material remaining in the sample sleeve. All of these soil materials were contained in a single drum. This material was then placed with soils excavated and stockpiled during removal of the USTs at pumping station C and that exhibited total petroleum hydrocarbon (TPH) concentrations greater than 500 parts per million (ppm). These soils were removed from the site for treatment.

2.2 TANK EXCAVATION SAMPLING ACTIVITIES

USTs and related surface structures were removed at pumping station C as part of this task. COE had previously removed pumping station E in 1992 and stations A, B, and D in 1994 as part of two IRAs.

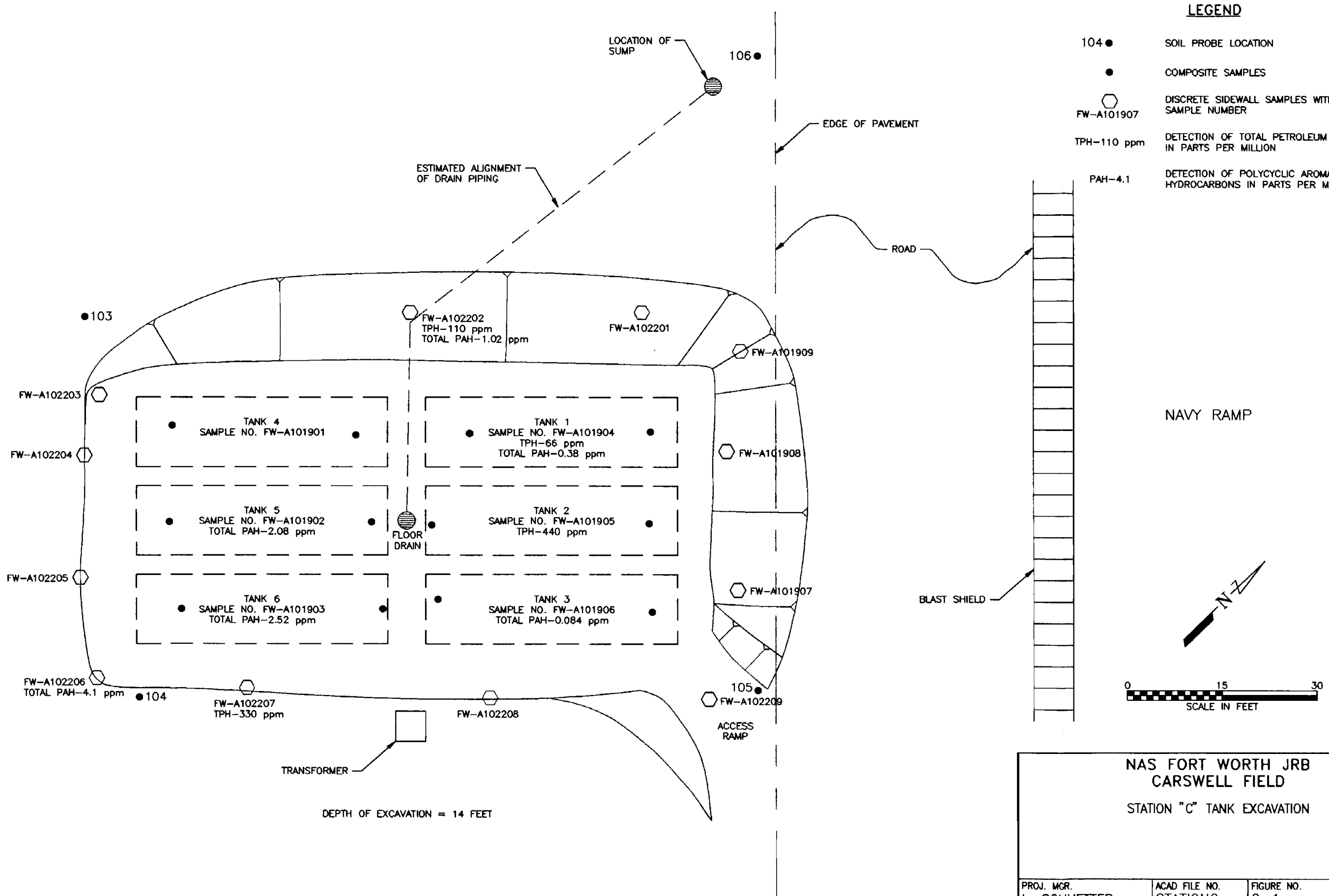
2.2.1 Excavation Description

Details of the completed excavation are illustrated in Figure 2-1. Six USTs associated with the fuel distribution system at pumping station C were excavated and removed. The excavation that remained after the storage tanks and concrete tank saddles were removed was 14 feet deep, 100 feet long, and 55 feet wide at its bottom. The northwest and northeast sidewalls of the excavation were sloped at 1:1 for safety considerations. The southwest and southeast walls were left near vertical because underground utility locations prevented further excavation for sloping of these sidewalls. An access ramp was constructed at the northeast corner of the excavation. The completed surface dimensions of the excavation were approximately 138 feet by 78 feet by 14 feet deep.

2.2.2 Tank Excavation Sampling Activities

The completed excavation for the removal of the USTs at Station C and associated soil stockpiles were sampled according to the requirements of the TNRCC. The sample locations and tank designations are shown in Figure 2-1. A composite sample, consisting of two subsamples, was collected from each tank location in the bottom of the excavation. Discrete samples were collected from the sidewalls at the four corners of the excavation with an additional two samples collected on each sidewall. The sidewall locations are also shown in Figure 2-1.

Composite samples were collected from the excavation using an excavator fitted with a 1-yard bucket. Each tank location was sampled using the excavator to dig to a depth of approximately 2 feet below the invert of each tank. A composite subsample was collected at both ends of each tank by collecting material from the excavator bucket using a decontaminated scoop. Care was taken to ensure that natural soil was chosen as the sample. Each subsample was placed into a mixing bowl. Upon collection of both subsamples, the sample was composited by gently mixing the soil in the bowl.



NAS FORT WORTH JRB
CARSWELL FIELD

STATION "C" TANK EXCAVATION

PROJ. MGR.	ACAD FILE NO.	FIGURE NO.
L. SCHUETTER	STATIONC	2-1
DRAWN BY	PROJ. NO.	DATE
J. HUNTER	10-K-70100	6/30/95

When mixing was completed, the sample was placed into 4-ounce jars. The jars were completely filled to avoid headspace. The sample jar was labeled, logged on the appropriate chain-of-custody form, and immediately placed in an iced cooler.

Three soil stockpiles were constructed from material removed from the excavation. The sizes of stockpiles 1, 2, and 3 were approximately 500, 600, and 600 cubic yards, respectively. Discrete samples were collected for every 50 cubic yards of soil contained in a stockpile. A grid was laid out for each stockpile, which divided the pile into 50-cubic-yard sections. Samples were then collected from each section. A total of 34 samples were collected for stockpile characterization.

Discrete tank pit sidewall samples were collected using the excavator and the same procedure detailed above for the composite samples, excluding the mixing step. Discrete stockpile samples were collected using a decontaminated shovel to dig into the stockpile up to 2 feet deep. This was done to access soil that had not been subjected to aeration. Samples were collected directly from the hole dug with the shovel and placed in 4-ounce jars. Each sample was labeled, logged on the proper chain-of-custody form, and placed into an iced cooler.

3.0 RESULTS

The following sections discuss the analytical procedures and results obtained from the soil sampling for this project.

3.1 ANALYTICAL PROCEDURES AND RESULTS

Soil samples collected during the Geoprobe sampling investigation were analyzed onsite for total BTEX and PAHs using immunoassay field screening methodologies (U.S. Environmental Protection Agency [EPA] draft Methods SW4030 and SW4035, respectively). Duplicates of approximately 10 percent of the samples were sent to an offsite laboratory for confirmatory analysis of BTEX by Method SW8020 and PAHs by Method SW8310. Samples collected from the UST excavation were analyzed by the offsite laboratory for BTEX, PAHs, and TPH (EPA Method E418.1). Samples collected from the soil stockpiles were analyzed for BTEX and TPH.

3.1.1 Immunoassay

Field screening analysis of soil samples was conducted using Ohmicron immunoassay soil extraction and analysis kits specific for total BTEX and for PAHs, and performed by a Jacobs geologist who had been trained and certified by the manufacturer as a qualified analyst. Extractions and analyses were performed according to the manufacturer's procedures as given in Appendix A of the Sampling and Analysis Plan (Jacobs 1995b), and any changes that were implemented were performed under the guidance of Ohmicron. Appendix A contains all immunoassay analytical results for total BTEX and PAHs.

Soil samples were extracted within two days of sample collection, and analyzed within two days of extraction for BTEX and seven days of extraction for PAHs. Ten-gram quantities of soil were individually weighed for extraction. The plastic, clay-rich soils

that were encountered in many of the samples proved to be difficult to extract completely. These soils tended to form clay balls during the agitation step of the extraction process, limiting exposure of the soil materials to the extraction solutions. Several steps were taken in the field to alleviate this problem including, at Ohmicron's suggestion, the addition of three to five steel balls to the sample and extraction solution during the agitation step. This met with partial success, but it is believed that extraction efficiency problems contributed to the high variances demonstrated in some of the immunoassay duplicates and in the confirmation samples sent to the offsite laboratory.

Soil samples were generally analyzed in batches of 20 to 30 samples. Although larger batch sizes were possible, batch size was limited to minimize the time differences between the first and last samples in the extraction and incubation processes.

In general, three proficiency samples were analyzed at the beginning and end of each analytical batch. The proficiency samples are manufacturer-prepared standards of low, medium, and high concentrations within the analytical range of the specific immunoassay kits. Analytical results for the proficiency samples are listed in Table 3-1 for BTEX and Table 3-2 for PAHs. Figure 3-1 and Figure 3-2 are graphical representations of the proficiency sample data. Results for all of the BTEX proficiency samples are very close to the manufacturer's average value, as are results for PAH proficiency samples A and B. However, Table 3-2 and Figure 3-2 indicate some problems with PAH proficiency samples. Expired PAH proficiency samples were used for analytical batch 1 (lines 1 and 2 in Figure 3-2). A measurement error was documented during pipetting of the first proficiency sample C during analytical batch 7 (line 14 in Figure 3-2). Measured concentrations of PAH in proficiency sample C also show a systematic increase starting with batch 4 (lines 8 and 9 in Figure 3-2). Because these systematic changes are not found in PAH proficiency samples A and B, the problem is believed to be specific to PAH proficiency sample C, rather than to operator or instrument error, which would affect all sample results.

TABLE 3-1
Analytical Results of BTEX Proficiency Samples (ppm)

Line Number	Sample A	Value	Sample B	Value	Sample C	Value
1	BTEX01- 34	0.26	BTEX01- 35	1.05	BTEX01- 36	4.08
2	BTEX01- 37	0.22	BTEX01- 38	1.57	BTEX01- 39	2.90
3	BTEX02- 1	0.12	BTEX02- 2	0.58	BTEX02- 3	2.15
4	BTEX02- 22	0.06	BTEX02- 23	0.47	BTEX02- 24	1.97
5	BTEX03- 1	0.14	BTEX03- 2	0.49	BTEX03- 3	1.86
6	BTEX03- 26	0.35	BTEX03- 27	1.00	BTEX03- 28	3.69
7	BTEX04- 1	0.19	BTEX04- 2	0.53	BTEX04- 3	2.58
8	BTEX04- 27	0.21	BTEX04- 28	0.78	BTEX04- 29	2.52
9	BTEX05- 1	0.18	BTEX05- 2	0.63	BTEX05- 3	2.06
10	BTEX06- 1	0.14	BTEX05- 31	0.86	BTEX06- 3	2.42
11	BTEX07- 1	0.23	BTEX06- 2	0.57	BTEX06- 32	2.52
12	BTEX08- 1	0.28	BTEX06- 31	0.71	BTEX07- 3	2.96
13	BTEX08- 32	0.42	BTEX07- 2	0.79	BTEX08- 3	2.37
14	BTEX09- 1	0.15	BTEX08- 2	0.75	BTEX08- 34	2.57
15	BTEX10- 1	0.17	BTEX08- 33	0.91	BTEX09- 3	2.15
16	BTEX11- 1	0.16	BTEX09- 2	0.65	BTEX10- 3	2.27
17	BTEX12- 1	0.13	BTEX10- 2	0.72	BTEX11- 3	2.81
18	BTEX12- 28	0.23	BTEX11- 2	0.62	BTEX12- 3	1.97
19	BTEX14- 1	0.22	BTEX12- 2	0.57	BTEX12- 30	2.32
20	BTEX14- 22	0.20	BTEX12- 29	0.82	BTEX14- 3	2.23
21	BTEX15- 1	0.22	BTEX14- 2	0.69	BTEX14- 24	2.38
22	BTEX15- 28	0.32	BTEX14- 23	0.79	BTEX15- 3	2.26
23	BTEX16- 1	0.27	BTEX15- 2	0.71	BTEX15- 30	2.83
24	BTEX16- 37	0.30	BTEX15- 29	0.95	BTEX16- 3	2.47
25			BTEX16- 2	0.79	BTEX16- 39	2.62
26			BTEX16- 38	1.01		
Average		0.22		0.77		2.52
St.Dev.		0.08		0.23		0.51

Notes:

BTEX = benzene, toluene, ethylbenzene, and xylene

ppm = parts per million

St.Dev. = Standard Deviation

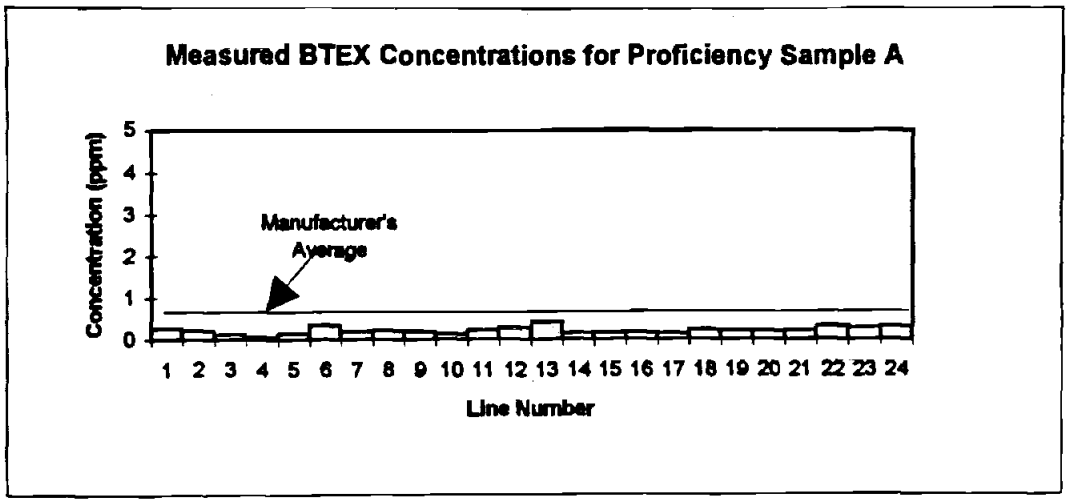
TABLE 3-2
Analytical Results of PAH Proficiency Samples (ppm)

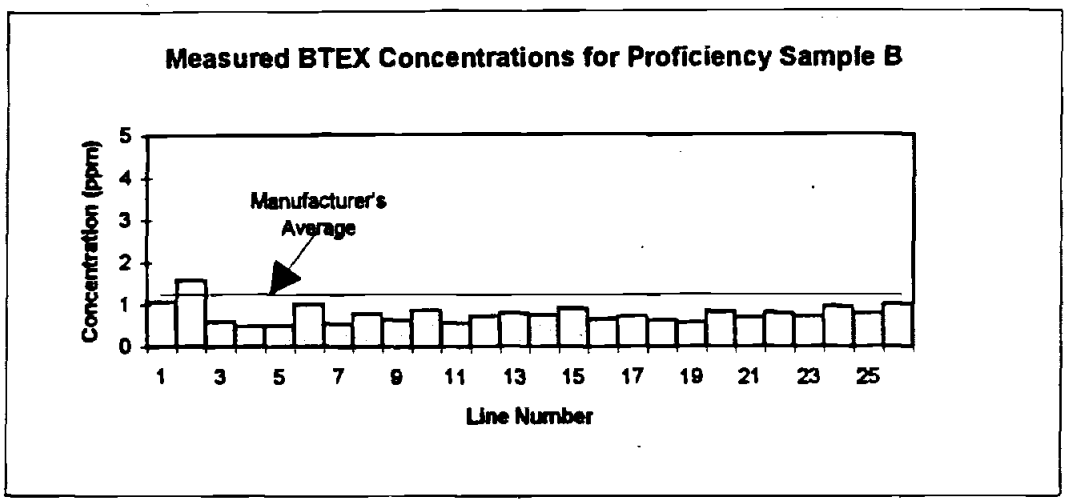
Line Number	Sample A	Value	Sample B	Value	Sample C	Value
1 *	PAH01- 25	30.3	PAH01- 26	44.5	PAH01- 27	239
2 *	PAH01- 28	407	PAH01- 29	683	PAH01- 30	855
3	PAH02- 1	3.04	PAH02- 2	14.6	PAH02- 3	28.1
4	PAH02- 30	1.61	PAH02- 32	15.0	PAH02- 33	28.5
5	PAH02- 31	3.43	PAH02- 37	14.1	PAH02- 38	26.9
6	PAH02- 36	2.93	PAH03- 2	13.8	PAH03- 3	39.2
7	PAH02- 36	2.93	PAH03- 29	12.3	PAH03- 30	32.9
8	PAH03- 1	5.43	PAH04- 2	17.9	PAH04- 3	32.6
9	PAH03- 28	1.50	PAH04- 29	18.8	PAH04- 30	43.2
10	PAH04- 1	4.06	PAH05- 2	32.8	PAH05- 3	39.8
11	PAH04- 28	5.06	PAH05- 28	32.8	PAH05- 29	60.1
12	PAH05- 1	10.0	PAH06- 2	22.1	PAH06- 3	50.5
13	PAH05- 27	7.99	PAH06- 28	25.8	PAH06- 29	52.6
14	PAH06- 1	4.69	PAH07- 2	22.9	PAH07- 3 (e)	1.04
15	PAH06- 27	5.07	PAH07- 35	24.1	PAH07- 36	61.7
16	PAH07- 1	4.43	PAH08- 2	22.7	PAH08- 3	81.6
17	PAH08- 1	5.72	PAH08- 32	25.0	PAH08- 33	76.5
18	PAH07- 34	5.06	PAH09- 2	24.3	PAH09- 3	79.8
19	PAH08- 31	5.23	PAH09- 25	25.7	PAH09- 26	89.2
20	PAH09- 1	3.75				
21	PAH09- 24	5.02				
Average*		4.6		21.4		51.4
St.Dev.*		2.0		6.3		21.1

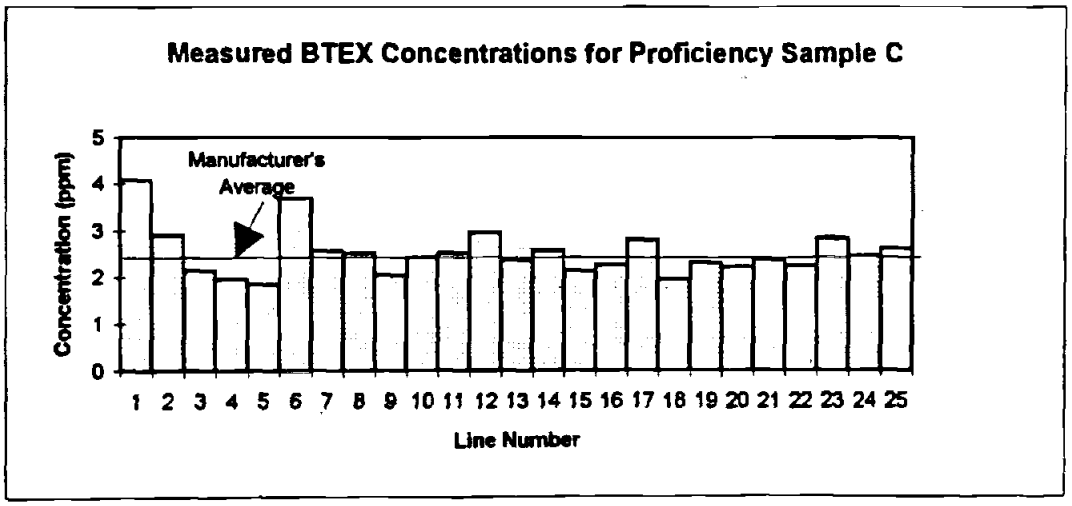
Notes:

PAH = polycyclic aromatic hydrocarbon
ppm = parts per million
St.Dev. = Standard Deviation
* = Lines 1 and 2 are excluded from calculations (PAH batch 1)
(e) = pipetting error during processing of proficiency sample; value excluded from calculations

FIGURE 3-1
Measured BTEX Concentrations in Proficiency Samples



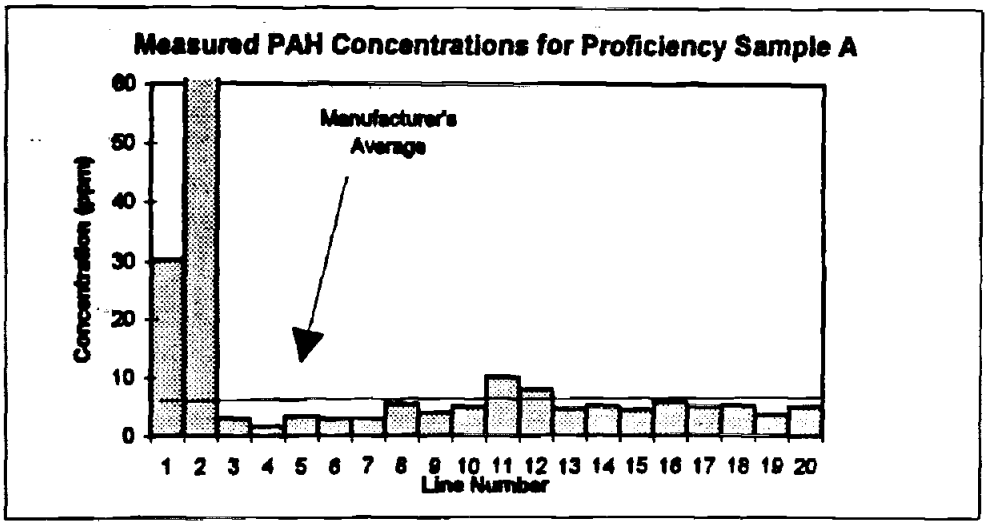


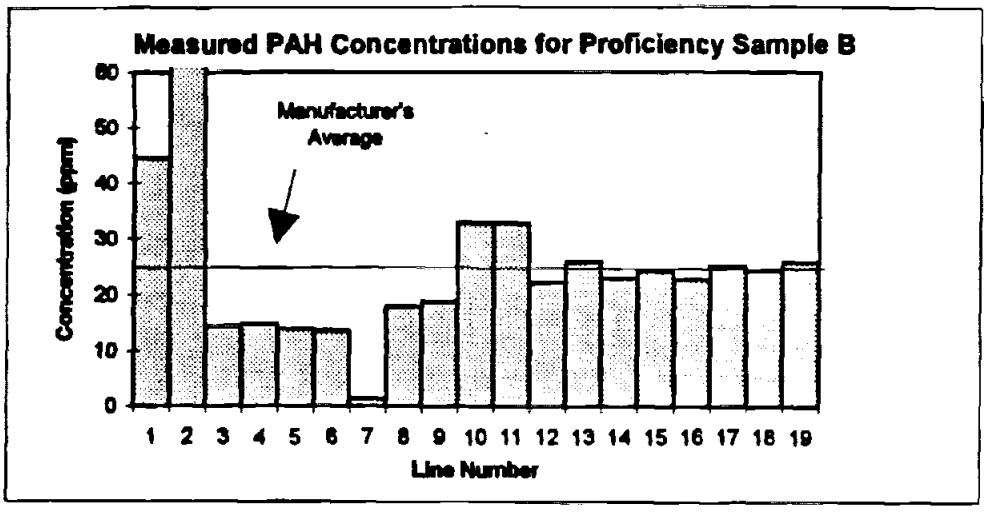


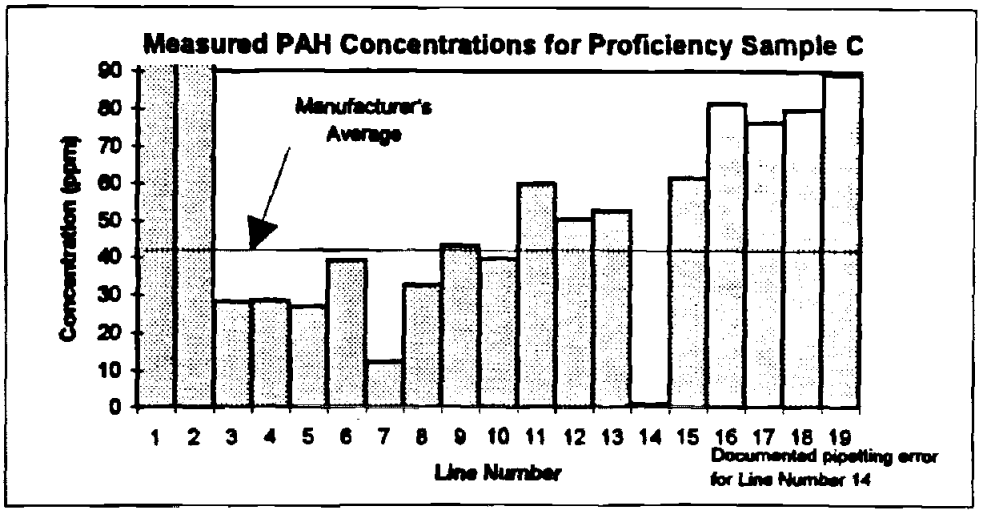
Notes:

BTEX = benzene, toluene, ethylbenzene, and xylene
ppm = parts per million

FIGURE 3-2
Measured PAH Concentrations in Proficiency Samples







Notes:

PAH = polycylic aromatic hydrocarbon
ppm = parts per million

BTEX immunoassay batch 12 produced consistent instrument readings of 0.00 for all samples. However, proficiency samples produced normal results. Instrument readings of 0.00 are relatively infrequent throughout the entire data set, even for BTEX below detection limits. Sample extracts from batch 12 were reanalyzed as batch 15, three days outside of holding times, producing analytical results comparable to results from the offsite laboratory. Although considerable effort was expended to do so, the source of the problem with batch 12 was never identified.

3.1.2 Offsite Laboratory Results

The offsite laboratory was used to analyze samples collected from the UST excavation, from the soil stockpile, and for confirmation analysis of samples collected along the pipeline from the drive point locations. The following sections discuss these analytical results.

3.1.2.1 UST Excavation Results

The UST removal excavation reached a depth of 14 feet below ground surface (bgs) after removal of the storage tanks, concrete saddles, and debris. At this depth the soils consisted of very moist, brown, fine to coarse clayey sand to sandy clay with fine subrounded gravel. Bluish-green staining was noted in the soil on the south ends of Tanks 1 and 2. The clayey sand contact with an underlying sandy unit is approximately 15 feet bgs, and groundwater was encountered at approximately 20 feet bgs.

The TPH (EPA Method 418.1) results from the tank excavation sampling event are presented in Table 3-3. BTEX was not detected in any samples collected from the tank excavation. PAHs were detected in two sidewall samples (FW-A102202 and FW-A102206), and four excavation bottom samples (FW-101902, FW-101903, FW-101904, and FW-101906) representing Tanks 1,3,5, and 6. The individual compounds detected and the results are presented in Table 3-3.

TABLE 3-3
Analytical Results from Station C Excavation

Sample Number		Location	Total Petroleum Hydrocarbons (Method 418.1) mg/kg	Total BTEX (Method 8020) µg/kg	Polynuclear Aromatic Hydrocarbons (Method 8310) µg/kg
FW-A	101901	Tank 4	nd	nd	nd
FW-A	101902	Tank 5	nd	nd	Anthracene - 200 Benzo (a) Anthracene - 210 Fluoranthene - 850 Pyrene - 820
FW-A	101903	Tank 6	nd	nd	Benzo (a) Anthracene - 570 Fluoranthene - 1200 Pyrene - 750
FW-A	101904	Tank 1	66	nd	Pyrene - 380
FW-A	101905	Tank 2	440	nd	nd
FW-A	101906	Tank 3	nd	nd	Fluoranthene - 84
FW-A	101907	Excavation NE Sidewall	nd	nd	nd
FW-A	101908	Excavation NE Sidewall	nd	nd	nd
FW-A	101909	Excavation North Corner	nd	nd	nd
FW-A	102201	Excavation NW Sidewall	nd	nd	nd
FW-A	102202	Excavation NW Sidewall	110	nd	Fluoranthene - 400 Napthalene - 380 Pyrene - 240
FW-A	102203	Excavation West Corner	nd	nd	nd
FW-A	102204	Excavation SW Sidewall	nd	nd	nd
FW-A	102205	Excavation SW Sidewall	nd	nd	nd
FW-A	102206	Excavation South Corner	nd	nd	Napthalene - 4100
FW-A	102207	Excavation SE Sidewall	330	nd	nd
FW-A	102208	Excavation SE Sidewall	nd	nd	nd
FW-A	102209	Excavation East Corner	nd	nd	nd

Notes:
nd = not detected
NE = northeast
NW = northwest
SE = southeast
SW = southwest
mg/kg = milligrams/kilogram
µg/kg = micrograms per kilogram

3.1.2.2 Soil Stockpile Results

TPH results from the stockpile sampling are presented in Tables 3-4 through 3-6. BTEX concentrations were nondetectable in all samples collected from the stockpiles. TPH results were compared to TNRCC action levels (TNRCC 1993) to determine the disposition of each 50 cubic yards of soil represented by a sample result. Stockpiled soil that exhibited TPH concentrations lower than 500 ppm was used as backfill in the removal excavation. Soil samples representing 50 yards of stockpiled soil that exhibited TPH concentrations of 500 ppm or greater were separated from the stockpiles and disposed of offsite.

TABLE 3-4
Analytical Results
from Soil Stockpile Number 1

Sample Number		Total Petroleum Hydrocarbons (Method 418.1) mg/kg	BTEX Method (SW8020) µg/kg
FW-A	101601	353	nd
FW-A	101602	nd	nd
FW-A	101603	nd	nd
FW-A	101604	111	nd
FW-A	101605	nd	nd
FW-A	101606	nd	nd
FW-A	101607	nd	nd
FW-A	101608	794	nd
FW-A	101701	92	nd
FW-A	101702	nd	nd

Notes:
mg/kg = milligrams per kilogram
nd = not detected
µg/kg = micrograms per kilogram

TABLE 3-5
Analytical Results
from Soil Stockpile Number 2

Sample Number		Total Petroleum Hydrocarbons (Method 418.1) mg/kg	BTEX Method (SW8020) µg/kg
FW-A	101703	1200	nd
FW-A	101704	200	nd
FW-A	101705	41	nd
FW-A	101706	783	nd
FW-A	101707	184	nd
FW-A	101708	497	nd
FW-A	101801	264	nd
FW-A	101802	682	nd
FW-A	101803	nd	nd
FW-A	101804	225	nd
FW-A	101805	394	nd
FW-A	101806	498	nd

TABLE 3-6
Analytical Results
from Soil Stockpile Number 3

Sample Number		Total Petroleum Hydrocarbons (Method 418.1) mg/kg	BTEX Method (SW8020) µg/kg
FW-A	102301	nd	nd
FW-A	102302	220	nd
FW-A	102303	170	nd
FW-A	102304	110	nd
FW-A	102305	130	nd
FW-A	102306	220	nd
FW-A	102307	460	nd
FW-A	102308	450	nd
FW-A	102309	240	nd
FW-A	102401	39	nd
FW-A	102402	610	nd
FW-A	102403	280	nd

3.1.2.3 Geoprobe Results

An offsite analytical laboratory was used for confirmation of the immunoassay field screening results. BTEX (SW8020) and PAH (SW8310) analyses were conducted on duplicates of 10 percent of field samples. In addition, 10 percent of the field samples submitted to the offsite laboratory were duplicates. Other quality control (QC) samples submitted to the offsite laboratory include the following:

- Equipment Blanks - analyzed for BTEX and PAHs; and
- Ambient Blank - analyzed for BTEX only.

Offsite analytical services were provided by CKY, Inc., located in Torrance, California, an AFCEE-audited laboratory. Analytical results produced by the offsite laboratory are included in Appendix B.

3.1.3 Waste Handling

Excess sample material generated during immunoassay analysis was placed in a drum until the end of the field phase of the project. This material was then placed with the stockpile of contaminated soil excavated during removal of the USTs at pumping station C and disposed of along with those soils.

Waste immunoassay analytical reagents were disposed of to the municipal sanitary sewer system. These reagents consisted of dilute concentrations of methanol and sulfuric acid.

3.2 COMPARISON OF IMMUNOASSAY RESULTS TO OFFSITE LABORATORY RESULTS

Forty-four BTEX (SW8020) duplicate soil samples and 34 PAH (SW8310) duplicate soil samples were sent to the offsite laboratory for confirmation of the immunoassay results. The offsite laboratory was also sent four field duplicates for QC purposes.

The purpose of the confirmation analyses was to demonstrate on a qualitative level that the immunoassay analytical method was accurately characterizing the presence or absence of BTEX and PAH compounds in soil samples.

Table 3-7 compares BTEX and PAH immunoassay results with results from the offsite laboratory. Table 3-7 shows that on a qualitative level there is good comparability between the immunoassay results and the offsite laboratory nondetectable results.

Immunoassay PAH analysis produced two apparent false positive results in samples from DP 148B and DP 149B with results of greater than (>) 5.0 ppm and 3.2 ppm, respectively, compared to offsite laboratory results showing no PAHs detected in these samples. HNu readings for these sample intervals did indicate the presence of ionizable compounds.

Immunoassay BTEX results from batch 12 are not comparable to the offsite laboratory because of problems during immunoassay analysis of this batch. The samples included in this batch were subsequently reanalyzed as batch 15. However, BTEX results from duplicates for sample DP 149B are still not comparable, with less than (<) 1.4 ppm in the immunoassay sample and 260 ppm in the offsite laboratory sample. Analytical results from the offsite laboratory for samples DP 150B, DP 112C, and DP 172B all indicated the presence of BTEX, at concentrations of 1.76 ppm, 4.04 ppm, and 3.99 ppm, respectively, whereas the immunoassay analytical results were less than the detection limit of 1.4 ppm. It should be noted that a field duplicate of sample DP 172B, also sent to the offsite laboratory, produced a BTEX result below detection limits. Field notes indicate that all of these samples were collected at or near the water table and a detection of BTEX in the sample and its co-located duplicate may have been related more to the location of each sample relative to the water table than to analytical problems.

TABLE 3-7
Comparison of Immunoassay Results to Offsite Laboratory Results

Sample #	Depth (feet)	Immunoassay BTEX Lab Batch #	RPA 1 Value	Immunoassay BTEX (ppm)	Offsite Lab Total BTEX (ppm)	Immunoassay PAH Lab Batch #	RPA 1 Value	PAH (ppm)	Offsite Lab Control #	Offsite Lab Benzene (ppb)	Offsite Lab Toluene (ppb)	Offsite Lab E-Benzene (ppb)	Offsite Lab Xylenes (ppb)	Offsite Lab Total PAH (ppm)
DP 006A	5.0 - 6.5	BTEX01- 13	0.04	<1.4	nd	PAH01- 8	6.66	<1.0	FW-A100101	nd	nd	nd	nd	nd
DP 006B *	11.0 - 12.5	BTEX01- 14	0.05	<1.4	nd	PAH01- 9	1.64	<1.0	FW-A100102	nd	nd	nd	nd	nd
DP 011B *	12.5 - 13.0	BTEX01- 24	0.08	<1.4	nd	PAH01- 14	4.52	<1.0	FW-A100201	nd	nd	nd	nd	nd
DP 011BFD *	12.5 - 13.0	BTEX01- 24	0.08	<1.4	0.18	PAH01- 14		<1.0	FW-A100202	nd	14	6.9	160	nd
DP 015A	5.0 - 6.0	BTEX01- 29	0.04	<1.4	nd	—		—	FW-A100301	nd	nd	nd	nd	—
DP 023A	4.0 - 6.0	BTEX02- 13	0.01	<1.4	nd	PAH02- 4	1.22	<1.0	FW-A100503	nd	nd	nd	nd	nd
DP 029B	18.0 - 19.0	BTEX03- 12	0.06	<1.4	nd	—		—	FW-A100506	nd	nd	nd	nd	—
DP 036A	4.0 - 6.0	BTEX04- 9	0.03	<1.4	nd	—		—	FW-A100508	nd	nd	nd	nd	—
DP 044B	11.0 - 13.0	BTEX04- 21	0.04	<1.4	nd	—		—	FW-A100601	nd	nd	nd	nd	—
DP 016B *	13.0 - 14.0	BTEX05- 6	1.66	16.6	0.28	PAH03- 6	82.97	>5.0	FW-A100602	nd	nd	196	82	0.83
DP 012A	4.0 - 6.0	BTEX05- 8	0.07	<1.4	nd	—		—	FW-A100701	nd	nd	nd	nd	—
DP 056A	5.0 - 6.0	BTEX06- 4	0	<1.4	nd	—		—	FW-A100703	nd	nd	nd	nd	—
DP 056B *	21.5 - 22.0	BTEX06- 6	0.01	<1.4	nd	—		—	FW-A100704	nd	nd	nd	nd	—
DP 061A	4.0 - 6.0	BTEX06- 16	0.01	<1.4	nd	PAH03- 26	0.64	<1.0	FW-A100705	nd	nd	nd	nd	nd
DP 061AFD	4.0 - 6.0	BTEX06- 16	0.01	<1.4	nd	PAH03- 26	0.64	<1.0	FW-A100706	nd	nd	nd	nd	nd
DP 073B	6.5 - 8.0	BTEX07- 22	0.05	<1.4	nd	PAH04- 23	1.29	<1.0	FW-A100801	nd	nd	nd	nd	nd
DP 073C *	21.0 - 23.0	BTEX07- 23	0.04	<1.4	nd	PAH04- 24	1.5	<1.0	FW-A100802	nd	nd	nd	nd	nd
DP 087A	4.5 - 5.0	BTEX08- 12	0.03	<1.4	nd	—		—	FW-A100901	nd	nd	nd	nd	—
DP 096B *	9.0 - 10.0	BTEX09- 5	3.04	>30	2.82	PAH05- 17	98.63	>5.0	FW-A100903	nd	620	nd	2200	2.80
DP 103C	21.0 - 22.0	BTEX09- 17	0.31	3.1	1.58	PAH05- 22	8.76	<1.0	FW-A100904	nd	260	270	1050	0.65
DP 108B	14.0 - 15.0	BTEX09- 23	0.05	<1.4	nd	—		—	FW-A100905	nd	nd	nd	nd	—
DP 108B *	20.0 - 21.0	BTEX10- 4	0.07	<1.4	nd	—		—	FW-A100906	nd	nd	nd	nd	—
DP 109A	4.0 - 6.0	BTEX10- 5	2.11	21.1	0.96	PAH06- 7	24.8	2.5	FW-A100909	12	nd	140	830	1.10
DP 114B *	19.5 - 20.0	BTEX10- 14	0.03	<1.4	0.02	—		—	FW-A101001	nd	4.6	2.3	18	—
DP 115B	11.0 - 12.0	BTEX10- 16	4.28	>30	13.90	PAH06- 11	126.94	>5.0	FW-A101002	2900	3600	4500	2900	11.00
DP 120B *	18.0 - 19.0	BTEX10- 26	0.05	<1.4	nd	—		—	FW-A101005	nd	nd	nd	nd	—
DP 122C *	18.0 - 20.0	BTEX10- 33	2.25	22.5	1.43	PAH06- 21	47.35	4.7	FW-A101006	nd	120	330	980	0.66
DP 124B *	19.0 - 21.0	BTEX10- 37	0.11	<1.4	0.98	PAH06- 23	5.66	<1.0	FW-A101007	nd	nd	nd	980	0.39
DP 146A	5.0 - 6.0	BTEX12- 15	0	<1.4	3.16	PAH07- 27	6.86	<1.0	FW-A101201	280	1300	280	1300	nd
DP 146A	5.0 - 6.0	BTEX15- 15	0.84	8.4	3.16	—		—	FW-A101201	280	1300	280	1300	nd
DP 148B *	10.0 - 11.0	BTEX12- 20	0	<1.4	55.50	PAH07- 32	266.43	>5.0	FW-A101202	2200	8500	8800	38000	nd
DP 148B *	10.0 - 11.0	BTEX15- 20	10.01	>30	55.50	—		—	FW-A101202	2200	8500	8800	38000	nd
DP 149B *	10.0 - 11.0	BTEX12- 22	0	<1.4	260.00	PAH08- 5	32.11	3.2	FW-A101203	260000	nd	nd	nd	nd
DP 149B *	10.0 - 11.0	BTEX15- 22	0.13	<1.4	260.00	—		—	FW-A101203	260000	nd	nd	nd	nd
DP 150B *	10.5 - 11.0	BTEX12- 24	0	<1.4	1.76	PAH08- 7	2.69	<1.0	FW-A101206	nd	130	230	1400	nd
DP 150B *	10.5 - 11.0	BTEX15- 24	0.03	<1.4	1.76				FW-A101206	nd	130	230	1400	nd
DP 154B *	10.0 - 11.0	BTEX13- 11	0.02	<1.4	1.04	—		—	FW-A101207	nd	nd	160	880	—
DP 159B *	10.0 - 11.0	BTEX13- 23	0.02	<1.4	1.38	—		—	FW-A101301	nd	180	207	990	—

TABLE 3-7
Comparison of Immunoassay Results to Offsite Laboratory Results

Sample #	Depth (feet)	Immunoassay BTEX Lab Batch #	RPA 1 Value	Immunoassay BTEX (ppm)	Offsite Lab Total BTEX (ppm)	Immunoassay PAH Lab Batch #	RPA 1 Value	PAH (ppm)	Offsite Lab Control #	Offsite Lab Benzene (ppb)	Offsite Lab Toluene (ppb)	Offsite Lab E-Benzene (ppb)	Offsite Lab Xylenes (ppb)	Offsite Lab Total PAH (ppm)
DP 166B *	10.0 - 11.0	BTEX14- 11	0.01	<1.4	nd	PAH08- 23	3.63	<1.0	FW-A101302	nd	nd	nd	nd	nd
DP 119A	5.0 - 6.0	BTEX14- 14	0.06	<1.4	0.03	PAH08- 24	3.66	<1.0	FW-A101303	4.9	4.7	4.8	16.7	nd
DP 119B	11.0 - 12.0	BTEX14- 15	0.01	<1.4	nd	PAH08- 25	2.38	<1.0	FW-A101304	nd	nd	nd	nd	nd
DP 119C *	20.0 - 21.0	BTEX14- 16	7.12	>30	205.00	PAH08- 26	373.52	>5.0	FW-A101305	27000	25000	53000	100000	32.60
DP 112B	11.0 - 12.0	BTEX14- 18	0.05	<1.4	nd	PAH08- 28	4.45	<1.0	FW-A101306	nd	nd	nd	nd	nd
DP 112C *	20.0 - 21.0	BTEX14- 19	0.01	<1.4	4.04	PAH08- 29	5.31	<1.0	FW-A101307	1800	200	240	1800	0.03
DP 170A	4.0 - 6.0	BTEX16- 5	0.05	<1.4	nd	PAH09- 7	1.99	<1.0	FW-A101501	nd	nd	nd	nd	nd
DP 170AFD	4.0 - 6.0	BTEX16- 5	0.05	<1.4	nd	PAH09- 7	1.99	<1.0	FW-A101502	nd	nd	nd	nd	nd
DP 172B *	10.0 - 12.0	BTEX16- 15	0.06	<1.4	3.99	PAH09- 13	66.39	>5.0	FW-A101503	nd	nd	570	3420	6.03
DP 172BFD *	10.0 - 12.0	BTEX16- 15	0.06	<1.4	nd	PAH09- 13	66.39	>5.0	FW-A101504	nd	nd	nd	nd	1.94

Notes:

BTEX = benzene, toluene, ethylbenzene, and xylene
lab = laboratory
nd = Below PQLs. PQL for BTEX is generally under 0.005 ppm and PQL for PAH is generally under 0.130 ppm.
PAH = polycyclic aromatic hydrocarbon
ppb = parts per billion
ppm = parts per million
PQL = Practical Quantitation Limits
RPA1 = photoanalyzer instrument model
— = not analyzed
* = sample collected at or just above the water table
# = number

Of four duplicate sample pairs sent to the offsite laboratory, only one had BTEX and/or PAH concentrations detectable by immunoassay methods. This offsite sample pair also showed considerable variation in the analytical results for both BTEX and PAHs, as can be seen from the table below. Results from the remaining three duplicate pairs are comparable except for minor discrepancies in results from DP 11B and DP 11FD (field duplicate) for which BTEX was reported as not detected and 0.18 ppm, respectively.

	BTEX Results (ppm)		PAH Results (ppm)	
Sample Number	Immunoassay	Offsite Laboratory	Immunoassay	Offsite Laboratory
172B	<1.4	3.99	>5.0	6.03
172BFD		nd		1.94

BTEX and PAH results that do not correlate well may be explained by the method of collecting duplicate samples. Duplicate samples were obtained from the same drive-point sampling sleeve. The sampling sleeve was cut into 4-inch- to 6-inch-long segments that were immediately capped after cutting to minimize volatilization. Thus, the duplicate samples are not true duplicates, but are co-located samples representing adjacent intervals of the unconsolidated stratigraphy, and the lack of correlation between sample and the co-located duplicate may be explainable because the contaminants are not uniformly dispersed throughout the soil matrix. Measures taken during field sampling to minimize inhomogeneities of contaminant concentrations include the following:

- verifying that uniform lithologic materials were present in both the sample and duplicate by visually screening the soil in the drive-point sample sleeve; and
- verifying that comparable moisture content was present in both the sample and duplicate by visually screening the soil in the drive-point sample sleeve.

However, local inhomogeneities of contaminant concentrations could still result from minute variations of mineralogy, chemistry, and physical structure of the soil materials. Another factor that could influence the comparability of samples and duplicates could be the relative position of the sample material to the water table surface. Many of the B- and C-suffixed samples were collected just above the water table. Capillary effects related to BTEX and PAH mobility over short distances and seasonal water table fluctuations that could have smeared contaminants across discrete soil intervals above the water table could be responsible for very localized variations in contaminant concentrations.

3.3 POTENTIAL AREAS OF CONCERN

For purposes of this discussion, the fuel distribution system is divided into eight separate areas. Areas were selected based on geography. In general, for areas where there is potential for a significant presence of hydrocarbons, cross sections, tables, and detailed discussions were developed. In areas where little or no potential for the presence of hydrocarbons warranting further investigation exists, discussions are limited. Descriptions of Areas 1 through 8 are provided below with a discussion of physical and analytical results following.

Area 1, Tank Farm and Fuel Feeder Line, is defined as the pipeline southeast of the Marine and Navy Ramps including the fuel tank farm composed of tanks 1059, 1156, and 1157. Soil probe locations in Area 1 are DP 1 through DP 13, DP 48, DP 50 through DP 54, and DP 173 through DP 178.

Area 2, Navy Ramp, is the fuel pipeline that serviced the South Apron, currently known as the Navy Ramp. Area 2 includes the soil probe locations DP 110 through DP 128.

Area 3, Marine Ramp, includes the valve vaults and piping that serviced the area now known as the Marine Ramp.

Area 4, Alert Apron, includes the fuel pipeline and pumping station E that serviced the Alert Apron.

Areas 5 through 8 are pumping stations A, B, C, and D.

3.3.1 Area 1 - Tank Farm and Fuel Feeder Line (Leaking Petroleum Storage Tank No. 104819)

The results of the immunoassay field screening indicate the detection of total BTEX at soil probe location DP 54. Total BTEX was detected at 5.5 to 6.0 feet bgs at a concentration of 1.5 ppm. Total PAH was detected at soil probe locations DP 3 and DP 176 at depths of 18 to 18.5 and 4.5 to 5.0 feet bgs, respectively. The PAH concentrations indicated by the immunoassay testing are greater than 5 ppm for the sample collected from DP 3 and 1.3 ppm for the sample collected from DP 54. HNu readings for these samples did not indicate the presence of organic hydrocarbons. These soil probe locations are illustrated on Plate 1. Analytical results are presented in Table 3-8 and Appendices A and B.

3.3.2 Area 2 - Navy Ramp

Area 2 is located on the southwest side of the Navy Ramp. Area 2 consists of the piping that supplied fuel to six valve vaults and hydrants on the Navy Ramp. The surface is paved with asphaltic concrete and concrete. Area 2 is shown on Plate 1.

Subsurface soils encountered were clayey sands from the surface to approximately 11 to 18 feet bgs. The thickness of the sandy clay horizon increases toward the northwest. The clayey sand is underlain by a poorly graded sand interbedded with well graded sand. Clayey sand and silty sand lenses were encountered in this sandy

TABLE 3-8
Area 1 - Tank Farm and Fuel Feeder Line Detections

Sample #		Depth (feet)			Immunoassay BTEX (ppm)	Immunoassay PAH (ppm)	HNu Reading	Offsite Lab Total BTEX (ppm)	Offsite Lab Benzene (ppb)	Offsite Lab Toluene (ppb)	Offsite Lab Ethylbenzene (ppb)	Offsite Lab Xylenes (ppb)	Offsite Lab Total PAH (ppm)	Offsite Lab Individual PAH Compounds (ppb)
DP	003C	18	-	18.5	<1.4	>5.0	0	na	na	na	na	na	na	na
DP	054A	5.5	-	6	1.5	<1.0	0	na	na	na	na	na	na	na
DP	176A	4.5	-	5	<1.4	1.3	0	na	na	na	na	na	na	na

Note:
BTEX = benzene, toluene, ethylbenzene, xylene
lab = laboratory
na = not analyzed
PAH = polycyclic aromatic hydrocarbon
ppb = parts per billion
ppm = parts per million

horizon. A bedrock high was discovered in the northwest portion of Area 2 at a depth of approximately 8 feet bgs. The bedrock consists of weathered to relatively fresh limestone. To the northwest of the bedrock high, the clayey sand unit pinches out with the predominant soil type becoming poorly graded sand interbedded with well graded sand. Groundwater was encountered in Area 2 at approximately 19 to 22 feet bgs on the south of the bedrock high and approximately 6 feet bgs on the north side of the bedrock high. Subsurface features are illustrated on Cross Section A-A', Plate 2.

Soil probe locations and immunoassay and HNu results for Area 2 are illustrated on Plates 1 and 2. HNu readings taken on samples collected from soil probes in Area 2 ranged from 1 to 350 ppm. Immunoassay results ranged from 3.5 to 22.5 ppm. Complete analytical results are presented in Appendices A and B. Detection results are presented in Table 3-9.

3.3.3 Area 3 - Marine Ramp

Area 3 is located immediately to the northeast of the Marine Ramp. The surface is not paved. Fuel was distributed to the Marine Ramp by feeder lines originating at pumping stations A and C. These feeder lines supplied fuel to five valve vaults that fed fuel to hydrants on the Marine Ramp. Lines that conveyed fuel to the hydrants are generally under asphalt or concrete.

Subsurface soils encountered consisted of clayey sands to a depth of approximately 17 feet bgs underlain by poorly graded sands. In the southeast portion of Area 2, soil probes encountered well graded gravel at a depth of approximately 20 to 22 feet bgs. In the northwest portion of Area 3, a bedrock high of weathered and relatively fresh limestone was encountered at depths of approximately 3 to 8 feet bgs. This bedrock high is the same unit encountered in Area 2. To the immediate northwest of the bedrock high, the clayey sand horizon pinches out and the subsurface soils become predominately silty sand. Groundwater was encountered at Area 3 at approximately 20 to 22 feet bgs to the southeast of the bedrock high. Northwest of the bedrock high

TABLE 3-9
Area 2 - Navy Ramp Detections

Sample #		Depth (feet)			Immunoassay BTEX (ppm)	Immunoassay PAH (ppm)	HNu Readings	Offsite Lab Total BTEX (ppm)	Offsite Lab Benzene (ppb)	Offsite Lab Toluene (ppb)	Offsite Lab Ethylbenzene (ppb)	Offsite Lab Xylenes (ppb)	Offsite Lab Total PAH (ppm)	Offsite Lab Individual PAH Compounds (ppb)
DP	110A	5.5	-	6	3.5	2.3	55	na	na	na	na	na	na	na
DP	110B	11.5	-	12	12.3	4.3	20	na	na	na	na	na	na	na
DP	110C	21.5	-	22	<1.4	<1.0	200	na	na	na	na	na	na	na
DP	112A	5	-	6	<1.4	1.9	5	na	na	na	na	na	na	na
DP	112B	11	-	12	<1.4	<1.0	26	na	na	na	na	na	na	na
DP	112C	20	-	21	<1.4	<1.0	5	na	na	na	na	na	na	na
DP	114B	19.5	-	20	<1.4		5	0.02	nd	4.6	2.3	18	na	na
DP	115A	5.5	-	6	16.6		110	na	na	na	na	na	na	na
DP	115B	11	-	12	>30	>5.0	350	13.9	2900	3600	4500	2900	11	Napthalene - 11000
DP	115C	19	-	20	>30	>5.0	350	na	na	na	na	na	na	na
DP	115CFD	19	-	20	>30	>5.0	350	na	na	na	na	na	na	na
DP	119A	5	-	6	<1.4	<1.0	3	na	na	na	na	na	na	na
DP	119B	11	-	12	<1.4	<1.0	4	na	na	na	na	na	na	na
DP	119C	20	-	21	>30	>5.0	170	na	na	na	na	na	na	na
DP	120B	18	-	19	<1.4		15	nd	na	na	na	na	na	na
DP	121B	18.5	-	19	<1.4	<1.0	2	na	na	na	na	na	na	na
DP	122A	5.5	-	6	<1.4	<1.0	2	na	na	na	na	na	na	na
DP	122B	11	-	12	15.7	2.3	170	na	na	na	na	na	na	na
DP	122BFD	11	-	12	16.5	2.6	160	na	na	na	na	na	na	na
DP	122C	18	-	20	22.5	4.7	0	1.43	nd	120	330	980	0.86	Napthalene - 660
DP	123B	19.5	-	20	<1.4		1	na	na	na	na	na	na	na
DP	124B	19	-	21	<1.4	<1.0	50	0.98	nd	nd	nd	980	0.39	Napthalene - 390
DP	125A	5	-	5.5	<1.4	<1.0	40	na	na	na	na	na	na	na
DP	125B	11.5	-	12	<1.4	3.8	0	na	na	na	na	na	na	na
DP	127AFD	5	-	6	2.7		0	na	na	na	na	na	na	na

Notes:
BTEX = benzene, toluene, ethylbenzene, xylene
lab = laboratory
na = not analyzed
nd = not detected
PAH = polycyclic aromatic hydrocarbon
ppb = parts per billion
ppm = parts per million

groundwater was encountered at approximately 10 feet bgs. Subsurface features are illustrated on Cross Section B-B', Plate 3.

Soil probe locations, immunoassay and HNu results, and stratigraphy for Area 3 are depicted on Plates 1 and 3. HNu readings taken on samples collected ranged from 2 to 180 ppm. Immunoassay detections ranged from 1.3 to greater than 30 ppm. Complete results are presented in Table 3-10 and Appendices A and B.

3.3.4 Area 4 - Alert Apron and Station E (Leaking Petroleum Storage Tank No. 104484)

The Alert Apron is located at the north end of the site and is accessed by an abandoned taxiway that intersects Taxiway B. The fuel distribution system at the Alert Apron was supplied by a single pipeline that delivered fuel to pumping station E. From pumping station E, pipelines distributed fuel to four valve vaults and hydrants. Plate 1 illustrates the physical layout of features and soil probe locations at the Alert Apron.

Subsurface soil types encountered at the Alert Apron were sandy clays from the surface to approximately 2.5 to 7 feet bgs, with thickness decreasing to the northeast. Below the sandy clays, fine to coarse poorly graded sands were encountered. This sand unit is interbedded with silty sand and well graded sands. Groundwater was encountered at approximately at 11 feet bgs.

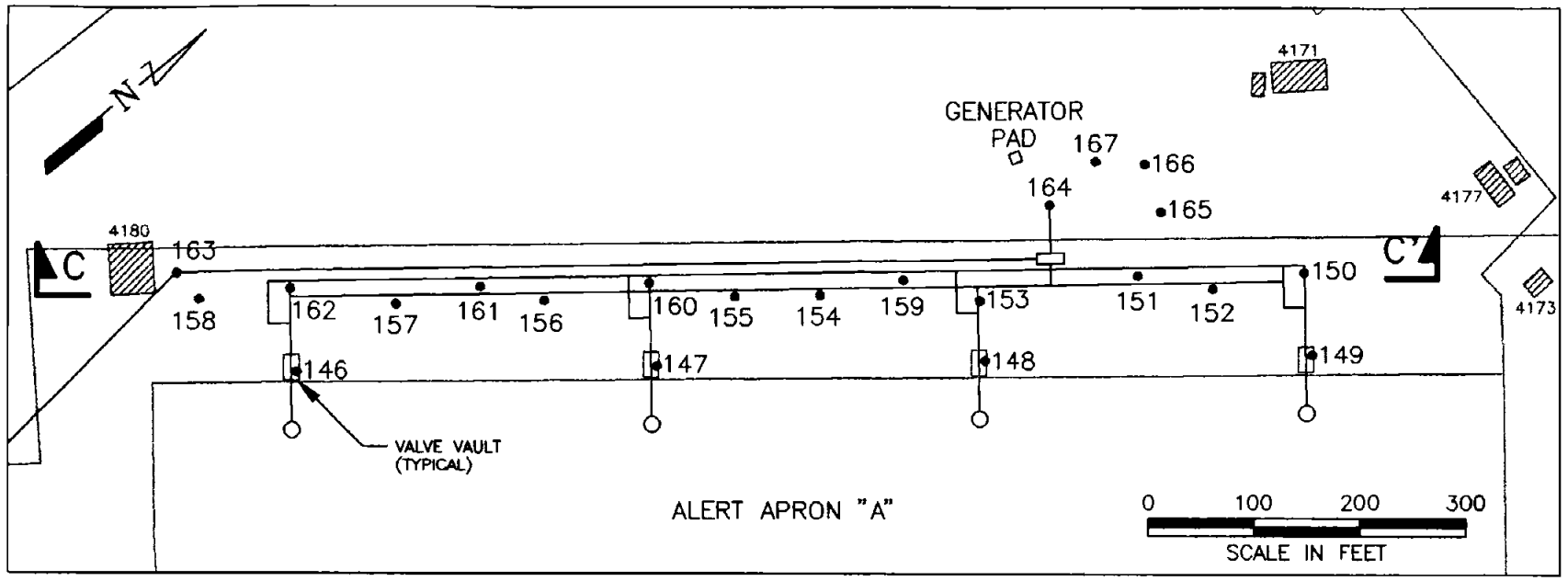
HNu readings taken on collected samples ranged from 1 to 310 ppm. Immunoassay detections ranged from 2.1 to 7.2 ppm for PAHs. A single detection for total BTEX at 8.5 ppm in soil probe DP 153 was recorded. Additionally, free product was observed at the water table in soil probes DP 153 and DP 154. Generally, detections were observed northeast of DP 154 for HNu readings and immunoassay analysis with the exception of low HNu readings in DP 163 and DP 158, and a detection of PAHs in DP 161 at 2.1 ppm. Positive detections for the Alert Apron are illustrated in Figure 3-3. Complete analytical results are presented in Appendices A and B.

TABLE 3-10
Area 3 - Marine Ramp Detections

Sample #		Depth (feet)			Immunoassay BTEX (ppm)	Immunoassay PAH (ppm)	HNu Reading	Offsite Lab Total BTEX (ppm)	Offsite Lab Benzene (ppm)	Offsite Lab Toluene (ppb)	Offsite Lab Ethylbenzene (ppb)	Offsite Lab Xylenes (ppb)	Offsite Lab Total PAH (ppm)	Offsite Lab Individual PAH Compounds (ppb)
DP	074B	22.5	-	23	<1.4		5	na	na	na	na	na	na	na
DP	075B	22.5	-	23	<1.4	<1.0	2	na	na	na	na	na	na	na
DP	075BFD	22.5	-	23	<1.4	<1.0	2	na	na	na	na	na	na	na
DP	092A	4.5	-	5	<1.4	2	0	na	na	na	na	na	na	na
DP	098A	4.5	-	5	24.8	>5.0	90	na	na	na	na	na	na	na
DP	098B	9	-	10	>30	>5.0	180	2.82	nd	820	nd	2200	2.8	Napthalene - 2800

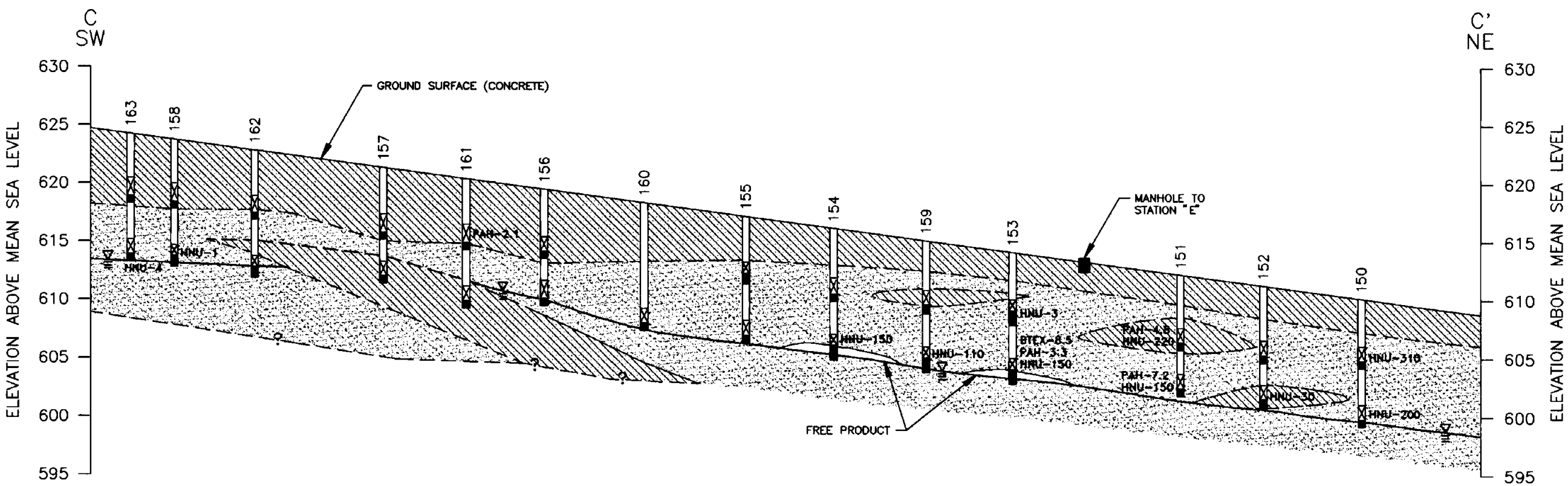
Notes:

BTEX = benzene, toluene, ethylbenzene, xylene
lab = laboratory
na = not analyzed
nd = not detected
PAH = polycyclic aromatic hydrocarbon
ppb = parts per billion
ppm = parts per million

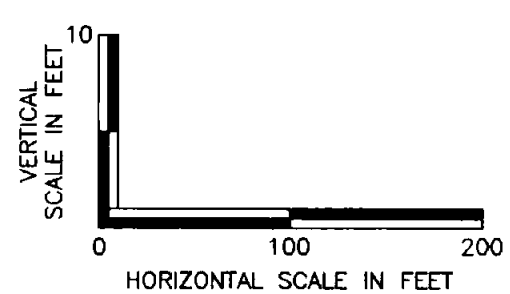


LEGEND

- SANDY CLAY WITH VARYING AMOUNTS OF CLAY AND FINE SUBROUNDED AND SUBANGULAR GRAVEL. TRACES OF ORGANICS NOTED TO 6' DEEP
- FINE TO COARSE POORLY GRADED SAND INTERBEDDED WITH FINE TO COARSE, WELL GRADED SAND
- DRIVE INTERVAL SHOWING SAMPLED INTERVAL
- GROUNDWATER ELEVATION, ALL GROUNDWATER ELEVATIONS ARE ESTIMATED
- BTEX–1.25 — BENZENE, TOLUENE, ETHYLBENZENE, AND XYLENE TOTAL CONCENTRATION IN ppm
- PAH–4.2 — POLYCYCLIC HYDROCARBONS TOTAL CONCENTRATION IN ppm
- HNU–5.5 — HNU READING FROM DRIVE INTERVAL IF GREATER THAN BACKGROUND



CROSS SECTION C–C'
ORIENTATION – N38°E



NAS FORT WORTH JRB
CARSWELL FIELD

CROSS SECTION C–C'
ALERT APRON, STATION E,
AREA 4, LPST #104484

PROJ. MGR.	ACAD FILE NO.	FIGURE NO.
L. SCHUETTER	CROSSC	3–3
DRAWN BY	PROJ. NO.	DATE
J. HUNTER	10–K–70100	7/12/95

Table 3-11 includes the positive detections for immunoassay analysis and HNu readings.

3.3.5 Area 5 - Pumping Station A (Leaking Petroleum Storage Tank No. 108711)

Pumping station A is located southwest and on the south end of the Navy Ramp. Pumping station A has been demolished. The station is similar to all other pumping stations associated with the fuel distribution system. The station consisted of six 25,000-gallon USTs and piping required to convey fuel to the Marine Ramp valve vaults. An important characteristic of this station and other stations at the site is that a drainage system was installed to drain incidental fluid from the floor of each station. These drains discharged to sumps typically installed in the vicinity of the north corner of each station except station E. The sump for station E is located at DP 150. The location of station A with respect to local base cultural features is illustrated on Plate 1.

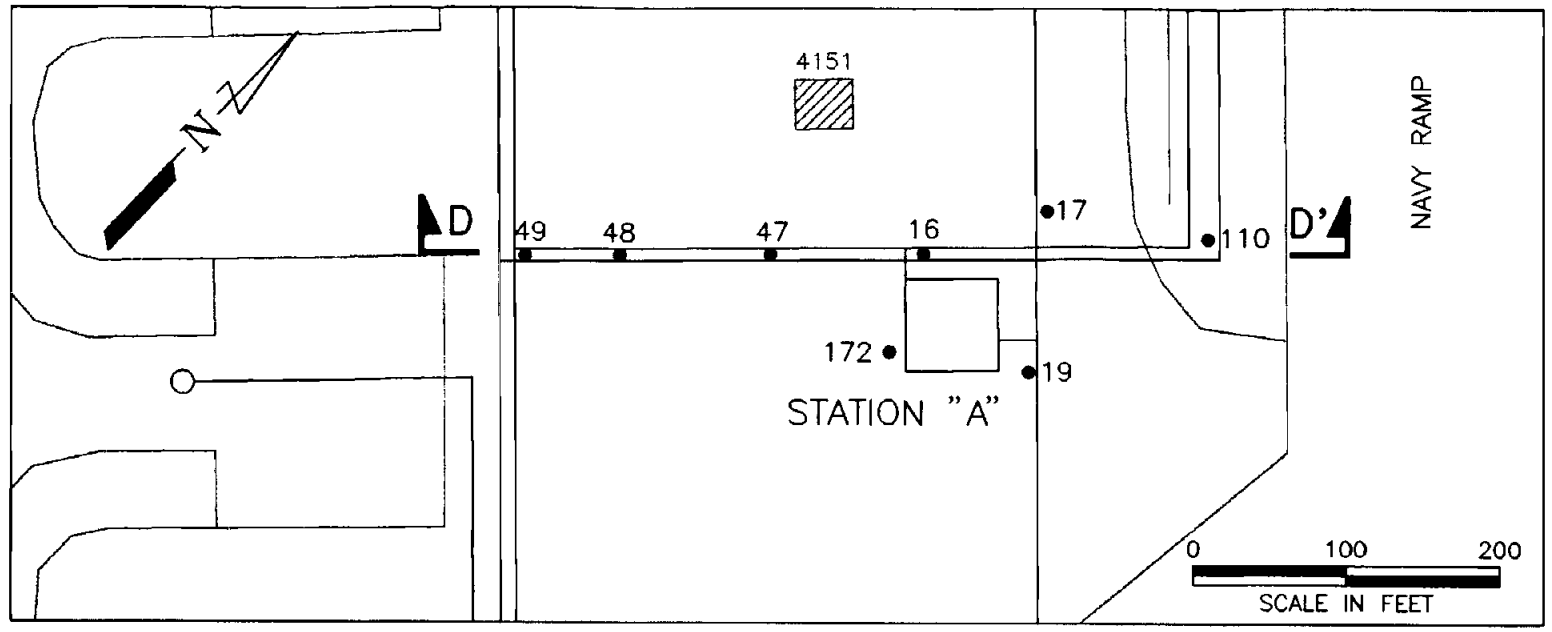
Subsurface soil types encountered in Area 5 were sandy clays from the surface to approximately 8 to 10 feet bgs. Below the sandy clays, fine to coarse poorly graded sands were encountered. This sand unit is interbedded with silty sand and well graded sands. Below the sand horizon a well graded gravel was encountered at approximately 21 feet bgs. Groundwater was encountered at approximately 18 to 20 feet bgs.

Soil probes DP 16, DP 17, DP 19, and DP 172 were located specifically to investigate station A and associated piping. HNu readings ranged from 2 ppm in soil probe DP 17 to a high of 300 ppm in DP 172. Immunoassay results indicate the presence of total BTEX in concentrations ranging from 7.6 to 22.7 ppm in the subsurface soils immediately beneath station A. Immunoassay results also indicate the presence of PAHs. Concentrations reported for PAHs beneath station A range from 1.2 ppm to greater than 5.0 ppm. Soil samples collected from DP 172 at 10 to 12 feet bgs and DP 16 at 13 to 14 feet bgs were saturated with fuel. Positive detection details are illustrated in Figure 3-4 and provided in Table 3-12. Complete analytical results are presented in Appendices A and B.

TABLE 3-11
Area 4 - Alert Apron and Station E/Leaking Petroleum Storage Tank No. 104484 Detections

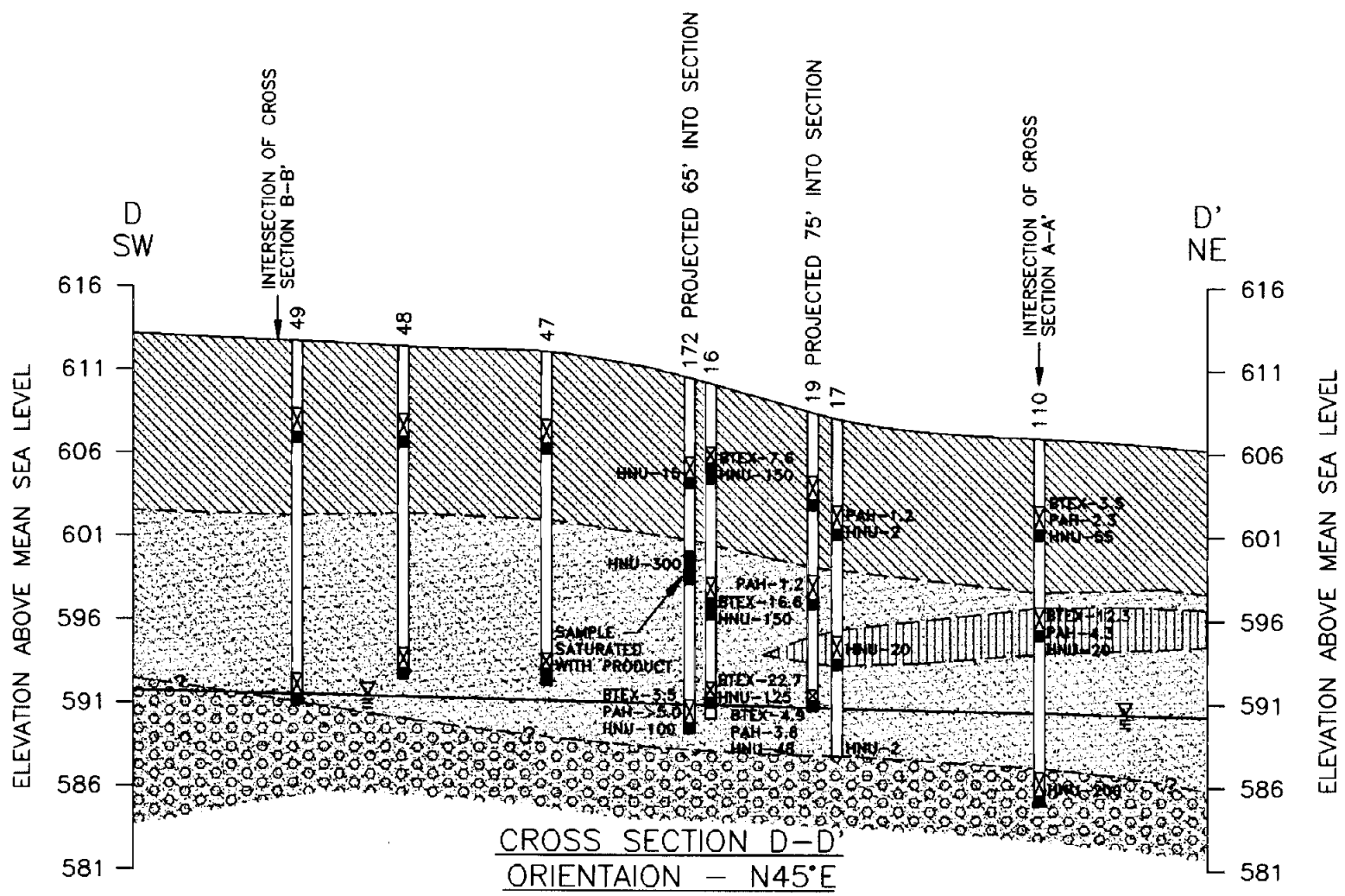
Sample #		Depth (feet)			Immunoassay BTEX (ppm)	Immunoassay PAH (ppm)	HNu Reading	Offsite Lab Total BTEX (ppm)	Offsite Lab Benzene (ppm)	Offsite Lab Toluene (ppb)	Offsite Lab Ethylbenzene (ppb)	Offsite Lab Xylenes (ppb)	Offsite Lab Total PAH (ppm)	Offsite Lab Individual PAH Compounds (ppb)
DP	149B	10	-	11	nd		0	260	260,000	nd	nd	nd	nd	nd
DP	150A	5.5	-	6	>30		310	na	na	na	na	na	na	na
DP	150B	10.5	-	11	<1.4		200	1.76	nd	130	230	1,400	nd	nd
DP	151A	5.5	-	6	4.8		220	na	na	na	na	na	na	na
DP	151B	9.5	-	10	7.2		150	na	na	na	na	na	na	na
DP	151B	9.5	-	10	7.9		150	na	na	na	na	na	na	na
DP	152B	9.5	-	10	<1.4		30	na	na	na	na	na	na	na
DP	153A	5	-	6	<1.4	<1.0	3	na	na	na	na	na	na	na
DP	153AFD	5	-	6	<1.4	<1.0	3	na	na	na	na	na	na	na
DP	153B	10	-	11	8.5	3.3	150	na	na	na	na	na	na	na
DP	154B	10	-	11	<1.4		150	1.04	nd	nd	160	880	na	na
DP	158B	10	-	11	<1.4		1	na	na	na	na	na	na	na
DP	158BFD	10	-	11	<1.4		1	na	na	na	na	na	na	na
DP	159B	10	-	11	<1.4		110	1.38	nd	180	207	990	na	na
DP	161A	5.5	-	6	<1.4	2.1	0	na	na	na	na	na	na	na
DP	163B	10.5	-	11	<1.4	<1.0	4	na	na	na	na	na	na	na

Notes:
BTEX = benzene, toluene, ethylbenzene, xylene
lab = laboratory
na = not analyzed
nd = not detected
PAH = polycyclic aromatic hydrocarbon
ppb = parts per billion
ppm = parts per million

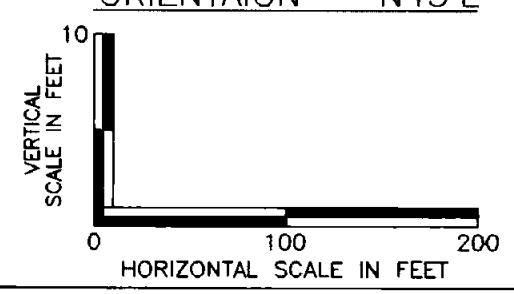


LEGEND

- SANDY CLAY WITH VARYING AMOUNTS OF CLAY AND FINE SUBROUNDED AND SUBANGULAR GRAVEL. TRACES OF ORGANICS NOTED TO 6' DEEP
- SILTY SAND. VARYING AMOUNTS OF SILT AND PLASTICITY
- FINE TO COARSE POORLY GRADED SAND INTERBEDDED WITH FINE TO COARSE, WELL GRADED SAND
- WELL-GRADED GRAVELS, GRAVEL-SAND MIXTURES, LITTLE OR NO FINES
- DRIVE INTERVAL SHOWING SAMPLED INTERVAL
- GROUNDWATER ELEVATION, ALL GROUNDWATER ELEVATIONS ARE ESTIMATED
- BTEX-1.25 — BENZENE, TOLUENE, ETHYLBENZENE, AND XYLENE TOTAL CONCENTRATION IN ppm
- PAH-4.2 — POLYCYCLIC HYDROCARBONS TOTAL CONCENTRATION IN ppm
- HNU-5.5 — HNU READING FROM DRIVE POINT INTERVAL IF GREATER THAN BACKGROUND



CROSS SECTION D-D'
ORIENTAION – N45°E



NAS FORT WORTH JRB
CARSWELL FIELD

CROSS SECTION D-D'
STATION A, AREA 5, LPST #108711

PROJ. MGR.	ACAD FILE NO.	FIGURE NO.
L. SCHUETTER	CROSSD	3-4
DRAWN BY	PROJ. NO.	DATE
J. HUNTER	10-K-70100	7/10/95

TABLE 3-12
Area 5 - Station A/Leaking Petroleum Storage Tank No. 108711 Detections

Sample #		Depth (feet)			Immunoassay BTEX (ppm)	Immunoassay PAH (ppm)	HNu Reading	Offsite Lab Total BTEX (ppm)	Offsite Lab Benzene (ppm)	Offsite Lab Toluene (ppb)	Offsite Lab Ethylbenzene (ppb)	Offsite Lab Xylenes (ppb)	Offsite Lab Total PAH (ppm)	Offsite Lab Individual PAH Compounds (ppb)
DP	016A	5	-	6	7.6	>5.0	150	na	na	na	na	na	na	na
DP	016AFD	5	-	6	<1.4	1.4	150	na	na	na	na	na	na	na
DP	016B	13	-	14	16.6	>5.0	150	na	na	na	na	na	na	na
DP	016C	19	-	19.5	22.7	>5.0	125	na	na	na	na	na	na	na
DP	017A	6.5	-	7	<1.4	1.2	2	na	na	na	na	na	na	na
DP	017B	6.5	-	7	<1.4	<1.0	2	na	na	na	na	na	na	na
DP	017C	13.5	-	14	<1.4		20	na	na	na	na	na	na	na
DP	019A	5.5	-	6	<1.4	<1.0	2	na	na	na	na	na	na	na
DP	019B	11.5	-	12	<1.4	1.2	22	na	na	na	na	na	na	na
DP	019C	17.5	-	18	4.9	3.8	18	na	na	na	na	na	na	na
DP	110A	5.5	-	6	3.5	2.3	55	na	na	na	na	na	na	na
DP	110B	11.5	-	12	12.3	4.3	20	na	na	na	na	na	na	na
DP	110C	21.5	-	22	<1.4	<1.0	200	na	na	na	na	na	na	na
DP	172A	5.5	-	6	<1.4	>5.0	15	na	na	na	na	na	na	na
DP	172AFD	5.5	-	6	<1.4	>5.0	15	na	na	na	na	na	na	na
DP	172B	10	-	12	<1.4	>5.0	300	3.99	nd	nd	570	3,420	6.03	
DP	172BFD	10	-	12				nd	nd	nd	nd	nd	1.94	Fluoranthene - 2,600 Napthalene - 910 Phenanthrene - 720 Pyrene - 1,800
DP	172C	20.5	-	21	3.5	>5.0	100	na	na	na	na	na	na	na

Notes:
BTEX = benzene, toluene, ethylbenzene, xylene
lab = laboratory
na = not analyzed
nd = not detected
PAH = polycyclic aromatic hydrocarbon
ppb = parts per billion
ppm = parts per million

3.3.6 Area 6 - Pumping Station B (Leaking Petroleum Storage Tank No. 108712)

Station B is located approximately 700 feet northwest of station A. Pumping station B has been demolished and is similar to station A. Station B provided fuel to the Navy Ramp (Area 2) valve vaults and hydrants. The location of station B is shown on Plate 1.

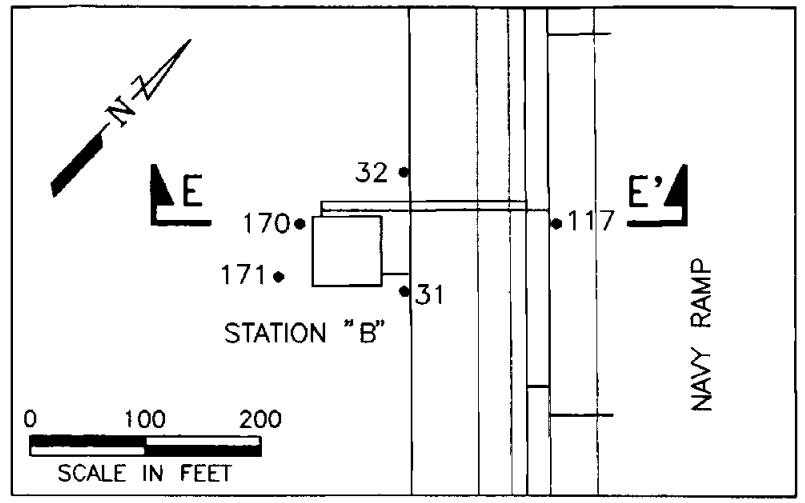
Subsurface soil types encountered in Area 6 were sandy clays from the surface to approximately 15 feet bgs. Below the sandy clays, fine to coarse poorly graded sands were encountered. This sand unit is interbedded with silty sand and well graded sands. Within this sand horizon, lenses of clayey sand and silty sand were encountered. Groundwater was encountered at approximately 20 feet bgs. Subsurface details are illustrated in Cross Section E-E', Figure 3-5.

Soil probes DP 170, DP 171, DP 32, and DP 31 were located to investigate station B. Total BTEX was detected by immunoassay in DP 31 and DP 32. Concentrations of BTEX range from 1.4 to 2.0 ppm. These detections and depths are detailed in Figure 3-5 and Table 3-13.

3.3.7 Area 7 - Pumping Station C

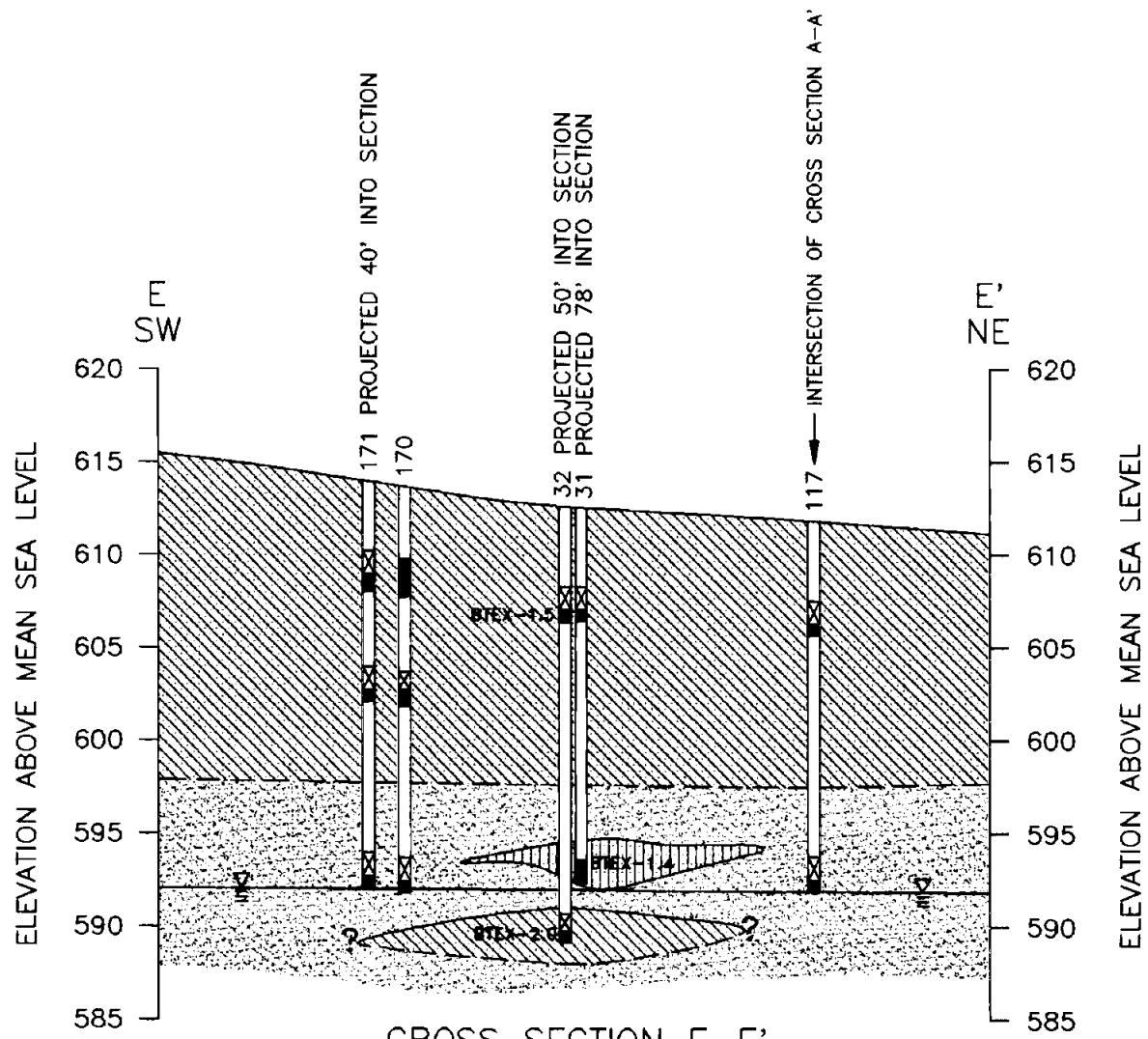
Station C is located approximately 300 feet northwest of station B. Pumping station C is similar to station A and was demolished in 1995 as part of this task. Station C provided fuel to the Marine Ramp (Area 3) valve vaults and hydrants. The location of station C is shown on Plate 1.

Subsurface soil types encountered in Area 7 were sandy clays from the surface to approximately 12 to 15 feet bgs. Below the sandy clays, fine to coarse poorly graded sands were encountered. This sand unit is interbedded with silty sand and well graded sands. Within this sand horizon, lenses of clayey sand were encountered.

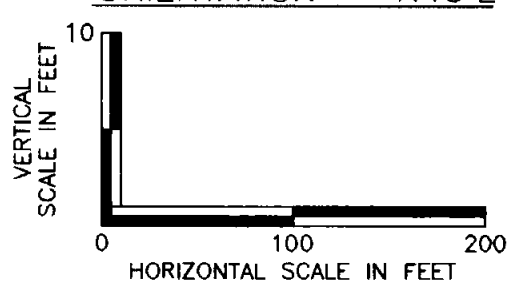


LEGEND

- CLAYEY SAND WITH VARYING AMOUNTS OF CLAY AND FINE SUBROUNDED AND SUBANGULAR GRAVEL. TRACES OF ORGANICS NOTED TO 6' DEEP
- SILTY SAND. VARYING AMOUNTS OF SILT AND PLASTICITY
- FINE TO COARSE POORLY GRADED SAND INTERBEDDED WITH FINE TO COARSE, WELL GRADED SAND
- DRIVE INTERVAL SHOWING SAMPLED INTERVAL
- GROUNDWATER ELEVATION, ALL GROUNDWATER ELEVATIONS ARE ESTIMATED
- BTEX–1.25 BENZENE, TOLUENE, ETHYLBENZENE, AND XYLENE TOTAL CONCENTRATION IN ppm



CROSS SECTION E–E'
ORIENTATION – N45°E



NAS FORT WORTH JRB
CARSWELL FIELD

CROSS SECTION E–E'
STATION B, AREA 6, LPST #108712

PROJ. MGR.	ACAD FILE NO.	FIGURE NO.
L. SCHUETTER	CROSSE	3–5
DRAWN BY	PROJ. NO.	DATE
J. HUNTER	10–K–70100	7/11/95

TABLE 3-13
Area 6 - Station "B"/Leaking Petroleum Storage Tank No.108712 Detections

Sample #		Depth (feet)			Immunoassay BTEX (ppm)	Immunoassay PAH (ppm)	HNu Reading	Offsite Lab Total BTEX (ppm)	Offsite Lab Benzene (ppm)	Offsite Lab Toluene (ppb)	Offsite Lab Ethylbenzene (ppb)	Offsite Lab Xylenes (ppb)	Offsite Lab Total PAH (ppm)	Offsite Lab Individual PAH Compounds (ppb)
DP	031B	19	-	20	1.4	na	0	na	na	na	na	na	na	na
DP	032A	5.5	-	6	1.5	na	0	na	na	na	na	na	na	na
DP	032B	23	-	23.5	2	na	0	na	na	na	na	na	na	na

Notes:
BTEX = benzene, toluene, ethylbenzene, xylene
lab = laboratory
na = not analyzed
nd = not detected
PAH = polycyclic aromatic hydrocarbon
ppb = parts per billion
ppm = parts per million

Groundwater was encountered at approximately 20 feet bgs. Subsurface details are illustrated in Cross Section F-F', Figure 3-6.

Soil probes DP 103, DP 104, DP 105, and DP 106 were located to investigate station C. Total BTEX and PAHs were detected by immunoassay in probe DP 105 at 21.5 to 22 feet bgs. The concentrations of BTEX and PAHs at this depth were 5.5 and 2.3 ppm, respectively. Additionally, total BTEX was detected in DP 106 at approximately 5.5 to 6.0 and 21 to 21.5 feet at concentrations of 28.1 and 5.2 ppm, respectively. DP 106 is not illustrated in Figure 3-6 because it would project into the cross section at DP 105.

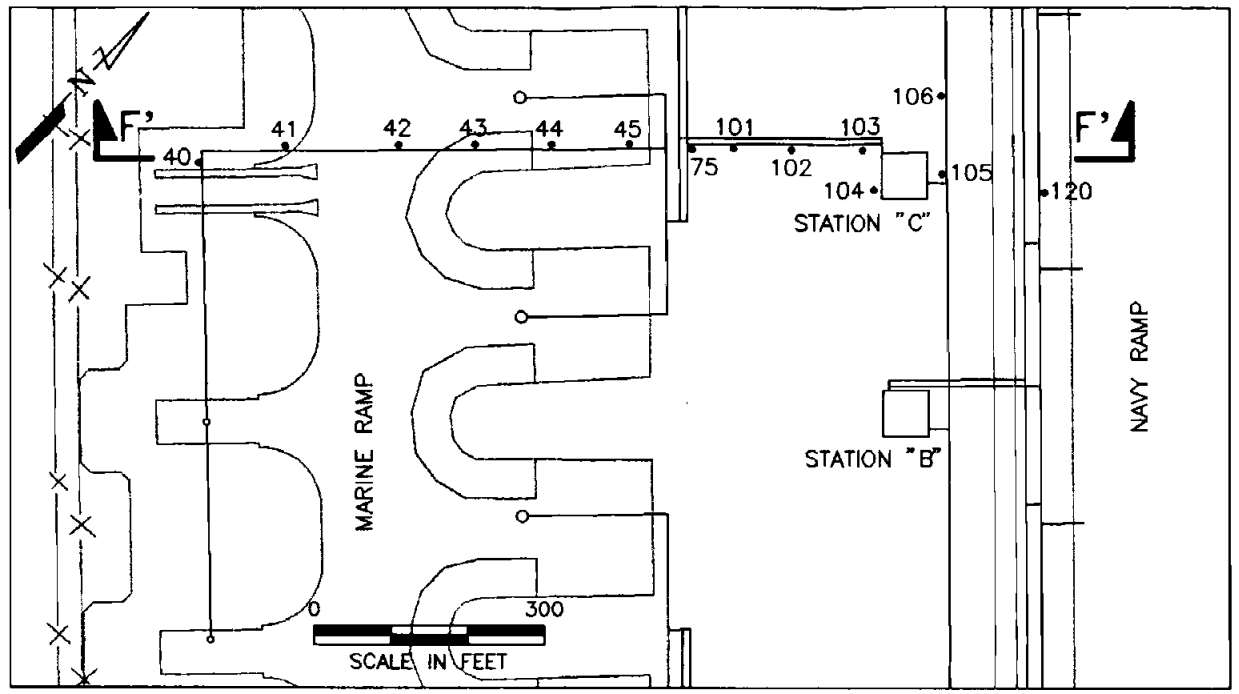
HNu readings indicate the presence of organic hydrocarbons in DP 75, DP 101, DP 102, DP 103, DP 105, and DP 106. HNu readings taken from samples collected in DP 106 were 10 ppm at 5.5 to 6.0 feet, 4 ppm at 14 to 15 feet, and 10 ppm at 21 to 21.5 feet. The HNu readings generally increase with proximity to station C at the groundwater table (Figure 3-6). These results are also presented in Table 3-14.

During the removal of station C USTs, the resulting excavation was sampled for this investigation. Refer to Section 3.1.2.1, UST Excavation Results, for details.

3.3.8 Area 8 - Pumping Station D (Leaking Petroleum Storage Tanks Nos. 108713 and 95220)

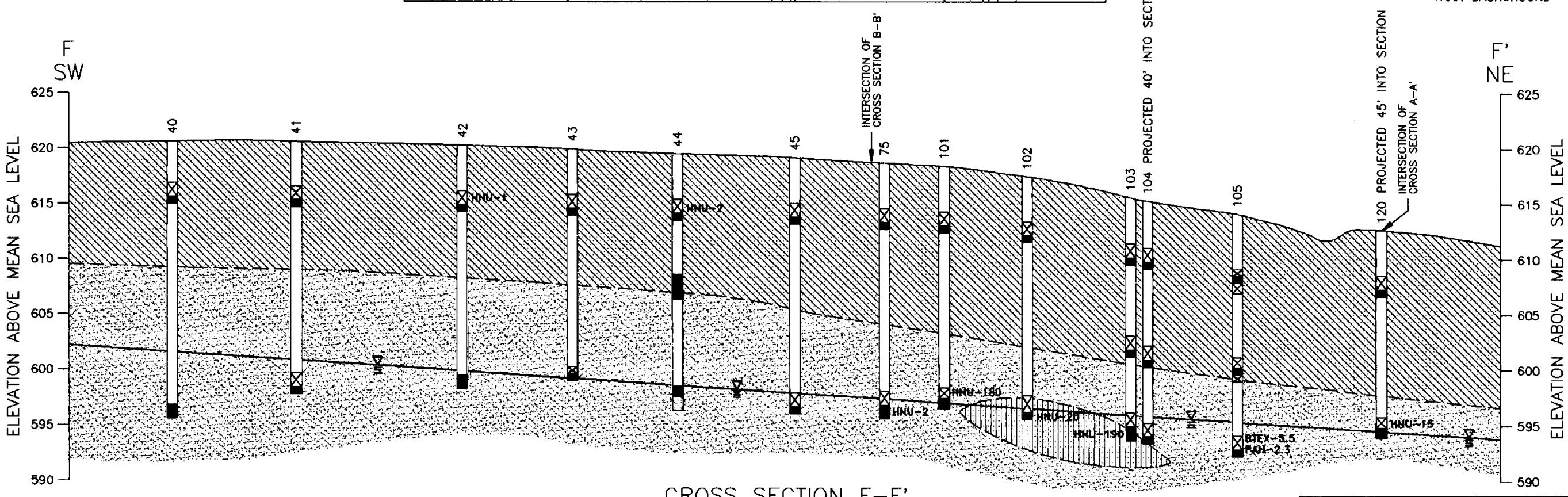
Station D is located approximately 400 feet northwest of station C. Pumping station D has been demolished and is similar to station A. Station D provided fuel to the Navy Ramp (Area 2) valve vaults and hydrants. The location of station D is shown on Plate 1.

Subsurface soil types encountered in Area 8 were sandy clays from the surface to approximately 7 to 18 feet bgs. Below the sandy clays, silty sand was encountered toward the northeast end of Area 7. Toward the southwest end of Area 7, weathered

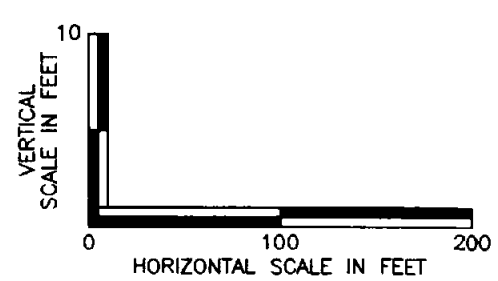


LEGEND

- SANDY CLAY WITH VARYING AMOUNTS OF CLAY AND FINE SUBROUNDED AND SUBANGULAR GRAVEL. TRACES OF ORGANICS NOTED TO 6' DEEP
- SILTY SAND. VARYING AMOUNTS OF SILT AND PLASTICITY
- FINE TO COARSE POORLY GRADED SAND INTERBEDDED WITH FINE TO COARSE, WELL GRADED SAND
- DRIVE INTERVAL SHOWING SAMPLED INTERVAL
- GROUNDWATER ELEVATION, ALL GROUNDWATER ELEVATIONS ARE ESTIMATED
- BTEX–1.25 — BENZENE, TOLUENE, ETHYLBENZENE, AND XYLENE TOTAL CONCENTRATION IN ppm
- PAH–4.2 — POLYCYCLIC HYDROCARBONS TOTAL CONCENTRATION IN ppm
- HNU–5.5 — HNU READING FROM DRIVE INTERVAL IF GREATER THAN BACKGROUND



CROSS SECTION F–F'
ORIENTATION – N45°E



NAS FORT WORTH JRB
CARSWELL FIELD

CROSS SECTION F–F'
STATION C, AREA 7

PROJ. MGR.	ACAD FILE NO.	FIGURE NO.
L. SCHUETTER	CROSSF	3–6
DRAWN BY	PROJ. NO.	DATE
J. HUNTER	10–K–70100	7/5/95

TABLE 3-14
Area 7 - Station "C" Detections

Sample #		Depth (feet)			Immunoassay BTEX (ppm)	Immunoassay PAH (ppm)	HNu Reading	Offsite Lab Total BTEX (ppm)	Offsite Lab Benzene (ppm)	fisite La Toluene (ppb)	Offsite Lab Ethylbenzene (ppb)	Offsite Lab Xylenes (ppb)	Offsite Lab Total PAH (ppm)	Offsite Lab Individual PAH Compounds (ppb)
DP	042A	5.5	-	6	<1.4	<1.0	1	na	na	na	na	na	na	na
DP	044A	5.5	-	6	<1.4	na	2	na	na	na	na	na	na	na
DP	045A	5.5	-	6	<1.4	<1.0	1.5	na	na	na	na	na	na	na
DP	045B	22.5	-	23	<1.4	<1.0	15	na	na	na	na	na	na	na
DP	075B	22.5	-	23	<1.4	<1.0	2	na	na	na	na	na	na	na
DP	075BFD	22.5	-	23	<1.4	<1.0	2	na	na	na	na	na	na	na
DP	101B	21	-	22	>30	na	150	na	na	na	na	na	na	na
DP	101BFD	21	-	22	<1.4	na	180	na	na	na	na	na	na	na
DP	102B	21.5	-	22	<1.4	na	20	na	na	na	na	na	na	na
DP	103C	21	-	22	3.1	<1.0	190	1.58	nd	260	270	1,050	0.65	Napthalene - 650
DP	105C	21.5	-	22	5.5	2.3	0	na	na	na	na	na	na	na
DP	106A	5.5	-	6.0	28.1	na		na	na	na	na	na	na	na
DP	106B	14.0	-	15.0	<1.4	na		na	na	na	na	na	na	na
DP	106C	21.5	-	22.0	5.2	na		na	na	na	na	na	na	na
DP	120B	18	-	19	<1.4	na	15	nd	nd	nd	nd	nd	na	na

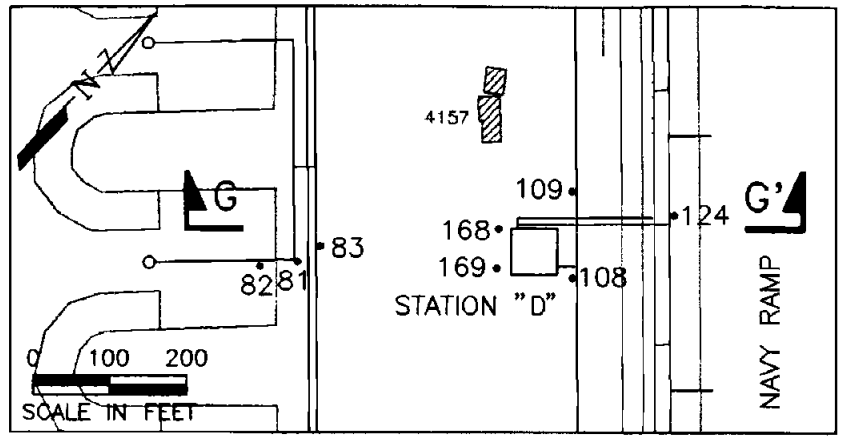
Note:

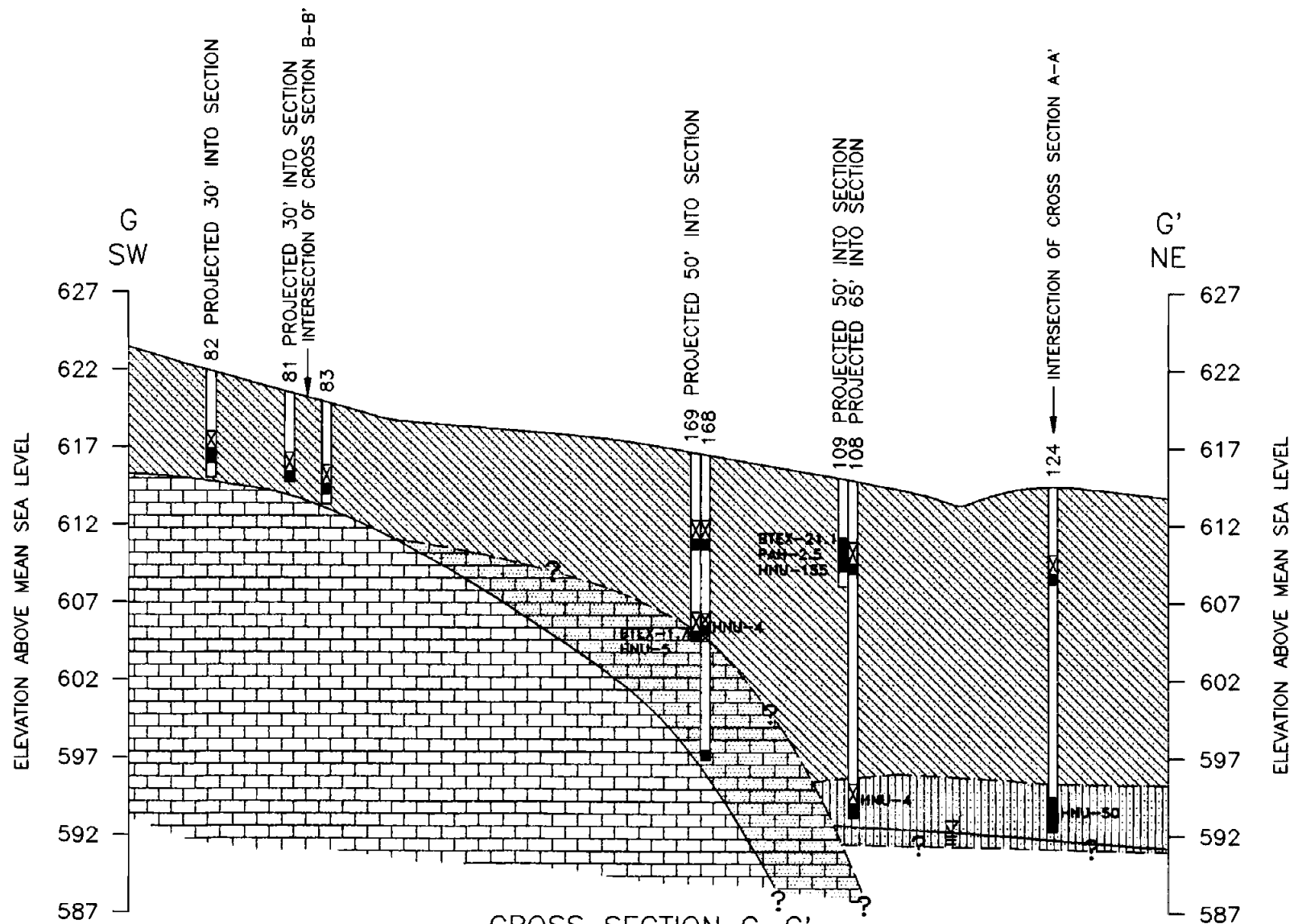
BTEX = benzene, toluene, ethylbenzene, xylene
lab = laboratory
na = not analyzed
PAH = polycyclic aromatic hydrocarbon
ppb = parts per billion
ppm = parts per million

and relatively fresh limestone bedrock was encountered. Groundwater was encountered at approximately 21 feet bgs only on the northeast end of Area 7. Subsurface details are illustrated in Cross Section G-G', Figure 3-7.

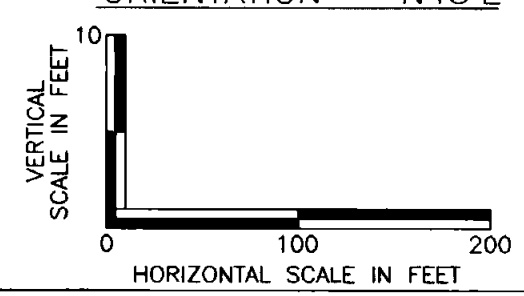
Soil probes DP 108, DP 109, DP 168, and DP169 were located to investigate station D. Total BTEX and PAHs were detected by immunoassay in DP 109 at 4 to 6 feet bgs. The concentrations of BTEX and PAHs at this depth were 21.1 and 2.5 ppm, respectively. A BTEX concentration of 1.7 ppm was also detected in DP 169 by immunoassay at a depth of approximately 11.5 to 12 feet bgs. HNu readings indicate the presence of organic hydrocarbons in DP108, DP 109, DP 168, and DP 169. All HNu readings were 5 ppm or less except for DP 109 at 4 to 6 feet bgs. HNu readings in DP 124 may be related to Station D or to valve vaults on the Navy Ramp. Positive detections are presented in Table 3-15. All analytical results are included in Appendices A and B.

During the investigation of the pipeline, the pipeline was being abandoned. Most of the pipeline was abandoned in place by pumping a grout into the pipe. Some sections of the pipeline were removed, particularly in the vicinity of the pump stations. Trenches dug to remove the pipeline from around station D exhibited staining, and fuel odor was detected in ambient air around the excavation.





CROSS SECTION G–G'
ORIENTATION – N45°E



LEGEND

- SANDY CLAY WITH VARYING AMOUNTS OF CLAY AND FINE SUBROUNDED AND SUBANGULAR GRAVEL. TRACES OF ORGANICS NOTED TO 6' DEEP
- SILTY SAND. VARYING AMOUNTS OF SILT AND PLASTICITY
- WEATHERED LIMESTONE BEDROCK
- LIMESTONE BEDROCK
- DRIVE INTERVAL SHOWING SAMPLED INTERVAL
- GROUNDWATER ELEVATION, ALL GROUNDWATER ELEVATIONS ARE ESTIMATED
- BTEX–1.25 — BENZENE, TOLUENE, ETHYLBENZENE, AND XYLENE TOTAL CONCENTRATION IN ppm
- PAH–4.2 — POLYCYCLIC HYDROCARBONS TOTAL CONCENTRATION IN ppm
- HNU–5.0 — HNU READING FROM DRIVE POINT INTERVAL IF GREATER THAN BACKGROUND

NAS FORT WORTH JRB
CARSWELL FIELD

CROSS SECTION G–G'
SECTION D, AREA 8, LPST #108713

PROJ. MGR.	ACAD FILE NO.	FIGURE NO.
L. SCHUETTER	CROSSG	3–7
DRAWN BY	PROJ. NO.	DATE
J. HUNTER	10–K–70100	7/12/95

TABLE 3-15
Area 8 - Station D/Leaking Petroleum Storage Tank Nos. 108713 & 95220 Detections

Sample #		Depth (feet)			Immunoassay BTEX (ppm)	Immunoassay PAH (ppm)	HNu Reading	Offsite Lab Total BTEX (ppm)	Offsite Lab Benzene (ppm)	Offsite Lab Toluene (ppb)	Offsite Lab Ethylbenzene (ppb)	Offsite Lab Xylenes (ppb)	Offsite Lab Total PAH (ppm)	Offsite Lab Individual PAH Compounds (ppb)
DP	082A	5	-	6	<1.4		1							
DP	082AFD	5	-	6	<1.4		1							
DP	108B	20	-	21	<1.4		4	nd						
DP	109A	4	-	6	21.1	2.5	155	0.98	12	nd	140	830	1.1	Napthalene - 1,100
DP	124B	19	-	21	<1.4	<1.0	50	0.98	nd	nd	nd	980	0.39	Napthalene - 390
DP	168B	11	-	11.5	<1.4	<1.0	4							
DP	169B	11.5	-	12	1.7		5							

Note:
BTEX = benzene, toluene, ethylbenzene, xylene
lab = laboratory
na = not analyzed
PAH = polycyclic aromatic hydrocarbon
ppb = parts per billion
ppm = parts per million

4.0 CONCLUSIONS

This section presents preliminary conclusions based on the findings detailed in Section 3.0.

4.1 UNDERGROUND STORAGE TANK REMOVAL EXCAVATION CONCLUSIONS

Conclusions developed from the results of the excavation samples are presented in Section 4.2.7 with the discussion of pumping station C.

4.2 FUEL DISTRIBUTION SYSTEM PIPELINE INVESTIGATION CONCLUSIONS

The following sections present the conclusions for each of the eight areas described in Section 3.3.

4.2.1 Area 1 - Tank Farm and Fuel Feeder Line

The results of the investigation for this area indicate that hydrocarbons were detected in the subsurface. However, the locations of the detections are sporadic. Total BTEX and PAHs were detected by immunoassay in DP 54 and DP 176, respectively. HNu readings indicated the absence of organic hydrocarbons at these locations. Both of the immunoassay detections were in the upper sample of each probe. The lowermost sample of each probe indicated the absence of these compounds. Because the upper sample indicated a presence of BTEX or PAHs, these concentrations could be related to the pipeline.

At probe location DP 9, samples collected from within the probe hole did not indicate the presence of petroleum hydrocarbons. However, the surface soils at DP 9 were impacted by hydrocarbons as indicated by the results (Appendix B, Grab 1, Grab 2, and Grab 3) from additional sampling in the area exposed by construction activities.

Because the analytical results of soil samples from DP 9 indicated that BTEX and PAHs were nondetectable at depth, but detected at and near the subgrade, it is concluded that the petroleum hydrocarbons impacting the soil at DP 9 could possibly originate from spills onto the apron in the area that migrated to the soils though expansion joints in the concrete paving.

The sample from probe location DP 3 indicated the presence of PAHs at a concentration greater than 5.0 ppm, which is the upper limit for the immunoassay analysis. However HNu readings and physical examination of the soils did not indicate the presence of petroleum hydrocarbons. The sample was collected from the lower portion of the soil probe near the groundwater table. Because of the depth of the sample and the nondetected results from the upper sample in this probe and the surrounding probe location results, it is unlikely that the pipeline in this area would be a potential source for the hydrocarbons detected.

4.2.2 Area 2 - Navy Ramp

In general, the results indicate that the detections of petroleum hydrocarbons occur beneath and near the valve vaults leading to the hydrants on the Navy Ramp and the 90 degree change in direction of the pipeline at DP 110. At locations DP 110, DP 112, DP 115, DP 119, DP 122, and DP 125, detections of petroleum hydrocarbons by HNu and immunoassay were in the upper and lower (at groundwater) portions of each probe hole. At locations between the valve vaults, hydrocarbons were typically detected near the groundwater table, indicating that the potential migration of hydrocarbons from the valve vaults to the groundwater may have spread laterally. Additionally, it is possible that petroleum hydrocarbons released to the soil at the pump stations could be migrating downgradient. Because HNu readings indicated the presence of a hydrocarbon in many probe locations where the immunoassay results indicated nondetectable concentrations, there may be a potential for some constituents that were not analyzed for to be present in the soil.

The detection of BTEX in DP 127 on the northwest end of the Navy Ramp indicates the presence of petroleum hydrocarbons at the groundwater table. DP 127 is located on the northwest side of the bedrock high (Plate 2). Apparently, the bedrock is a barrier to groundwater movement as demonstrated by the higher groundwater table elevation. The potential for migration of petroleum hydrocarbons may be great in this area because of the high water table elevation and the possibility that the water table could fluctuate significantly.

4.2.3 Area 3 - Marine Ramp

The detection of petroleum hydrocarbons occurred only in the northeast end of the Marine Ramp. These detections were primarily at DP 98, which is adjacent to a valve vault. High concentrations of total BTEX and PAHs were detected in the upper sample and the sample collected from just above groundwater. It is suspected that the hydrocarbons encountered in the soil at this location are due to leaks in the valving that migrated out of the valve vault and into the soil.

4.2.4 Area 4 - Alert Apron

The results of the investigation of this area indicate that petroleum hydrocarbons are present in the soils and groundwater northeast of DP 154. Given the geographic location of the detected hydrocarbons, the suspected source would be station E piping, USTs, and the sump drain system from the floor of station E. The sump is located at DP 150. HNu readings do not agree with immunoassay detections at all probe locations. This may indicate the presence of constituents that were not analyzed for, or that fuels released to the environment have degraded. The free product encountered in DP 154 and DP 153 may have migrated laterally from station E or from a leaking pipeline. Because the detections of hydrocarbons are generally in samples collected from near the water table as the distance from station E increases, it is suspected that station E is the most likely source of these hydrocarbons.

4.2.5 Area 5 - Pumping Station A

Because of the significant detections of petroleum hydrocarbons directly below the location of pumping station A, it is likely that the source of the hydrocarbons is activities associated with this facility (Figure 3-4). Samples saturated with fuel indicate that a significant amount of product remains in the vadose zone and may continue downward migration toward the groundwater table.

4.2.6 Area 6 - Pumping Station B

Hydrocarbons were detected in the soils and at the groundwater table directly below pumping station B. However, these concentrations are low, and HNu readings do not support the results of the immunoassay. Petroleum hydrocarbons are likely to exist in the soils at station B. Hydrocarbons that may be present are probably limited in extent given the results of surrounding probe locations.

4.2.7 Area 7 - Pumping Station C

Total BTEX and PAHs were detected by immunoassay analysis in the soils and groundwater directly below station C and near the floor drain sump that is located at DP 106 (Figure 3-6). The results of the excavation sampling also indicate the presence of TPH and PAHs on the northwest side and north corner of the excavation. These positive detections coincide with the location of the station floor drain and sump. It appears that fuels may have been captured by the drain system. The drain system piping may have leaked, as indicated by the hydrocarbons detected beneath the alignment of this piping. Fuels that may have been captured by the drain system would also have been conveyed to the sump in the north corner of the station as indicated by the results of the immunoassay analysis from DP 106. The results of the investigation indicate that soil and groundwater in the vicinity of station C have been impacted by petroleum hydrocarbons.

Samples collected from the south corner and the southeast sidewall of the tank excavation also contained detectable concentrations of TPH and PAHs. Results from samples collected in soil probe DP 104, which is located near the south corner of the excavation, did not indicate the presence of petroleum hydrocarbons. Because of these results, it is expected that soil impacted by hydrocarbons may be areally limited to the south corner of the tank removal excavation.

HNu readings taken from soil probes near station C indicate that hydrocarbons may be present in an upgradient direction. This is indicated by HNu readings in DP 101 and 102. The HNu reading of 2 ppm in DP 75 is not considered to be significant. Immunoassay analysis did not indicate the presence of total BTEX or PAHs in these probe locations, which may suggest that a hydrocarbon other than BTEX or PAH is present. The jet fuel stored at station C and conveyed through the piping may degrade after release to soil and groundwater. Therefore, total BTEX and PAHs may not be detectable as constituents of the fuel as it exists in the environment. Examples of this occurring at the site are the positive results for TPH with the absence of BTEX and PAHs in identical samples collected in the tank removal excavation (Table 3-3). Therefore, it is difficult, given the results of this investigation, to determine a possible source for the upgradient hydrocarbons detected with the HNu. Possibilities for the upgradient HNu readings are hydrocarbons that have impacted the groundwater at station C and that have migrated laterally because of groundwater flow fluctuations, leaks in the fuel distribution pipeline in the area, or a hydrocarbon not associated with the fuel distribution system.

4.2.8 Area 8 - Pumping Station D

Petroleum hydrocarbons were detected in the soils directly below station D. DP 109 was located to investigate the sump drainage system for the station. The presence of hydrocarbons at this location indicate that fuel may have drained to the sump. DP 168 and DP 169 were located just outside the original tank pit. Detections of

hydrocarbons in DP 169 indicate that a release may have occurred at the station. Samples collected near the water table did not exhibit BTEX or PAHs by immunoassay; however, low HNu readings were noted. These results suggest that there could have been a release from the station activities and that fuel probably drained to the sump. Hydrocarbons in the soils beneath the station appear to be limited to the vadose zone directly beneath the station and sump at the time this investigation was conducted (Figure 3-7).

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APPENDIX A

Immunoassay Analytical Results

Appendix A Immunoassay Results

Sample #	Depth (feet)	BTEX Lab Batch #	BTEX (ppm)	PAH Lab Batch #	PAH (ppm)
DP 001A	4.0 - 6.0	BTEX01- 1	<1.4	PAH01- 1	<1.0
DP 001B	13.5 - 14.0	BTEX01- 2	<1.4	PAH01- 2	<1.0
DP 001C	22.5 - 23.0	BTEX01- 3	<1.4	PAH01- 3	<1.0
DP 002A	6.5 - 7.0	BTEX01- 4	<1.4		
DP 002B	11.5 - 12.0	BTEX01- 5	<1.4		
DP 002C	16.5 - 17.5	BTEX01- 6	<1.4		
DP 003A	6.5 - 7.0	BTEX01- 7	<1.4	PAH01- 4	<1.0
DP 003B	12.0 - 12.5	BTEX01- 8	<1.4	PAH01- 5	<1.0
DP 003C	18.0 - 18.5	BTEX01- 9	<1.4	PAH01- 6	>5.0
DP 004A	6.5 - 7.0	BTEX01- 10	<1.4		
DP 004B	16.5 - 17.0	BTEX01- 11	<1.4		
DP 005A	6.5 - 7.0	BTEX01- 12	<1.4	PAH01- 7	<1.0
DP 006A	5.0 - 6.5	BTEX01- 13	<1.4	PAH01- 8	<1.0
DP 006B	11.0 - 12.5	BTEX01- 14	<1.4	PAH01- 9	<1.0
DP 007A	5.0 - 7.0	BTEX01- 15	<1.4		
DP 007B	11.5 - 12.0	BTEX01- 16	<1.4		
DP 008A	6.5 - 7.0	BTEX01- 17	<1.4	PAH01- 10	<1.0
DP 008B	11.5 12.0	BTEX01- 18	<1.4	PAH01- 11	<1.0
DP 009A	6.5 - 7.0	BTEX01- 19	<1.4	PAH01- 12	<1.0
DP 010A	5.0 - 5.5	BTEX01- 20	<1.4		
DP 010B	11.0 - 11.5	BTEX01- 21	<1.4		
DP 010C	11.0 - 11.5	BTEX01- 22	<1.4		
DP 011A	5.0 - 5.5	BTEX01- 23	<1.4	PAH01- 13	<1.0
DP 011B	12.5 - 13.0	BTEX01- 24	<1.4	PAH01- 14	<1.0
DP 011BFD	12.5 - 13.0				
DP 012A	4.0 - 6.0	BTEX05- 8	<1.4		
DP 012B	12.5 - 13.0	BTEX05- 9	<1.4		
DP 013A	6.5 - 7.0	BTEX01- 25	<1.4		
DP 013B	21.5 - 22.0	BTEX01- 26	<1.4		
DP 014A	5.0 - 5.5	BTEX01- 27	<1.4	PAH01- 15	<1.0
DP 014B	22.5 - 23.0	BTEX01- 28	<1.4	PAH01- 16	<1.0
DP 015A	5.0 - 6.0	BTEX01- 29	<1.4		
DP 015B	21.5 - 22.0	BTEX01- 30	<1.4		
DP 016A	5.0 - 6.0	BTEX05- 4	7.6	PAH03- 4	>5.0
DP 016AFD	5.0 - 6.0	BTEX05- 5	<1.4	PAH03- 5	1.4
DP 016B	13.0 - 14.0	BTEX05- 6	16.6	PAH03- 6	>5.0
DP 016C	19.0 - 19.5	BTEX05- 7	22.7	PAH03- 7	>5.0
DP 017A	6.5 - 7.0	BTEX01- 31	<1.4	PAH01- 17	1.2
DP 017B	6.5 - 7.0	BTEX01- 32	<1.4	PAH01- 18	<1.0
DP 017C	13.5 - 14.0	BTEX01- 33	<1.4		
DP 018A	6.5 - 7.0	BTEX02- 4	<1.4	PAH01- 19	<1.0
DP 018B	18.5 - 19.0	BTEX02- 5	<1.4	PAH01- 20	<1.0
DP 019A	5.5 - 6.0	BTEX02- 6	<1.4	PAH01- 21	<1.0
DP 019B	11.5 - 12.0	BTEX02- 7	<1.4	PAH01- 22	1.2
DP 019C	17.5 - 18.0	BTEX02- 8	4.9	PAH01- 23	3.8
DP 020A	5.5 - 6.0	BTEX02- 9	<1.4		
DP 020B	18.5 - 19.0	BTEX02- 10	<1.4		
DP 021A	7.5 - 8.0	BTEX02- 11	<1.4		
DP 021B	23.5 - 24.0	BTEX02- 12	<1.4		

Appendix A Immunoassay Results

Sample #	Depth (feet)	BTEX Lab Batch #	BTEX (ppm)	PAH Lab Batch #	PAH (ppm)
DP 001A	4.0 - 6.0	BTEX01- 1	<1.4	PAH01- 1	<1.0
DP 022A	5.0 - 5.5	BTEX02- 17	<1.4	PAH02- 7	<1.0
DP 022AFD	5.5 - 6.0	BTEX02- 18	<1.4	PAH02- 8	<1.0
DP 022C	23.5 - 24.0	BTEX02- 16	<1.4	PAH02- 6	<1.0
DP 023A	4.0 - 6.0	BTEX02- 13	<1.4	PAH02- 4	<1.0
DP 023B	18.0 - 18.5	BTEX02- 14	<1.4	PAH02- 5	<1.0
DP 024A	8.5 - 9.0	BTEX02- 15	<1.4		
DP 024B	23.5 - 24.0	BTEX02- 19	<1.4		
DP 025A	5.5 - 6.0	BTEX02- 20	<1.4		
DP 025B	20.5 - 21.0	BTEX02- 21	<1.4		
DP 026A	5.0 - 5.5	BTEX03- 4	<1.4	PAH02- 9	<1.0
DP 026B	20.5 - 21.0	BTEX03- 5	<1.4	PAH02- 10	<1.0
DP 027A	5.5 - 6.0	BTEX03- 6	<1.4		
DP 027B	18.5 - 19.0	BTEX03- 7	<1.4		
DP 028A	5.0 - 6.0	BTEX03- 8	<1.4		
DP 028B	5.0 - 6.0	BTEX03- 9	<1.4		
DP 028C	17.0 - 18.0	BTEX03- 10	<1.4		
DP 029A	5.5 - 6.0	BTEX03- 11	<1.4		
DP 029B	18.0 - 19.0	BTEX03- 12	<1.4		
DP 030A	5.5 - 6.0	BTEX03- 13	3.7	PAH02- 11	<1.0
DP 030B	19.0 - 20.0	BTEX03- 14	<1.4	PAH02- 12	<1.0
DP 031A	5.5 - 6.0	BTEX03- 15	<1.4		
DP 031B	19.0 - 20.0	BTEX03- 16	1.4		
DP 032A	5.5 - 6.0	BTEX03- 17	1.5		
DP 032B	23.0 - 23.5	BTEX03- 18	2		
DP 033A	5.5 - 6.0	BTEX03- 19	<1.4	PAH02- 13	<1.0
DP 033AFD	5.5 - 6.0	BTEX03- 20	2.5	PAH02- 14	<1.0
DP 033B	17.0 - 18.0	BTEX03- 21	<1.4	PAH02- 15	<1.0
DP 034A	5.5 - 6.0	BTEX03- 22	<1.4	PAH02- 16	<1.0
DP 035A	5.5 - 6.0	BTEX03- 23	<1.4		
DP 035B	12.0 - 14.0	BTEX03- 24	<1.4		
DP 035C	22.0 - 23.0	BTEX03- 25	<1.4		
DP 036A	5.5 - 6.0	BTEX04- 4	<1.4	PAH02- 17	<1.0
DP 036B	22.0 - 23.0	BTEX04- 5	<1.4		
DP 037A	5.0 - 6.0	BTEX04- 6	<1.4	PAH02- 18	<1.0
DP 037AFD	5.0 - 6.0	BTEX04- 7	<1.4	PAH02- 19	<1.0
DP 037B	22.0 - 23.0	BTEX04- 8	<1.4	PAH02- 20	<1.0
DP 038A	4.0 - 6.0	BTEX04- 9	<1.4		
DP 038B	22.0 - 23.0	BTEX04- 10	<1.4		
DP 039A	5.5 - 6.0	BTEX04- 11	<1.4	PAH02- 21	<1.0
DP 039B	24.0 - 25.0	BTEX04- 12	<1.4		
DP 040A	5.5 - 6.0	BTEX04- 13	<1.4	PAH02- 22	<1.0
DP 040B	22.5 - 23.5	BTEX04- 14	<1.4	PAH02- 23	<1.0
DP 041A	5.5 - 6.0	BTEX04- 15	<1.4		
DP 041AFD	5.5 - 6.0	BTEX04- 16	<1.4		
DP 041B	22.5 - 23.0	BTEX04- 17	<1.4		
DP 042A	5.5 - 6.0	BTEX04- 23	<1.4	PAH02- 26	<1.0
DP 042B	21.0 - 22.0	BTEX04- 24	<1.4	PAH02- 27	<1.0
DP 043A	5.5 - 6.0	BTEX04- 18	<1.4	PAH02- 24	<1.0

Appendix A Immunoassay Results

Sample #	Depth (feet)	BTEX Lab Batch #	BTEX (ppm)	PAH Lab Batch #	PAH (ppm)
DP 001A	4.0 - 6.0	BTEX01- 1	<1.4	PAH01- 1	<1.0
DP 043B	20.5 - 21.0	BTEX04- 19	<1.4	PAH02- 25	<1.0
DP 044A	5.5 - 6.0	BTEX04- 20	<1.4		
DP 044B	11.0 - 13.0	BTEX04- 21	<1.4		
DP 044C	21.0 - 22.0	BTEX04- 22	<1.4		
DP 045A	5.5 - 6.0	BTEX04- 25	<1.4	PAH02- 28	<1.0
DP 045B	22.5 - 23.0	BTEX04- 26	<1.4	PAH02- 29	<1.0
DP 046A	5.5 - 6.0	BTEX05- 10	<1.4	PAH03- 8	<1.0
DP 046B	10.0 - 10.5	BTEX05- 11	<1.4	PAH03- 9	<1.0
DP 047A	5.0 - 5.5	BTEX05- 12	<1.4		
DP 047B	19.0 - 20.0	BTEX05- 13	<1.4		
DP 047BFD	19.0 - 20.0	BTEX05- 14	<1.4		
DP 048A	5.5 - 6.0	BTEX05- 15	<1.4	PAH03- 10	<1.0
DP 048B	19.5 - 20.0	BTEX05- 16	<1.4	PAH03- 11	<1.0
DP 049A	5.5 - 6.0	BTEX05- 17	<1.4	PAH03- 12	<1.0
DP 049B	21.5 - 22.0	BTEX05- 18	<1.4	PAH03- 13	<1.0
DP 050A	4.5 - 5.0	BTEX05- 19	<1.4	PAH03- 14	<1.0
DP 050B	9.5 - 10.0	BTEX05- 20	<1.4	PAH03- 15	<1.0
DP 051A	4.5 - 5.0	BTEX05- 21	<1.4		
DP 051B	8.0 - 9.0	BTEX05- 22	<1.4		
DP 051BFD	8.0 - 9.0	BTEX05- 23	<1.4		
DP 052A	5.5 - 6.0	BTEX05- 24	<1.4	PAH03- 16	<1.0
DP 053A	3.0 - 3.5	BTEX05- 25	<1.4	PAH03- 17	<1.0
DP 053B	5.5 - 6.0	BTEX05- 26	<1.4		
DP 054A	5.5 - 6.0	BTEX05- 27	1.5	PAH03- 18	<1.0
DP 054B	11.5 - 12.0	BTEX05- 28	<1.4	PAH03- 19	<1.0
DP 055A	5.0 - 6.0	BTEX05- 29	<1.4		
DP 055B	21.5 - 22.0	BTEX05- 30	<1.4		
DP 056A	5.0 - 6.0	BTEX06- 4	<1.4		
DP 056AFD	5.0 - 6.0	BTEX06- 5	<1.4		
DP 056B	21.5 - 22.0	BTEX06- 6	<1.4		
DP 057A	5.5 - 6.0	BTEX06- 7	<1.4		
DP 057B	21.0 - 21.5	BTEX06- 8	<1.4		
DP 058A	5.5 - 6.0	BTEX06- 9	<1.4	PAH03- 20	<1.0
DP 058B	21.5 - 22.0	BTEX06- 10	<1.4	PAH03- 21	<1.0
DP 059A	5.5 - 6.0	BTEX06- 11	<1.4		
DP 059B	21.5 - 22.0	BTEX06- 12	<1.4		
DP 060A	5.0 - 6.0	BTEX06- 13	<1.4	PAH03- 23	<1.0
DP 060AFD	5.0 - 6.0	BTEX06- 14	<1.4	PAH03- 24	<1.0
DP 060B	21.5 - 22.0	BTEX06- 15	<1.4	PAH03- 25	<1.0
DP 061A	4.0 - 6.0	BTEX06- 16	<1.4	PAH03- 26	<1.0
DP 061AFD	4.0 - 6.0				
DP 061B	21.5 - 22.0	BTEX06- 17	<1.4	PAH03- 27	<1.0
DP 062A	5.5 - 6.0	BTEX06- 18	<1.4		
DP 062B	21.5 - 22.0	BTEX06- 19	<1.4		
DP 063A	5.5 - 6.0	BTEX06- 20	<1.4		
DP 063B	21.5 - 22.0	BTEX06- 21	<1.4		
DP 064A	5.5 - 6.0	BTEX06- 22	<1.4		
DP 064B	21.5 - 22.0	BTEX06- 23	<1.4		

Appendix A Immunoassay Results

Sample #	Depth (feet)	BTEX Lab Batch #	BTEX (ppm)	PAH Lab Batch #	PAH (ppm)
DP 001A	4.0 - 6.0	BTEX01- 1	<1.4	PAH01- 1	<1.0
DP 065A	5.5 - 6.0	BTEX06- 24	<1.4	PAH04- 4	<1.0
DP 065B	21.5 - 22.0	BTEX06- 25	<1.4	PAH04- 5	<1.0
DP 066A	4.0 - 4.5	BTEX06- 26	<1.4		
DP 066B	21.5 - 22.0	BTEX06- 27	<1.4		
DP 067A	4.5 - 5.0	BTEX06- 28	<1.4	PAH04- 6	<1.0
DP 067B	21.0 - 22.0	BTEX06- 29	<1.4	PAH04- 7	<1.0
DP 067BFD	21.0 - 22.0	BTEX06- 30	<1.4	PAH04- 8	<1.0
DP 068A	4.5 - 6.0	BTEX07- 7	<1.4		
DP 068B	22.0 - 22.5	BTEX07- 8	<1.4		
DP 069A	4.5 - 5.0	BTEX07- 9	<1.4	PAH04- 12	<1.0
DP 069B	21.5 - 22.0	BTEX07- 10	<1.4	PAH04- 13	<1.0
DP 070A	5.5 - 6.0	BTEX07- 11	<1.4	PAH04- 14	<1.0
DP 070B	23.0 - 24.0	BTEX07- 12	<1.4	PAH04- 15	<1.0
DP 070BFD	23.0 - 24.0	BTEX07- 13	<1.4	PAH04- 16	<1.0
DP 071A	6.0 - 6.5	BTEX07- 14	<1.4	PAH04- 17	<1.0
DP 071B	25.5 - 26.0	BTEX07- 15	<1.4	PAH04- 18	<1.0
DP 072A	5.5 - 6.0	BTEX07- 16	<1.4		
DP 072B	22.5 - 23.0	BTEX07- 18	<1.4	PAH04- 19	<1.0
DP 073A	5.5 - 6.0	BTEX07- 21	<1.4	PAH04- 22	<1.0
DP 073B	6.5 - 8.0	BTEX07- 22	<1.4	PAH04- 23	<1.0
DP 073C	21.0 - 23.0	BTEX07- 23	<1.4	PAH04- 24	<1.0
DP 074A	5.5 - 6.0	BTEX07- 24	<1.4		
DP 074B	22.5 - 23.0	BTEX07- 25	<1.4		
DP 075A	5.5 - 6.0	BTEX07- 17	<1.4		
DP 075B	22.5 - 23.0	BTEX07- 19	<1.4	PAH04- 20	<1.0
DP 075BFD	22.5 - 23.0	BTEX07- 20	<1.4	PAH04- 21	<1.0
DP 076A	5.0 - 5.5	BTEX07- 26	<1.4	PAH04- 25	<1.0
DP 076B	21.5 - 22.0	BTEX07- 27	<1.4	PAH04- 26	<1.0
DP 077A	5.5 - 6.0	BTEX07- 28	<1.4		
DP 077B	22.5 - 23.0	BTEX07- 29	<1.4		
DP 078A	5.5 - 6.0	BTEX07- 30	<1.4		
DP 078B	21.5 - 22.0	BTEX07- 31	<1.4		
DP 078BFD	21.5 - 22.0	BTEX07- 32	<1.4		
DP 079A	5.5 - 6.0	BTEX07- 33	<1.4	PAH04- 27	<1.0
DP 080A	5.5 - 6.0	BTEX08- 4	<1.4	PAH05- 4	<1.0
DP 081A	5.5 - 6.0	BTEX08- 5	<1.4	PAH05- 5	<1.0
DP 082A	5.0 - 6.0	BTEX08- 6	<1.4		
DP 082AFD	5.0 - 6.0	BTEX08- 7	<1.4		
DP 083A	5.5 - 6.0	BTEX08- 8	<1.4		
DP 084A	4.5 - 5.0	BTEX08- 9	<1.4		
DP 085A	5.5 - 6.0	BTEX08- 10	<1.4	PAH05- 6	<1.0
DP 086A	4.5 - 5.0	BTEX08- 11	<1.4		
DP 087A	4.5 - 5.0	BTEX08- 12	<1.4		
DP 088A	4.5 - 5.0	BTEX08- 13	<1.4	PAH05- 7	<1.0
DP 089A	4.5 - 5.0	BTEX08- 14	<1.4		
DP 090A	4.5 - 5.0	BTEX08- 15	<1.4	PAH05- 8	<1.0
DP 091A	4.0 - 5.0	BTEX08- 16	<1.4		
DP 091AFD	4.0 - 5.0	BTEX08- 17	<1.4		

Appendix A Immunoassay Results

Sample #	Depth (feet)	BTEX Lab Batch #	BTEX (ppm)	PAH Lab Batch #	PAH (ppm)
DP 001A	4.0 - 6.0	BTEX01- 1	<1.4	PAH01- 1	<1.0
DP 092A	4.5 - 5.0	BTEX08- 18	<1.4	PAH05- 9	2.0
DP 092B	18.5 - 19.0	BTEX08- 19	<1.4	PAH05- 10	<1.0
DP 093A	6.5 - 7.0	BTEX08- 20	<1.4	PAH05- 11	<1.0
DP 093B	18.0 - 18.5	BTEX08- 21	<1.4	PAH05- 12	<1.0
DP 094A	4.0 - 4.5	BTEX08- 23	1.4		
DP 094B	16.5 - 17.0	BTEX08- 22	<1.4		
DP 095A	3.0 - 3.5	BTEX08- 24	<1.4		
DP 095B	9.5 - 10.0	BTEX08- 25	<1.4		
DP 096A	3.5 - 4.0	BTEX08- 26	<1.4		
DP 096B	9.5 - 10.0	BTEX08- 27	<1.4		
DP 097A	2.5 - 3.0	BTEX08- 28	<1.4	PAH05- 13	<1.0
DP 097B	8.5 - 9.5	BTEX08- 29	<1.4	PAH05- 14	<1.0
DP 097BFD	8.5 - 9.5	BTEX08- 30	<1.4	PAH05- 15	<1.0
DP 098A	4.5 - 5.0	BTEX09- 4	24.8	PAH05- 16	>5.0
DP 098B	9.0 - 10.0	BTEX09- 5	>30	PAH05- 17	>5.0
DP 099A	4.5 - 5.0	BTEX09- 6	<1.4		
DP 099B	11.5 - 12.0	BTEX09- 7	<1.4		
DP 100A	2.5 - 3.0	BTEX09- 8	<1.4	PAH05- 18	<1.0
DP 100B	9.5 - 10.0	BTEX09- 9	<1.4	PAH05- 19	<1.0
DP 101A	5.5 - 6.0	BTEX09- 10	<1.4		
DP 101B	21.0 - 22.0	BTEX09- 11	>30		
DP 101BFD	21.0 - 22.0	BTEX09- 12	<1.4		
DP 102A	5.5 - 6.0	BTEX09- 13	<1.4		
DP 102B	21.5 - 22.0	BTEX09- 14	<1.4		
DP 103A	5.5 - 6.0	BTEX09- 15	<1.4	PAH05- 20	<1.0
DP 103B	14.5 - 15.0	BTEX09- 16	<1.4	PAH05- 21	<1.0
DP 103C	21.0 - 22.0	BTEX09- 17	3.1	PAH05- 22	<1.0
DP 104A	5.5 - 6.0	BTEX09- 18	<1.4		
DP 104B	14.5 - 15.0	BTEX09- 19	<1.4		
DP 104C	21.5 - 22.0	BTEX09- 20	<1.4		
DP 105A	5.5 - 6.0	BTEX09- 25	<1.4	PAH05- 25	<1.0
DP 105B	14.0 - 14.5	BTEX09- 21	<1.4	PAH05- 23	<1.0
DP 105C	21.5 - 22.0	BTEX09- 22	5.5	PAH05- 24	2.3
DP 106A	5.5 - 6.0	BTEX09- 26	28.1		
DP 106B	14.0 - 15.0	BTEX09- 23	<1.4		
DP 106C	21.5 - 22.0	BTEX09- 24	5.2		
DP 107A	4.0 - 5.0	BTEX09- 27	<1.4	PAH06- 4	<1.0
DP 107AFD	4.0 - 5.0	BTEX09- 28	<1.4	PAH06- 5	<1.0
DP 107B	20.0 - 20.5	BTEX09- 29	<1.4	PAH06- 6	<1.0
DP 108A	5.5 - 6.0	BTEX09- 30	<1.4		
DP 108B	20.0 - 21.0	BTEX10- 4	<1.4		
DP 109A	4.0 - 6.0	BTEX10- 5	21.1	PAH06- 7	2.5
DP 110A	5.5 - 6.0	BTEX10- 6	3.5	PAH06- 8	2.3
DP 110B	11.5 - 12.0	BTEX10- 7	12.3	PAH06- 9	4.3
DP 110C	21.5 - 22.0	BTEX10- 10	<1.4	PAH06- 10	<1.0
DP 111A	5.5 - 6.0	BTEX10- 8	<1.4		
DP 111B	18.5 - 19.0	BTEX10- 9	<1.4		
DP 112A	5.0 - 6.0	BTEX14- 17	<1.4	PAH08- 27	1.9

Appendix A Immunoassay Results

Sample #	Depth (feet)	BTEX Lab Batch #	BTEX (ppm)	PAH Lab Batch #	PAH (ppm)
DP 001A	4.0 - 6.0	BTEX01- 1	<1.4	PAH01- 1	<1.0
DP 112AFD	5.0 - 6.0	BTEX14- 18	<1.4	PAH08- 28	<1.0
DP 112B	11.0 - 12.0	BTEX14- 19	<1.4	PAH08- 29	<1.0
DP 112C	20.0 - 21.0	BTEX14- 20	2.3	PAH08- 30	2.2
DP 113A	5.5 - 6.0	BTEX10- 11	<1.4		
DP 113B	20.5 - 21.0	BTEX10- 12	<1.4		
DP 114A	5.5 - 6.0	BTEX10- 13	<1.4		
DP 114B	19.5 - 20.0	BTEX10- 14	<1.4		
DP 115A	5.5 - 6.0	BTEX10- 15	16.6		
DP 115B	11.0 - 12.0	BTEX10- 16	>30	PAH06- 11	>5.0
DP 115C	19.0 - 20.0	BTEX10- 17	>30	PAH06- 12	>5.0
DP 115CFD	19.0 - 20.0	BTEX10- 18	>30	PAH06- 13	>5.0
DP 116A	5.5 - 6.0	BTEX10- 19	<1.4		
DP 116B	19.5 - 20.0	BTEX10- 20	<1.4		
DP 117A	5.5 - 6.0	BTEX10- 21	<1.4	PAH06- 14	<1.0
DP 117B	19.5 - 20.0	BTEX10- 22	<1.4	PAH06- 15	<1.0
DP 118A	5.5 - 6.0	BTEX10- 23	<1.4		
DP 118B	18.5 - 19.0	BTEX10- 24	<1.4		
DP 119A	5.0 - 6.0	BTEX14- 14	<1.4	PAH08- 24	<1.0
DP 119B	11.0 - 12.0	BTEX14- 15	<1.4	PAH08- 25	<1.0
DP 119C	20.0 - 21.0	BTEX14- 16	>30	PAH08- 26	>5.0
DP 120A	5.5 - 6.0	BTEX10- 25	<1.4		
DP 120B	18.0 - 19.0	BTEX10- 26	<1.4		
DP 121A	5.5 - 6.0	BTEX10- 27	<1.4	PAH06- 16	<1.0
DP 121B	18.5 - 19.0	BTEX10- 28	<1.4	PAH06- 17	<1.0
DP 122A	5.5 - 6.0	BTEX10- 29	<1.4	PAH06- 18	<1.0
DP 122B	11.0 - 12.0	BTEX10- 30	15.7	PAH06- 19	2.3
DP 122BFD	11.0 - 12.0	BTEX10- 32	16.5	PAH06- 20	2.6
DP 122C	18.0 - 20.0	BTEX10- 33	22.5	PAH06- 21	4.7
DP 123A	5.5 - 6.0	BTEX10- 34	<1.4		
DP 123B	19.5 - 20.0	BTEX10- 35	<1.4		
DP 124A	5.5 - 6.0	BTEX10- 36	<1.4	PAH06- 22	<1.0
DP 124B	19.0 - 21.0	BTEX10- 37	<1.4	PAH06- 23	<1.0
DP 125A	5.0 - 5.5	BTEX09- 32	<1.4	PAH06- 24	<1.0
DP 125B	11.5 - 12.0	BTEX09- 33	<1.4	PAH06- 25	3.6
DP 126A	5.5 - 6.0	BTEX09- 34	<1.4		
DP 127A	5.0 - 6.0	BTEX09- 35	<1.4		
DP 127AFD	5.0 - 6.0	BTEX09- 36	2.7		
DP 127B	20.5 - 21.0	BTEX09- 37	<1.4		
DP 128A	5.0 - 6.0	BTEX11- 5	<1.4	PAH07- 5	<1.0
DP 128AFD	5.0 - 6.0	BTEX11- 6	<1.4	PAH07- 6	<1.0
DP 128B	20.5 - 21.0	BTEX11- 7	<1.4	PAH07- 7	<1.0
DP 129A	5.0 - 5.5	BTEX11- 8	<1.4		
DP 130A	4.0 - 4.5	BTEX11- 9	<1.4		
DP 130AFD	4.0 - 4.5	BTEX11- 10	<1.4		
DP 131A	4.5 - 5.0	BTEX11- 11	<1.4	PAH07- 8	<1.0
DP 132A	4.5 - 5.0	BTEX11- 12	<1.4		
DP 132B	11.5 - 12.0	BTEX11- 13	<1.4		
DP 133A	5.5 - 6.5	BTEX11- 14	<1.4	PAH07- 9	<1.0

Appendix A Immunoassay Results

Sample #	Depth (feet)	BTEX Lab Batch #	BTEX (ppm)	PAH Lab Batch #	PAH (ppm)
DP 001A	4.0 - 6.0	BTEX01- 1	<1.4	PAH01- 1	<1.0
DP 133AFD	5.5 - 6.5	BTEX11- 15	<1.4	PAH07- 10	<1.0
DP 134A	6.0 - 6.5	BTEX11- 16	<1.4		
DP 134B	11.5 - 12.0	BTEX11- 17	<1.4		
DP 135A	6.0 - 6.5	BTEX11- 18	<1.4	PAH07- 11	>5.0
DP 135B	8.5 - 9.0	BTEX11- 19	<1.4	PAH07- 12	<1.0
DP 136A	5.5 - 6.0	BTEX11- 20	<1.4	PAH07- 13	<1.0
DP 136B	9.5 - 10.0	BTEX11- 21	<1.4	PAH07- 14	<1.0
DP 137A	4.0 - 5.0	BTEX11- 22	<1.4		
DP 137AFD	4.0 - 5.0	BTEX11- 23	<1.4		
DP 137B	9.5 - 10.0	BTEX11- 24	<1.4		
DP 138A	4.5 - 5.0	BTEX11- 25	<1.4	PAH07- 15	<1.0
DP 138B	9.5 - 10.0	BTEX11- 26	<1.4	PAH07- 16	<1.0
DP 139A	5.5 - 6.0	BTEX11- 27	<1.4		
DP 139B	10.5 - 11.0	BTEX11- 28	<1.4		
DP 140A	4.0 - 5.0	BTEX11- 29	<1.4	PAH07- 17	<1.0
DP 140AFD	4.0 - 5.0	BTEX11- 30	<1.4	PAH07- 18	<1.0
DP 140B	10.5 - 11.0	BTEX11- 31	<1.4	PAH07- 19	<1.0
DP 140C	14.5 - 15.0	BTEX11- 32	<1.4	PAH07- 20	<1.0
DP 141A	5.5 - 6.0	BTEX11- 33	<1.4		
DP 141B	11.5 - 12.0	BTEX12- 5	<1.4		
DP 141B	11.5 - 12.0	BTEX15- 5	<1.4		
DP 142A	5.5 - 6.0	BTEX12- 6	<1.4	PAH07- 21	<1.0
DP 142A	5.5 - 6.0	BTEX15- 6	<1.4		
DP 142B	11.5 - 12.0	BTEX12- 7	<1.4	PAH07- 22	<1.0
DP 142B	11.5 - 12.0	BTEX15- 7	<1.4		
DP 143A	5.5 - 6.0	BTEX12- 8	<1.4		
DP 143A	5.5 - 6.0	BTEX15- 8	<1.4		
DP 143B	11.5 - 12.0	BTEX12- 9	<1.4	PAH07- 23	<1.0
DP 143B	11.5 - 12.0	BTEX15- 9	<1.4		
DP 144A	5.5 - 6.0	BTEX12- 10	<1.4		
DP 144A	5.5 - 6.0	BTEX15- 10	<1.4		
DP 144B	10.0 - 10.5	BTEX12- 11	<1.4		
DP 144B	10.0 - 10.5	BTEX15- 11	<1.4		
DP 145A	5.5 - 6.0	BTEX12- 12	<1.4	PAH07- 24	<1.0
DP 145A	5.5 - 6.0	BTEX15- 12	<1.4		
DP 145B	11.0 - 12.0	BTEX12- 13	<1.4	PAH07- 25	<1.0
DP 145B	11.0 - 12.0	BTEX15- 13	<1.4		
DP 145BFD	11.0 - 12.0	BTEX12- 14	<1.4	PAH07- 26	<1.0
DP 145BFD	11.0 - 12.0	BTEX15- 14	<1.4		
DP 146A	5.0 - 6.0	BTEX12- 15	<1.4	PAH07- 27	<1.0
DP 146A	5.0 - 6.0	BTEX15- 15	8.4		
DP 146B	10.5 - 11.0	BTEX12- 16	<1.4	PAH07- 28	>5.0
DP 146B	10.5 - 11.0	BTEX15- 16	>30		
DP 147A	5.5 - 6.0	BTEX12- 17	<1.4	PAH07- 29	<1.0
DP 147A	5.5 - 6.0	BTEX15- 17	<1.4		
DP 147B	10.5 - 11.0	BTEX12- 18	<1.4	PAH07- 30	<1.0
DP 147B	10.5 - 11.0	BTEX15- 18	<1.4		
DP 148A	5.5 - 6.0	BTEX12- 19	<1.4	PAH07- 31	>5.0

Appendix A Immunoassay Results

Sample #	Depth (feet)	BTEX Lab Batch #	BTEX (ppm)	PAH Lab Batch #	PAH (ppm)
DP 001A	4.0 - 6.0	BTEX01- 1	<1.4	PAH01- 1	<1.0
DP 148A	5.5 - 6.0	BTEX15- 19	>30		
DP 148B	10.0 - 11.0	BTEX12- 20	<1.4	PAH07- 32	>5.0
DP 148B	10.0 - 11.0	BTEX15- 20	>30		
DP 149A	5.5 - 6.0	BTEX12- 21	<1.4	PAH07- 33	>5.0
DP 149A	5.5 - 6.0	BTEX15- 21	>30		
DP 149B	10.0 - 11.0	BTEX12- 22	<1.4	PAH08- 5	3.2
DP 149B	10.0 - 11.0	BTEX15- 22	<1.4		
DP 150A	5.5 - 6.0	BTEX12- 23	<1.4	PAH08- 6	<1.0
DP 150A	5.5 - 6.0	BTEX15- 23	>30		
DP 150B	10.5 - 11.0	BTEX12- 24	<1.4	PAH08- 7	<1.0
DP 150B	10.5 - 11.0	BTEX15- 24	<1.4		
DP 151A	5.5 - 6.0	BTEX12- 25	<1.4		
DP 151A	5.5 - 6.0	BTEX15- 25	4.8		
DP 151B	9.5 - 10.0	BTEX12- 26	<1.4		
DP 151B	9.5 - 10.0	BTEX13- 33	7.2		
DP 151B	9.5 - 10.0	BTEX15- 26	7.9		
DP 152A	5.5 - 6.0	BTEX13- 5	<1.4		
DP 152B	9.5 - 10.0	BTEX13- 6	<1.4		
DP 153A	5.0 - 6.0	BTEX13- 7	<1.4	PAH08- 8	<1.0
DP 153AFD	5.0 - 6.0	BTEX13- 8	<1.4	PAH08- 9	<1.0
DP 153B	10.0 - 11.0	BTEX13- 9	6.5	PAH08- 10	3.3
DP 154A	5.5 - 6.0	BTEX13- 10	<1.4		
DP 154B	10.0 - 11.0	BTEX13- 11	<1.4		
DP 155A	5.0 - 6.0	BTEX13- 12	<1.4		
DP 155AFD	5.0 - 6.0	BTEX13- 13	<1.4		
DP 155B	10.5 - 11.0	BTEX13- 14	<1.4		
DP 156A	5.5 - 6.0	BTEX13- 15	<1.4		
DP 156B	9.5 - 10.0	BTEX13- 16	<1.4		
DP 157A	5.5 - 6.0	BTEX13- 17	<1.4		
DP 157B	9.5 - 10.0	BTEX13- 18	<1.4		
DP 158A	5.5 - 6.0	BTEX13- 19	<1.4		
DP 158B	10.0 - 11.0	BTEX13- 20	<1.4		
DP 158BFD	10.0 - 11.0	BTEX13- 21	<1.4		
DP 159A	5.5 - 6.0	BTEX13- 22	<1.4		
DP 159B	? - ?	BTEX13- 23	<1.4		
DP 160A	10.5 - 11.0	BTEX13- 24	<1.4	PAH08- 11	<1.0
DP 161A	5.5 - 6.0	BTEX13- 25	<1.4	PAH08- 12	2.1
DP 161B	10.5 - 11.0	BTEX13- 26	<1.4	PAH08- 13	<1.0
DP 162A	5.5 - 6.0	BTEX13- 27	<1.4	PAH08- 14	<1.0
DP 162B	10.0 - 11.0	BTEX13- 28	<1.4	PAH08- 15	<1.0
DP 162BFD	10.0 - 11.0	BTEX13- 29	<1.4	PAH08- 16	<1.0
DP 163A	5.5 - 6.0	BTEX13- 30	<1.4	PAH08- 17	<1.0
DP 163B	10.5 - 11.0	BTEX13- 31	<1.4	PAH08- 18	<1.0
DP 164A	5.5 - 6.0	BTEX14- 5	<1.4	PAH08- 19	<1.0
DP 164B	10.0 - 11.0	BTEX14- 6	<1.4	PAH08- 20	<1.0
DP 164BFD	10.0 - 11.0	BTEX14- 7	<1.4	PAH08- 21	<1.0
DP 165A	5.5 - 6.0	BTEX14- 8	<1.4		
DP 165B	10.5 - 11.0	BTEX14- 9	6.4		

Appendix A Immunoassay Results

Sample #	Depth (feet)	BTEX Lab Batch #	BTEX (ppm)	PAH Lab Batch #	PAH (ppm)
DP 001A	4.0 - 6.0	BTEX01- 1	<1.4	PAH01- 1	<1.0
DP 166A	5.5 - 6.0	BTEX14- 10	<1.4	PAH08- 22	<1.0
DP 166B	10.0 - 11.0	BTEX14- 11	<1.4	PAH08- 23	<1.0
DP 167A	5.5 - 6.0	BTEX14- 12	<1.4		
DP 167B	10.5 - 11.0	BTEX14- 13	<1.4		
DP 168A	5.5 - 6.0	BTEX14- 25	<1.4	PAH09- 4	<1.0
DP 168B	11.0 - 11.5	BTEX14- 26	<1.4	PAH09- 5	<1.0
DP 168C	19.0 - 19.5	BTEX14- 27	<1.4	PAH09- 6	<1.0
DP 169A	5.5 - 6.0	BTEX14- 28	<1.4		
DP 169B	11.5 - 12.0	BTEX16- 4	1.7		
DP 170A	4.0 - 6.0	BTEX16- 5	<1.4	PAH09- 7	<1.0
DP 170AFD	4.0 - 6.0				
DP 170B	11.0 - 12.0	BTEX16- 6	<1.4	PAH09- 8	<1.0
DP 170BFD	11.0 - 12.0	BTEX16- 7	<1.4	PAH09- 9	<1.0
DP 170C	21.5 - 22.0	BTEX16- 8	<1.4	PAH09- 10	<1.0
DP 171A	5.0 - 6.0	BTEX16- 9	<1.4		
DP 171AFD	5.0 - 6.0	BTEX16- 10	<1.4		
DP 171B	11.5 - 12.0	BTEX16- 11	<1.4		
DP 171C	21.5 - 22.0	BTEX16- 12	<1.4		
DP 172A	5.5 - 6.0	BTEX16- 13	<1.4	PAH09- 11	>5.0
DP 172AFD	5.5 - 6.0	BTEX16- 14	<1.4	PAH09- 12	>5.0
DP 172B	10.0 - 12.0	BTEX16- 15	<1.4	PAH09- 13	>5.0
DP 172BFD	10.0 - 12.0				
DP 172C	20.5 - 21.0	BTEX16- 16	3.5	PAH09- 14	>5.0
DP 173A	4.0 - 5.0	BTEX16- 25	<1.4		
DP 173AFD	4.0 - 5.0	BTEX16- 26	<1.4		
DP 173B	9.5 - 10.0	BTEX16- 27	<1.4		
DP 174A	5.0 - 6.0	BTEX16- 22	<1.4	PAH09- 18	<1.0
DP 174AFD	5.0 - 6.0	BTEX16- 23	<1.4	PAH09- 19	<1.0
DP 174B	9.5 - 10.0	BTEX16- 24	<1.4	PAH09- 20	<1.0
DP 175A	5.5 - 6.0	BTEX16- 20	<1.4		
DP 175B	7.5 - 8.0	BTEX16- 21	<1.4		
DP 176A	4.5 - 5.0	BTEX16- 17	<1.4	PAH09- 15	1.3
DP 176B	9.0 - 10.0	BTEX16- 18	<1.4	PAH09- 16	<1.0
DP 176BFD	9.0 - 10.0	BTEX16- 19	<1.4	PAH09- 17	<1.0
DP 177A	5.5 - 6.0	BTEX16- 28	<1.4		
DP 178A	4.0 - 4.5	BTEX16- 29	<1.4	PAH09- 21	<1.0
DP 179A	5.0 - 6.0	BTEX16- 30	<1.4		
DP 179AFD	5.0 - 6.0	BTEX16- 31	<1.4		
DP 179B	21.5 - 22.0	BTEX16- 32	<1.4		
DP 180A	5.5 - 6.0	BTEX16- 33	<1.4		
DP 180B	21.0 - 22.0	BTEX16- 34	<1.4		
DP 180BFD	21.0 - 22.0	BTEX16- 35	<1.4		
GRAB-1	0.0 - 1.0	BTEX07- 4	17	PAH04- 9	>5.0
GRAB-2	0.0 - 1.0	BTEX07- 5	3.1	PAH04- 10	>5.0
GRAB-3	0.0 - 1.0	BTEX07- 6	<1.4	PAH04- 11	1.3

APPENDIX C

Chain of Custody Forms

FW-A9001

JACOBS ENGINEERING GROUP INC.
600 SEVENTEENTH STREET, SUITE 1100N DENVER, COLORADO 80202
TELEPHONE (303) 595 - 8855 FAX (303) 595 - 8857

CHAIN OF CUSTODY RECORD

USE A BALLPOINT PEN, BLACK INK, AND PRESS FIRMLY. INSTRUCTIONS ARE ON THE BACK

PROJECT NAME: NAS FW Pipeline Abandonment

PROJECT NUMBER: 10K70100

WBS CODE:

SUBCONTRACT / D.O. No.

LABORATORY NAME & ADDRESS: Onsite Immunoassay Lab

SAMPLE NUMBER	COLLECTION DATE	COLLECTION TIME	SAMPLER'S INITIALS	NUMBER OF CONTAINERS	CONTAINER SIZE AND TYPE	PRESERVATIVE	MATRIX CODE	ANALYSES REQUESTED	QC	CONDITION ON RECEIPT
FW-A 900101	3/8/95	14:55	MJ	1	24" Sleeve	4° C	S	Immunoassay BTEX AND PAH		
FW-A 900102	3/8/95	15:20	MJ	1	24" Sleeve	4° C	S	Immunoassay BTEX & PAH		
FW-A 900103	3/8/95	15:55	MJ	1	24" Sleeve	4° C	S	Immunoassay BTEX & PAH		
FW-A 900104				1	24" Sleeve	4° C	S	Immunoassay BTEX		
FW-A 900105				1	24" Sleeve	4° C	S	Immunoassay BTEX		
FW-A 900106				1	24" Sleeve	4° C	S	Immunoassay BTEX		
FW-A 900107				1	24" Sleeve	4° C	S	Immunoassay BTEX		
FW-A 900108				1	24" Sleeve	4° C	S	Immunoassay BTEX		
FW-A 900109				1	24" Sleeve	4° C	S	Immunoassay BTEX		DDS

COMMENTS:

	DATE	TIME			
COLLECTED & RELEASED BY	3/8/95	19:00	TURNAROUND TIME		
RECEIVED BY	3/8/95	19:00	RELINQUISHED BY	DATE / /	TIME :
RECORD RETURNED BY	DATE / /	TIME :	SHIPPING NUMBER:		

INFORMATION IN THIS SECTION FOR JACOBS USE ONLY

LOCATION	SAMPLE TYPE	DEPTH (Ft.)	QC CODE
DP-1	GP	4-6	
DP-1A			
DP-1	GP	13-14	
DP-1B			
DP-1	DP	22-23	
DP-1C			

SAMPLING COMMENTS:

JACOBS ENGINEERING GROUP INC.
800 SEVENTEENTH STREET, SUITE 1100N DENVER, COLORADO 80202
TELEPHONE (303) 595 - 8855 FAX (303) 595 - 8857

FW-A9002

CHAIN OF CUSTODY RECORD

USE A BALLPOINT PEN, BLACK INK, AND PRESS FIRMLY. INSTRUCTIONS ARE ON THE BACK

PROJECT NAME: NAS FW Pipeline Abandonment

PROJECT NUMBER: 10K70100

WBS CODE:

SUBCONTRACT / D.O. No.

LABORATORY NAME & ADDRESS: Onsite Immunoassay Lab

SAMPLE NUMBER	COLLECTION DATE	COLLECTION TIME	SAMPLER'S INITIALS	NUMBER OF CONTAINERS	CONTAINER SIZE AND TYPE	PRESERVATIVE	MATRIX CODE	ANALYSES REQUESTED	QC	CONDITION ON RECEIPT
FW-A 900201	3/8/95	16:40	MD	1	24" Sleeve	4 deg C	S	Immunoassay BTEX		
FW-A 900202	3/8/95	16:52	MD	1	24" Sleeve	4 deg C	S	Immunoassay BTEX		
FW-A 900203	3/8/95	17:22	MD	1	24" Sleeve	4 deg C	S	Immunoassay BTEX		
FW-A 900204				1	24" Sleeve	4 deg C	S	Immunoassay BTEX		
FW-A 900205				1	24" Sleeve	4 deg C	S	Immunoassay BTEX		
FW-A 900206				1	24" Sleeve	4 deg C	S	Immunoassay BTEX		
FW-A 900207				1	24" Sleeve	4 deg C	S	Immunoassay BTEX		
FW-A 900208				1	24" Sleeve	4 deg C	S	Immunoassay BTEX		
FW-A 900209				1	24" Sleeve	4 deg C	S	Immunoassay BTEX		DDS

COMMENTS:

	DATE	TIME
COLLECTED & RELEASED BY [signature]	3/8/95	19:00
RECEIVED BY Daniel DSg	3/8/95	19:00
RECORD RETURNED BY	/ /	:

TURNAROUND TIME

RELINQUISHED BY	DATE	TIME
	/ /	:

SHIPPING NUMBER:

INFORMATION IN THIS SECTION FOR JACOBS USE ONLY

LOCATION	SAMPLE TYPE	DEPTH (FT.)	QC CODE
DP-2 DP-2-A	DP	65-70	
DP-2 DP-2-B	MD DP	65-175	113/120
DP-2 DP-2-C	DP	165-175	

SAMPLING COMMENTS:

FW-A 9603

JACOBS ENGINEERING GROUP INC.
600 SEVENTEENTH STREET, SUITE 1100N DENVER, COLORADO 80202
TELEPHONE (303) 595 - 8855 FAX (303) 595 - 8857

CHAIN OF CUSTODY RECORD

USE A BALLPOINT PEN, BLACK INK, AND PRESS FIRMLY. INSTRUCTIONS ARE ON THE BACK

PROJECT NAME: NAS FW Pipeline Abandonment

PROJECT NUMBER: 10K70100

WBS CODE:

SUBCONTRACT / D.O. No.

LABORATORY NAME & ADDRESS: Onsite Immunoassay Lab

SAMPLE NUMBER	COLLECTION DATE	COLLECTION TIME	SAMPLER'S INITIALS	NUMBER OF CONTAINERS	CONTAINER SIZE AND TYPE	PRESERVATIVE	MATRIX CODE	ANALYSES REQUESTED	QC	CONDITION ON RECEIPT
FW-A 900301	3/8/95	17:45	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX & PAH		
FW-A 900302	3/8/95	18:05	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX & PAH		
FW-A 900303	3/8/95	18:40	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX & PAH		
FW-A 900304				1	24" Sleeve	4 deg C	S	Immunoassay BTEX		
FW-A 900305				1	24" Sleeve	4 deg C	S	Immunoassay BTEX		
FW-A 900306				1	24" Sleeve	4 deg C	S	Immunoassay BTEX		
FW-A 900307				1	24" Sleeve	4 deg C	S	Immunoassay BTEX		
FW-A 900308				1	24" Sleeve	4 deg C	S	Immunoassay BTEX		
FW-A 900309				1	24" Sleeve	4 deg C	S	Immunoassay BTEX		DDS

COMMENTS:

	DATE	TIME		DATE	TIME
COLLECTED & RELEASED BY: Michael [illegible]	3/8/95	19:00	TURNAROUND TIME		
RECEIVED BY: David D Say	3/8/95	19:00	RELINQUISHED BY	/ /	:
RECORD RETURNED BY	/ /	:			
			SHIPPING NUMBER:		

INFORMATION IN THIS SECTION FOR JACOBS USE ONLY

LOCATION	SAMPLE TYPE	DEPTH (FT.)	QC CODE
DP-3 DP-3-A	DP	6-7'	
DP-3 DP-3-B	DP	12-12.5'	
DP-3 DP-3-C	DP	18-18.5'	

SAMPLING COMMENTS:

FW-A9004

JACOBS ENGINEERING GROUP INC.
600 SEVENTEENTH STREET, SUITE 1100N DENVER, COLORADO 80202
TELEPHONE (303) 595 - 8855 FAX (303) 595 - 8857

CHAIN OF CUSTODY RECORD

USE A BALLPOINT PEN, BLACK INK, AND PRESS FIRMLY. INSTRUCTIONS ARE ON THE BACK

PROJECT NAME: NAS FW Pipeline Abandonment

PROJECT NUMBER: 10K70100

WBS CODE:

SUBCONTRACT / D.O. No.

LABORATORY NAME & ADDRESS: Onsite Immunoassay Lab

SAMPLE NUMBER	COLLECTION DATE	COLLECTION TIME	SAMPLER'S INITIALS	NUMBER OF CONTAINERS	CONTAINER SIZE AND TYPE	PRESERVATIVE	MATRIX CODE	ANALYSES REQUESTED	QC	CONDITION ON RECEIPT
FW-A 900401	3/9/95	9:44	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX		
FW-A 900402	3/9/95	10:18	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX		
FW-A 900403	3/9/95	11:00	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX & PAH		
FW-A 900404	3/9/95	14:22	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX & PAH		
FW-A 900405	3/9/95	14:45	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX & PAH		
FW-A 900406	3/9/95	15:00	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX ~~& PAH~~ MJ		
FW-A 900407	3/9/95	15:17	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX ~~& PAH~~ MJ		
FW-A 900408	3/9/95	16:06	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX & PAH		
FW-A 900409	3/9/95	16:26	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX & PAH		

COMMENTS:

COLLECTED & RELEASED BY	DATE	TIME	TURNAROUND TIME		
	/ /	:			
RECEIVED BY Dan Sg	DATE 3/9/95	TIME 18:45	RELINQUISHED BY	DATE / /	TIME :
RECORD RETURNED BY	DATE / /	TIME :			

SHIPPING NUMBER:

INFORMATION IN THIS SECTION FOR JACOBS USE ONLY

LOCATION	SAMPLE TYPE	DEPTH (FT.)	QC CODE
DP-4 DP-4A	DP	6.5-7.0	
DP-4 DP-4B	DP	16.5-17	
DP-5 DP-5A	DP	6.5-7	
DP-8 ~~DP-8B~~ DP-8A MJ	DP	5-6.5	
DP-6 DP-6B	DP	11-12.5	
DP-7 DP-7A	DP	5-7.0	
DP-7 DP-7B	DP	11.5-12.0	
DP8 DP-8A	DP	6.5-7.0	
DP8 DP-8B	DP	11.5-12	

SAMPLING COMMENTS:

FW-A9005

JACOBS ENGINEERING GROUP INC.
600 SEVENTEENTH STREET, SUITE 1100N DENVER, COLORADO 80202
TELEPHONE (303) 595 - 8855 FAX (303) 595 - 8857

CHAIN OF CUSTODY RECORD

USE A BALLPOINT PEN, BLACK INK, AND PRESS FIRMLY. INSTRUCTIONS ARE ON THE BACK

PROJECT NAME: NAS FW Pipeline Abandonment

PROJECT NUMBER: 10K70100

WBS CODE:

SUBCONTRACT / D.O. No.

LABORATORY NAME & ADDRESS: Onsite Immunoassay Lab

SAMPLE NUMBER	COLLECTION DATE	COLLECTION TIME	SAMPLER'S INITIALS	NUMBER OF CONTAINERS	CONTAINER SIZE AND TYPE	PRESERVATIVE	MATRIX CODE	ANALYSES REQUESTED	QC	CONDITION ON RECEIPT
FW-A 900501	3/9/95	17:00	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX PAH		
FW-A 900502				1	24" Sleeve	4 deg C	S	Immunoassay BTEX		
FW-A 900503				1	24" Sleeve	4 deg C	S	Immunoassay BTEX		
FW-A 900504				1	24" Sleeve	4 deg C	S	Immunoassay BTEX		
FW-A 900505				1	24" Sleeve	4 deg C	S	Immunoassay BTEX		
FW-A 900506				1	24" Sleeve	4 deg C	S	Immunoassay BTEX		
FW-A 900507				1	24" Sleeve	4 deg C	S	Immunoassay BTEX		
FW-A 900508				1	24" Sleeve	4 deg C	S	Immunoassay BTEX		
FW-A 900509				1	24" Sleeve	4 deg C	S	Immunoassay BTEX		DDS

COMMENTS:

COLLECTED & RELEASED BY	DATE	TIME	TURNAROUND TIME		
	/ /	:			
RECEIVED BY Dan S	DATE 3/9/95	TIME 18:45	RELINQUISHED BY	DATE / /	TIME :
RECORD RETURNED BY	DATE / /	TIME :			
			SHIPPING NUMBER:		

INFORMATION IN THIS SECTION FOR JACOBS USE ONLY

LOCATION	SAMPLE TYPE	DEPTH (FT.)	QC CODE
DP-9 DP-9A	DP	65-70	

SAMPLING COMMENTS:

JACOBS ENGINEERING GROUP INC.
600 SEVENTEENTH STREET, SUITE 1100N DENVER, COLORADO 80202
TELEPHONE (303) 595 - 8855 FAX (303) 595 - 8857

FW-A9006

CHAIN OF CUSTODY RECORD

USE A BALLPOINT PEN, BLACK INK, AND PRESS FIRMLY. INSTRUCTIONS ARE ON THE BACK

PROJECT NAME: NAS FW Pipeline Abandonment

PROJECT NUMBER: 10K70100

WBS CODE:

SUBCONTRACT / D.O. No.

LABORATORY NAME & ADDRESS: Onsite Immunoassay Lab

SAMPLE NUMBER	COLLECTION DATE	COLLECTION TIME	SAMPLER'S INITIALS	NUMBER OF CONTAINERS	CONTAINER SIZE AND TYPE	PRESERVATIVE	MATRIX CODE	ANALYSES REQUESTED	QC	CONDITION ON RECEIPT
FW-A 900601	3/10/95	8:34	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX		CHILLED
FW-A 900602	3/10/95	9:03	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX		
FW-A 900603	3/10/95	9:03	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX		
FW-A 900604	3/10/95	10:04	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX & PAH		
FW-A 900605	3/10/95	10:30	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX & PAH		
FW-A 900606	3/10/95	11:33 ~~12:10~~ MJ	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX		
FW-A 900607	3/10/95	12:10	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX		
FW-A 900608	3/10/95	14:50	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX & PAH		
FW-A 900609	3/10/95	15:15	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX & PAH		

COMMENTS:

	DATE	TIME
COLLECTED & RELEASED BY [signature]	3/10/95	19:40
RECEIVED BY Dan Sd	3/10/95	19:40
RECORD RETURNED BY	/ /	:

TURNAROUND TIME

RELINQUISHED BY	DATE	TIME
	/ /	:

SHIPPING NUMBER:

INFORMATION IN THIS SECTION FOR JACOBS USE ONLY

LOCATION	SAMPLE TYPE	DEPTH (FT.)	QC CODE
DP-10 DP-10A	DP	5-5.5	
DP-10 DP-10B	DP	11.0-11.5	
DP-10 DP-10C	QC DUP	11.0-11.5	
DP-11 DP-11A	DP	5.0-5.5	
DP-11 DP-11B	DP	12.5-13.0	
DP-13A DP-13	DP	6.5-7.0	
DP-13B DP-13	DP	21.5-22.0	
DP-14A DP-14	DP	5-5.5	
DP-14 DP-14B	DP	22.5-23 ~~15:15~~ MJ	

SAMPLING COMMENTS:

FW-A9007

JACOBS ENGINEERING GROUP INC.
600 SEVENTEENTH STREET, SUITE 1100N DENVER, COLORADO 80202
TELEPHONE (303) 595 - 8855 FAX (303) 595 - 8857

CHAIN OF CUSTODY RECORD

USE A BALLPOINT PEN, BLACK INK, AND PRESS FIRMLY. INSTRUCTIONS ARE ON THE BACK

PROJECT NAME: NAS FW Pipeline Abandonment

PROJECT NUMBER: 10K70100

WBS CODE:

SUBCONTRACT / D.O. No.

LABORATORY NAME & ADDRESS: Onsite Immunoassay Lab

SAMPLE NUMBER	COLLECTION DATE	COLLECTION TIME	SAMPLER'S INITIALS	NUMBER OF CONTAINERS	CONTAINER SIZE AND TYPE	PRESERVATIVE	MATRIX CODE	ANALYSES REQUESTED	QC	CONDITION ON RECEIPT
FW-A 900701	3/10/95	15:58	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX		CHILLED GOOD
FW-A 900702	3/10/95	~~17:19~~ 13 16:38	MJ DS	1	24" Sleeve	4 deg C	S	Immunoassay BTEX		
FW-A 900703	3/10/95	17:12	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX & PAH		
FW-A 900704	3/10/95	17:12	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX & PAH		
FW-A 900705	3/10/95	17:37	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX ~~& PAH~~ MJ		
FW-A 900706				1	24" Sleeve	4 deg C	S	Immunoassay BTEX		
FW-A 900707				1	24" Sleeve	4 deg C	S	Immunoassay BTEX		
FW-A 900708				1	24" Sleeve	4 deg C	S	Immunoassay BTEX		
FW-A 900709				1	24" Sleeve	4 deg C	S	Immunoassay BTEX		DDS

COMMENTS:

COLLECTED & RELEASED BY	DATE	TIME	TURNAROUND TIME		
Michael [illegible]	3/10/95	19:40			
RECEIVED BY	DATE	TIME	RELINQUISHED BY	DATE	TIME
Dan SG	3/10/95	19:40		/ /	:
RECORD RETURNED BY	DATE	TIME			
	/ /	:	SHIPPING NUMBER:		

INFORMATION IN THIS SECTION FOR JACOBS USE ONLY

LOCATION	SAMPLE TYPE	DEPTH (FT.)	QC CODE
DP-15 DP15A	DP	5-6	
DP-15 DP-15B	DP	21-22	
DP-17 DP-17A	DP	6-8	
DP-17 DP-17B	DUP	6-7	
DP17 DP-17C	DP	13-14	

SAMPLING COMMENTS:

FW-A9008

JACOBS ENGINEERING GROUP INC.
600 SEVENTEENTH STREET, SUITE 1100N DENVER, COLORADO 80202
TELEPHONE (303) 595 - 8856 FAX (303) 595 - 8857

CHAIN OF CUSTODY RECORD

USE A BALLPOINT PEN, BLACK INK, AND PRESS FIRMLY. INSTRUCTIONS ARE ON THE BACK

PROJECT NAME: NAS Ft. WORTH PIPELINE ABAND

PROJECT NUMBER: 10576100

WBS CODE:

SUBCONTRACT / D.O. No.

LABORATORY NAME & ADDRESS: ON-SITE IMMUNOASSAY

SAMPLE NUMBER	COLLECTION DATE	COLLECTION TIME	SAMPLER'S INITIALS	NUMBER OF CONTAINERS	CONTAINER SIZE AND TYPE	PRESERVATIVE	MATRIX CODE	ANALYSES REQUESTED	QC	CONDITION ON RECEIPT
FW-A 900801	3/13/95	8:47	MJ	1	24" Sleeve	4°C	S	Immunoassay BTEX & PAH		
FW-A 900802	3/13/95	9:21	MJ	1	"	4°C	S	" BTEX & PAH		
FW-A 900803	3/13/95	9:47	MJ	1	"	4°C	S	" BTEX & PAH		
FW-A 900804	3/13/95	10:12	MJ	1	"	4°C	S	" BTEX & PAH		
FW-A 900805	3/13/95	10:45	MJ	1	"	4°C	S	" BTEX & PAH		
FW-A 900806	3/13/95	12:12	MJ	1	"	4°C	S	" BTEX		
FW-A 900807	3/13/95	12:44	MJ	1	"	4°C	S	" BTEX		
FW-A 900808	3/13/95	16:30	MJ	1	"	4°C	S	" BTEX		
FW-A 900809	3/13/95	17:03	MJ	1	"	4°C	S	" BTEX		

COMMENTS:

	DATE	TIME
COLLECTED & RELEASED BY [signature]	3/13/95	18:46
RECEIVED BY [signature]	3/13/95	18:46
RECORD RETURNED BY	/ /	:

TURNAROUND TIME

RELINQUISHED BY	DATE	TIME
	/ /	:

SHIPPING NUMBER:

INFORMATION IN THIS SECTION FOR JACOBS USE ONLY

LOCATION	SAMPLE TYPE	DEPTH (FT.)	QC CODE
DP-18 DP-18A	DP	6.5-7.0	
DP-18 DP-18B	DP	18.5-19.0	
DP-19 DP-19A	DP	5.5-6.0	
DP-19 DP-19B	DP	11.5-12.0	
DP-19 DP-19C	DP	17.5-18.0	
DP-20 DP-20A	DP	5.5-6.0	
DP-20 DP-20B	DP	18.5-19.0	
DP-21 DP-21A	DP	7.5-8.0	
DP-21 DP-21B	DP	23.5-24.0	

SAMPLING COMMENTS:

STDIN WAIT DIEC / CA LAB PT / 1 DATA AGEM GOLDENROD - RETURN

FORM-12.CDR 07.20.92

FW-A900904

JACOBS ENGINEERING GROUP INC.
600 SEVENTEENTH STREET, SUITE 1100N DENVER, COLORADO 80202
TELEPHONE (303) 595 - 8855 FAX (303) 595 - 8857

CHAIN OF CUSTODY RECORD

USE A BALLPOINT PEN, BLACK INK, AND PRESS FIRMLY. INSTRUCTIONS ARE ON THE BACK

PROJECT NAME: NAS FW Pipeline Abandonment

LABORATORY NAME & ADDRESS: Onsite Immunoassay Lab

PROJECT NUMBER: 10K70100

WBS CODE:

SUBCONTRACT / D.O. No.

SAMPLE NUMBER	COLLECTION DATE	COLLECTION TIME	SAMPLER'S INITIALS	NUMBER OF CONTAINERS	CONTAINER SIZE AND TYPE	PRESER-VATIVE	MATRIX CODE	ANALYSES REQUESTED	QC	CONDITION ON RECEIPT
FW-A 900901	3/14/95	16:18	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX & PAH		
FW-A 900902	3/14/95	10:18	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX & PAH		
FW-A 900903	3/14/95	14:07	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX ~~& PAH~~ MJ		
FW-A 900904	3/14/95	9:05	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX & PAH		
FW-A 900905	3/14/95	8:29	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX & PAH		
FW-A 900906	3/14/95	8:29	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX & PAH		
FW-A 900907	3/14/95	14:38	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX		
FW-A 900908	3/14/95	14:51	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX ~~& PAH~~ MJ		
FW-A 900909	3/14/95	15:31	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX		

COMMENTS:

	DATE	TIME			
COLLECTED & RELEASED BY	3/14/95	18:30	TURNAROUND TIME		
RECEIVED BY Dan S	3/14/95	18:30	RELINQUISHED BY	DATE	TIME
				/ /	:
RECORD RETURNED BY	/ /	:			
			SHIPPING NUMBER:		

DISTRIBUTION: WHITE - PROJECT FILE / CANARY - LAB RECEIPT / PINK - DATA MANAGEMENT / GOLDENROD - FIELD

INFORMATION IN THIS SECTION FOR JACOBS USE ONLY

LOCATION	SAMPLE TYPE	DEPTH (FT.)	QC CODE
DP-23 DP-23A	DP	4°-6°	
DP-23 DP-23B	DP	18°-18.5°	
DP-24 DP24A	DP	8.5-9	
DP-22 DP-22C	DP	23.5-24°	
DP-22 DP-22A	DP	5°-5.5	
DP-22 Fledge DP-22B	DP	5.5-6°	
~~DP-25~~ MJ DP-24 ~~DP-25A~~ MJ DP24B	DP	~~5.5~~-6°	23.5-24
DP-25 DP-25A	DP	5.5-6°	
DP25 DP25B	DP ~~DP~~ MJ	20.5-21	

SAMPLING COMMENTS:

FORM-12.CDR 07/30/95

FW-A9010

JACOBS ENGINEERING GROUP INC.
600 SEVENTEENTH STREET, SUITE 1100N DENVER, COLORADO 80202
TELEPHONE (303) 595 - 8855 FAX (303) 595 - 8857

CHAIN OF CUSTODY RECORD

USE A BALLPOINT PEN, BLACK INK, AND PRESS FIRMLY. INSTRUCTIONS ARE ON THE BACK

PROJECT NAME: NAS FW Pipeline Abandonment

LABORATORY NAME & ADDRESS: Onsite Immunoassay Lab

PROJECT NUMBER: 10K70100

WBS CODE:

SUBCONTRACT / D.O. No.

SAMPLE NUMBER	COLLECTION DATE	COLLECTION TIME	SAMPLER'S INITIALS	NUMBER OF CONTAINERS	CONTAINER SIZE AND TYPE	PRESERVATIVE	MATRIX CODE	ANALYSES REQUESTED	QC	CONDITION ON RECEIPT
FW-A 901001	3/14/95	16:18	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX & PAH		
FW-A 901002	3/14/95	17:07	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX & PAH		
FW-A 901003	3/15/95	8:35	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX		
FW-A 901004	3/15/95	9:00	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX		
FW-A 901005	3/15/95	9:21	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX		
FW-A 901006	3/15/95	9:21	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX		
FW-A 901007	3/15/95	9:54	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX		
FW-A 901008	3/15/95	10:17	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX		
FW-A 901009	3/15/95	10:44	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX		

COMMENTS:

	DATE	TIME
COLLECTED & RELEASED BY	3/15/95	18:17
RECEIVED BY	3/15/95	18:17
RECORD RETURNED BY	/ /	:

TURNAROUND TIME

RELINQUISHED BY	DATE	TIME
	/ /	:

SHIPPING NUMBER:

INFORMATION IN THIS SECTION FOR JACOBS USE ONLY

LOCATION	SAMPLE TYPE	DEPTH (ft)	QC CODE
DP2C	DP	5-6	
DP2C			
DP26			
DP26B	DP	20-21	
DP27			
DP27A	DP	5-6	
DP27			
DP27B	DP	18-19	
DP28 DP28B	DP	5-6	
DP28			
DP28B	DP	5-6	
DP22			
DP22C	DP	17-18	
DP29			
DP29A	DP	5-6	
DP29			
DP29B	DP	18-19	

SAMPLING COMMENTS:

DISTRIBUTION: WHITE - PROJECT FILE / CANARY - LAB RECEIPT / PINK - DATA MANAGEMENT / GOLDENROD - FIELD

FORM-12.CDR 07 30 95

FW-A 9011

JACOBS ENGINEERING GROUP INC.
600 SEVENTEENTH STREET, SUITE 1100N DENVER, COLORADO 80202
TELEPHONE (303) 595 - 8855 FAX (303) 595 - 8857

CHAIN OF CUSTODY RECORD

USE A BALLPOINT PEN, BLACK INK, AND PRESS FIRMLY. INSTRUCTIONS ARE ON THE BACK

PROJECT NAME: NAS FW Pipeline Abandonment

PROJECT NUMBER: 10K70100

WBS CODE:

SUBCONTRACT / D.O. No.

LABORATORY NAME & ADDRESS: Onsite Immunoassay Lab

SAMPLE NUMBER	COLLECTION DATE	COLLECTION TIME	SAMPLER'S INITIALS	NUMBER OF CONTAINERS	CONTAINER SIZE AND TYPE	PRESERVATIVE	MATRIX CODE	ANALYSES REQUESTED	QC	CONDITION ON RECEIPT
FW-A 901101	3/15/95	11:07	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX & PAH		
FW-A 901102	3/15/95	11:36	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX & PAH		
FW-A 901103	3/15/95	12:08	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX		
FW-A 901104	3/15/95	12:42	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX		
FW-A 901105	3/15/95	15:21	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX		
FW-A 901106	3/15/95	16:29	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX		
FW-A 901107	3/15/95	16:54	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX & PAH		
FW-A 901108	3/15/95	16:54	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX & PAH		
FW-A 901109	3/15/95	17:37	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX & PAH		

COMMENTS:

	DATE	TIME		DATE	TIME
COLLECTED & RELEASED BY	3/15/95	18:14	TURNAROUND TIME		
RECEIVED BY Dan Sg	3/15/95	18:19	RELINQUISHED BY	/ /	:
RECORD RETURNED BY	/ /	:			
			SHIPPING NUMBER:		

INFORMATION IN THIS SECTION FOR JACOBS USE ONLY

LOCATION	SAMPLE TYPE	DEPTH (FT.)	QC CODE
DP30 DP30A	DP	5-6	
DP30 DP30B	DP	19-20	
DP31 DP31A	DP	5-6	
DP31 DP31B	DP	19-20	
DP32 DP32A	DP	5-6	
DP32 DP32B	DP	23-23.5	
DP33A DP33A	DP	5-6	
DP FIELD QC DP33AFD	DUP	5-6	
DP77 DP77B	DP	17-18	

SAMPLING COMMENTS:

DISTRIBUTION: WHITE - PROJECT FILE / CANARY - LAB RECEIPT / PINK - DATA MANAGEMENT / GOLDENROD - FIELD

FORM-12.CDR 07-30-93

FW-A9012

JACOBS ENGINEERING GROUP INC.
600 SEVENTEENTH STREET, SUITE 1100N DENVER, COLORADO 80202
TELEPHONE (303) 595 - 8855 FAX (303) 595 - 8857

CHAIN OF CUSTODY RECORD

USE A BALLPOINT PEN, BLACK INK, AND PRESS FIRMLY. INSTRUCTIONS ARE ON THE BACK

PROJECT NAME: NAS FW Pipeline Abandonment

PROJECT NUMBER: 10K70100

WBS CODE:

SUBCONTRACT / D.O. No.

LABORATORY NAME & ADDRESS: Onsite Immunoassay Lab

SAMPLE NUMBER	COLLECTION DATE	COLLECTION TIME	SAMPLER'S INITIALS	NUMBER OF CONTAINERS	CONTAINER SIZE AND TYPE	PRESERVATIVE	MATRIX CODE	ANALYSES REQUESTED	QC	CONDITION ON RECEIPT
FW-A 901201	3/16/95	8:27	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX + PAH		
FW-A 901202	3/16/95	8:53	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX		
FW-A 901203	3/16/95	9:22	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX		
FW-A 901204	3/16/95	10:12	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX		
FW-A 901205	3/16/95	10:44	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX + PAH		
FW-A 901206	3/16/95	11:27	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX		
FW-A 901207	3/16/95	11:57	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX + PAH		
FW-A 901208	3/16/95	11:57	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX + PAH		
FW-A 901209	3/16/95	14:37	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX + PAH		

COMMENTS:

COLLECTED & RELEASED BY	DATE	TIME	TURNAROUND TIME
[illegible]	3/16/95	19:08	

RECEIVED BY	DATE	TIME	RELINQUISHED BY	DATE	TIME
	/ /	:		/ /	:

RECORD RETURNED BY	DATE	TIME	SHIPPING NUMBER:
	/ /	:	

INFORMATION IN THIS SECTION FOR JACOBS USE ONLY

LOCATION	SAMPLE TYPE	DEPTH (FT)	QC CODE
DP34 DP34A	DP	[illegible]	
DP35 DP35A	DP	5-[illegible]	
DP35B	DP	12-14	
DP35 DP35C	DP	22-23	
DP36 DP36A	DP	5-6	
DP36 DP36B	DP	22-23	
DP37 DP-37A	DP	5-6	
DP-37 FLAP QC DP37AFP	QC DP	5-6	
[illegible] DP39B	DP	[illegible]	

SAMPLING COMMENTS:

DISTRIBUTION: WHITE - PROJECT FILE / CANARY - LAB RECEIPT / PINK - DATA MANAGEMENT / GOLDENROD - FIELD

FORM-12.CDR 07-30-95

FW-A9013

JACOBS ENGINEERING GROUP INC.
600 SEVENTEENTH STREET, SUITE 1100N DENVER, COLORADO 80202
TELEPHONE (303) 595 - 8855 FAX (303) 595 - 8857

CHAIN OF CUSTODY RECORD

USE A BALLPOINT PEN, BLACK INK, AND PRESS FIRMLY. INSTRUCTIONS ARE ON THE BACK

PROJECT NAME: NAS FW Pipeline Abandonment

PROJECT NUMBER: 10K70100

WBS CODE:

SUBCONTRACT / D.O. No.

LABORATORY NAME & ADDRESS: Onsite Immunoassay Lab

SAMPLE NUMBER	COLLECTION DATE	COLLECTION TIME	SAMPLER'S INITIALS	NUMBER OF CONTAINERS	CONTAINER SIZE AND TYPE	PRESERVATIVE	MATRIX CODE	ANALYSES REQUESTED	QC	CONDITION ON RECEIPT
FW-A 901301	3/16/95	1516	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX		
FW-A 901302	3/16/95	1406	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX		
FW-A 901303	3/16/95	1624	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX & PAH		
FW-A 901304	3/16/95	1719	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX		
FW-A 901305	3/17/95	0817	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX & PAH		
FW-A 901306	3/17/95	0435	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX & PAH		
FW-A 901307	3/17/95	0458	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX		
FW-A 901308	3/17/95	0458	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX		
FW-A 901309	3/17/95	1038	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX		

COMMENTS:

	DATE	TIME
COLLECTED & RELEASED BY [signature]	3/17/95	18:00
RECEIVED BY [signature]	3/17/95	18:00
RECORD RETURNED BY	/ /	:

TURNAROUND TIME

RELINQUISHED BY	DATE	TIME
	/ /	:

SHIPPING NUMBER:

INFORMATION IN THIS SECTION FOR JACOBS USE ONLY

LOCATION	SAMPLE TYPE	DEPTH (FT.)	QC CODE
DP38 DP38A	DP	4-6'	
DP38 DP38B	DP	22-23	
DP39 DP39A	DP	5'-6'	
DP39 DP39B	DP	24-25	
DP40 DP40A	DP	5'-6'	
DP40 DP40B	DP	22'-23'	
DP41 DP41A	DP	5'-6'	
DP41 Field QC DP41AFD	DUP	5'/6'	
DP41B DP41B	DP	22'-23'	

SAMPLING COMMENTS:

FW-A9014

JACOBS ENGINEERING GROUP INC.
600 SEVENTEENTH STREET, SUITE 1100N DENVER, COLORADO 80202
TELEPHONE (303) 595 - 8855 FAX (303) 595 - 8857

CHAIN OF CUSTODY RECORD

USE A BALLPOINT PEN, BLACK INK, AND PRESS FIRMLY. INSTRUCTIONS ARE ON THE BACK

PROJECT NAME: NAS FW Pipeline Abandonment

PROJECT NUMBER: 10K70100

WBS CODE:

SUBCONTRACT / D.O. No.

LABORATORY NAME & ADDRESS: Onsite Immunoassay Lab

SAMPLE NUMBER	COLLECTION DATE	COLLECTION TIME	SAMPLER'S INITIALS	NUMBER OF CONTAINERS	CONTAINER SIZE AND TYPE	PRESERVATIVE	MATRIX CODE	ANALYSES REQUESTED	QC	CONDITION ON RECEIPT
FW-A 901401	3/17/95	1152	MD	1	24" Sleeve	4 deg C	S	Immunoassay BTEX & PAH		
FW-A 901402	3/17/95	1128	MD	1	24" Sleeve	4 deg C	S	Immunoassay BTEX & PAH		
FW-A 901403	3/17/95	1357	MD	1	24" Sleeve	4 deg C	S	Immunoassay BTEX		
FW-A 901404	3/17/95	1416	MD	1	24" Sleeve	4 deg C	S	Immunoassay BTEX		
FW-A 901405	3/17/95	1438	MD	1	24" Sleeve	4 deg C	S	Immunoassay BTEX		
FW-A 901406	3/17/95	1458	MD	1	24" Sleeve	4 deg C	S	Immunoassay BTEX & PAH		
FW-A 901407	3/17/95	1534	MD	1	24" Sleeve	4 deg C	S	Immunoassay BTEX & PAH		
FW-A 901408	3/17/95	1549	MD	1	24" Sleeve	4 deg C	S	Immunoassay BTEX & PAH		
FW-A 901409	3/17/95	1616	MD	1	24" Sleeve	4 deg C	S	Immunoassay BTEX & PAH		

COMMENTS:

	DATE	TIME			
COLLECTED & RELEASED BY [signature]	3/17/95	1800	TURNAROUND TIME		
RECEIVED BY [signature]	3/17/95	16:00	RELINQUISHED BY	DATE / /	TIME :
RECORD RETURNED BY	DATE / /	TIME :	SHIPPING NUMBER:		

INFORMATION IN THIS SECTION FOR JACOBS USE ONLY

LOCATION	SAMPLE TYPE	DEPTH (ft)	QC CODE
DP43 DP43A	DP	5'-6'	
DP43 DP43B	DP	20'-21	
DP44 DP44A	DP	5'-6'	
DP44 DP44B	DP	11'-13'	
DP44 DP44C	DP	21-22	
DP42 DP42A	DP	5-6'	
DP42 DP42B	DP	21-22	
DP45 DP45A med	DP	5'-6	
DP45 DP45B High	DP	22'-23	

SAMPLING COMMENTS:

DISTRIBUTION: WHITE - PROJECT FILE / CANARY - LAB RECEIPT / PINK - DATA MANAGEMENT / GOLDENROD - FIELD

FORM-12.CDR 07/28/95

JACOBS ENGINEERING GROUP INC.
600 SEVENTEENTH STREET, SUITE 1100N DENVER, COLORADO 80202
TELEPHONE (303) 595 - 8855 FAX (303) 595 - 8857

FW-A9015

CHAIN OF CUSTODY RECORD

USE A BALLPOINT PEN, BLACK INK, AND PRESS FIRMLY. INSTRUCTIONS ARE ON THE BACK

PROJECT NAME: NAS FW Pipeline Abandonment

PROJECT NUMBER: 10K70100

WBS CODE:

SUBCONTRACT / D.O. No.

LABORATORY NAME & ADDRESS: Onsite Immunoassay Lab

SAMPLE NUMBER	COLLECTION DATE	COLLECTION TIME	SAMPLER'S INITIALS	NUMBER OF CONTAINERS	CONTAINER SIZE AND TYPE	PRESERVATIVE	MATRIX CODE	ANALYSES REQUESTED	QC	CONDITION ON RECEIPT
FW-A 901501	3/17/95	16:42	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX & PAH		
FW-A 901502	3/17/95	16:42	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX & PAH		
FW-A 901503	3/17/95	17:00	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX & PAH		
FW-A 901504	3/17/95	17:23	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX & PAH		
FW-A 901505	3/18/95	8:18	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX & ~~PAH~~ MJ		
FW-A 901506	3/18/95	8:36	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX & ~~PAH~~ MJ		
FW-A 901507	3/18/95	9:03	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX & PAH		
FW-A 901508	3/18/95	9:21	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX & PAH		
FW-A 901509	3/18/95	9:56	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX		

COMMENTS:

	DATE	TIME
COLLECTED & RELEASED BY [signature]	3/18/95	18:50
RECEIVED BY [signature]	3/18/95	18:50
RECORD RETURNED BY	/ /	:

TURNAROUND TIME

RELINQUISHED BY	DATE	TIME
	/ /	:

SHIPPING NUMBER:

INFORMATION IN THIS SECTION FOR JACOBS USE ONLY

LOCATION	SAMPLE TYPE	DEPTH (FT.)	QC CODE
DP16 DP16A High	DP	5-6	
DP16 Field QC DP16AFD High	DUP	5-6	
DP16 DP16B High	DP	13-14	
DP16 DP16C High	DP	19-19.5	
DP12 DP12A	DP	4-6	
DP12 DP12B	DP	12.5-13	
DP46 DP46A	DP	5.5-6.0	
DP46 DP46B	DP	10-10.5	
DP47 DP47A	DP	5.0-5.5	

SAMPLING COMMENTS:

DISTRIBUTION: WHITE - PROJECT FILE / CANARY - LAB RECEIPT / PINK - DATA MANAGEMENT / GOLDENROD - FIELD

FORM-12.CDR 07-30-95

JACOBS ENGINEERING GROUP INC.
800 SEVENTEENTH STREET, SUITE 1100N DENVER, COLORADO 80202
TELEPHONE (303) 595 - 8855 FAX (303) 595 - 8857

FW-A9016

CHAIN OF CUSTODY RECORD

USE A BALLPOINT PEN, BLACK INK, AND PRESS FIRMLY. INSTRUCTIONS ARE ON THE BACK

PROJECT NAME: NAS FW Pipeline Abandonment

PROJECT NUMBER: 10K70100

WBS CODE:

SUBCONTRACT / D.O. No.

LABORATORY NAME & ADDRESS: Onsite Immunoassay Lab

SAMPLE NUMBER	COLLECTION DATE	COLLECTION TIME	SAMPLER'S INITIALS	NUMBER OF CONTAINERS	CONTAINER SIZE AND TYPE	PRESERVATIVE	MATRIX CODE	ANALYSES REQUESTED	QC	CONDITION ON RECEIPT
FW-A 901601	3/18/95	10:25	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX		
FW-A 901602	3/18/95	10:25	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX		
FW-A 901603	3/18/95	10:42	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX & PAH's		
FW-A 901604	3/18/95	11:07	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX & PAH		
FW-A 901605	3/18/95	11:36	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX & PAH		
FW-A 901606	3/18/95	12:08	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX & PAH		
FW-A 901607	3/20/95	8:30	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX & PAH		
FW-A 901608	3/20/95	8:46	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX & PAH		
FW-A 901609	3/20/95	9:05	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX		

COMMENTS:

	DATE	TIME		DATE	TIME
COLLECTED & RELEASED BY	3/20/95	18:00	TURNAROUND TIME		
RECEIVED BY	3/20/95	18:00	RELINQUISHED BY	/ /	:
RECORD RETURNED BY	/ /	:			
			SHIPPING NUMBER:		

INFORMATION IN THIS SECTION FOR JACOBS USE ONLY

LOCATION	SAMPLE TYPE	DEPTH (FT.)	QC CODE
DP47 DP47B	DP	19-20	
DP47 Field QC DP47BFD	DUP	19-20	
DP48 DP48A	DP	5'-6'	
DP48 DP48B	DP	19'-20'	
DP49 DP49A	DP	5'-6'	
DP49 DP49B	DP	21'-22'	
DP50 DP50A	DP	45'-50'	
DP50 DP50B	DP	45'-10'	
DP51 DP51A	DP	45'-50'	

SAMPLING COMMENTS:

TRIBUT WHITE JECT CAN LAB T / PI DATA MANAGEMENT GOLDENROD - FIELD

FORM-12.CDR 07 30 95

FW-A-9017

JACOBS ENGINEERING GROUP INC.
600 SEVENTEENTH STREET, SUITE 1100N DENVER, COLORADO 80202
TELEPHONE (303) 595 - 8855 FAX (303) 595 - 8857

CHAIN OF CUSTODY RECORD

USE A BALLPOINT PEN, BLACK INK, AND PRESS FIRMLY. INSTRUCTIONS ARE ON THE BACK

PROJECT NAME: NAS FW Pipeline Abandonment

PROJECT NUMBER: 10K70100

WBS CODE:

SUBCONTRACT / D.O. No.

LABORATORY NAME & ADDRESS: Onsite Immunoassay Lab

SAMPLE NUMBER	COLLECTION DATE	COLLECTION TIME	SAMPLER'S INITIALS	NUMBER OF CONTAINERS	CONTAINER SIZE AND TYPE	PRESERVATIVE	MATRIX CODE	ANALYSES REQUESTED	QC	CONDITION ON RECEIPT
FW-A 901701	3/20/95	9:18	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX		
FW-A 901702	3/20/95	9:18	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX		
FW-A 901703	3/20/95	9:41	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX & PAH		
FW-A 901704	3/20/95	10:03	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX & PAH		
FW-A 901705	3/20/95	10:12	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX		
FW-A 901706	3/20/95	10:27	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX & PAH		
FW-A 901707	3/20/95	10:43	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX & PAH		
FW-A 901708	3/20/95	13:10	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX & ~~PAH~~ MJ		
FW-A 901709	3/20/95	14:00	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX		

COMMENTS:

COLLECTED & RELEASED BY	DATE	TIME	TURNAROUND TIME
[signature]	3/20/95	18:00	

RECEIVED BY	DATE	TIME	RELINQUISHED BY	DATE	TIME
Don Sc	3/20/95	18:00		/ /	:

RECORD RETURNED BY	DATE	TIME
	/ /	:

SHIPPING NUMBER:

INFORMATION IN THIS SECTION FOR JACOBS USE ONLY

LOCATION	SAMPLE TYPE	(FT.) DEPTH	QC CODE
DP51 DP51-A/B	DP	8-9'	
DP51 Field QC DP51BFD	DUP	8-9'	
DP52 DP52A	DP	5'/6'	
DP53 DP53A	DP	3'-3.5'	
DP53 DP53B	DP	5'-6'	
DP54 DP54A	DP	5'-6'	
DP54 DP54B	DP	11'-12'	
DP55 DP55A	DP	5-6	
DP55 DP55B	DP	21'-22	

SAMPLING COMMENTS:

DISTRIBUTION: WHITE - PROJECT FILE / CANARY - LAB RECEIPT / PINK - DATA MANAGEMENT / GOLDENROD - FIELD

FORM-12.CDR 07-28-93

FW-A9018

JACOBS ENGINEERING GROUP INC.
800 SEVENTEENTH STREET, SUITE 1100N DENVER, COLORADO 80202
TELEPHONE (303) 595 - 8855 FAX (303) 595 - 8857

CHAIN OF CUSTODY RECORD

USE A BALLPOINT PEN, BLACK INK, AND PRESS FIRMLY. INSTRUCTIONS ARE ON THE BACK

PROJECT NAME: NAS FW Pipeline Abandonment

PROJECT NUMBER: 10K70100

WBS CODE:

SUBCONTRACT / D.O. No.

LABORATORY NAME & ADDRESS: Onsite Immunoassay Lab

SAMPLE NUMBER	COLLECTION DATE	COLLECTION TIME	SAMPLER'S INITIALS	NUMBER OF CONTAINERS	CONTAINER SIZE AND TYPE	PRESERVATIVE	MATRIX CODE	ANALYSES REQUESTED	QC	CONDITION ON RECEIPT
FW-A 901801	3/20/95	14:24	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX		
FW-A 901802	3/20/95	14:24	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX		
FW-A 901803	3/20/95	14:59	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX		
FW-A 901804	3/20/95	15:12	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX		
FW-A 901805	3/20/95	15:53	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX		
FW-A 901806	3/20/95	16:03	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX & PAH		
FW-A 901807	3/20/95	16:33	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX & PAH		
FW-A 901808	3/20/95	16:48	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX		
FW-A 901809	3/20/95	17:43	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX		

COMMENTS:

	DATE	TIME
COLLECTED & RELEASED BY [signature]	3/20/95	19:04
RECEIVED BY [signature]	3/20/95	18:04
RECORD RETURNED BY	/ /	:

TURNAROUND TIME

RELINQUISHED BY	DATE	TIME
	/ /	:

SHIPPING NUMBER:

INFORMATION IN THIS SECTION FOR JACOBS USE ONLY

LOCATION	SAMPLE TYPE	DEPTH (FT)	QC CODE
DP56 DP56A	DP	5-6	
DP56 FIELD QC DP56AFD	DUP	5-6	
DP56 DP56B	DP	21.5-22	
DP57 DP57A	DP	5.5-6.0	
DP57 DP57B	DP	21-21.5	
DP58 DP58A	DP	5.5-6.0	
DP58 DP58B	DP	21.5-22	
DP59 DP59A	DP	5.5-6.0	
DP59 DP59B	DP	21.5-22	

SAMPLING COMMENTS:

FORM-12.CDR 07-30-93

EDIBLE WHITE DECT CAN LAB T / PI DATA GEME GOLDENROD - FIELD

FW-A9019

JACOBS ENGINEERING GROUP INC.
800 SEVENTEENTH STREET, SUITE 1100N DENVER, COLORADO 80202
TELEPHONE (303) 595 - 8855 FAX (303) 595 - 8857

CHAIN OF CUSTODY RECORD

USE A BALLPOINT PEN, BLACK INK, AND PRESS FIRMLY. INSTRUCTIONS ARE ON THE BACK

PROJECT NAME: NAS FW Pipeline Abandonment

PROJECT NUMBER: 10K70100

WBS CODE:

SUBCONTRACT / D.O. No.

LABORATORY NAME & ADDRESS: Onsite Immunoassay Lab

SAMPLE NUMBER	COLLECTION DATE	COLLECTION TIME	SAMPLER'S INITIALS	NUMBER OF CONTAINERS	CONTAINER SIZE AND TYPE	PRESERVATIVE	MATRIX CODE	ANALYSES REQUESTED	QC	CONDITION ON RECEIPT
FW-A 901901	3/21/95	8:16	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX & PAH		
FW-A 901902	3/21/95	8:16	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX & PAH		
FW-A 901903 MJ 4	3/21/95	8:41	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX & PAH		
FW-A 901904 MJ 5	3/21/95	9:03	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX & PAH		
FW-A 901905	3/21/95	9:30	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX & PAH		
FW-A 901906	3/21/95	10:17	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX		
FW-A 901907	3/21/95	10:43	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX		
FW-A 901908	3/21/95	11:12	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX		
FW-A 901909	3/21/95	11:39	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX		

COMMENTS:

	DATE	TIME
COLLECTED & RELEASED BY	3/21/95	18:5
RECEIVED BY	3/21/95	18:15
RECORD RETURNED BY	/ /	:

TURNAROUND TIME

RELINQUISHED BY	DATE	TIME
	/ /	:

SHIPPING NUMBER:

INFORMATION IN THIS SECTION FOR JACOBS USE ONLY

LOCATION	SAMPLE TYPE	DEPTH (FT.)	QC CODE
DP60 DP60A	DP	5-6	
DP60 Field QC DP60AFD	DUP	5-6	
DP60 DP60B	DP	21.5-22	
DP61 DP61A	DP	5-6	
DP61 DP61B	DP	21.5-22	
DP62 DP62A	DP	5.5-6.5	
DP62 DP62B	DP	21.5-22	
DP63 DP63A	DP	5.5-6.5	
DP63 DP63B	DP	21.5-22	

SAMPLING COMMENTS:

DISTRIBUTION: WHITE - PROJECT FILE / CANARY - LAB RECEIPT / PINK - DATA MANAGEMENT / GOLDENROD - FIELD

FORM-12.CDR 07/30/93

JACOBS ENGINEERING GROUP INC.
600 SEVENTEENTH STREET, SUITE 1100N DENVER, COLORADO 80202
TELEPHONE (303) 595 - 8855 FAX (303) 595 - 8857

FW-A9020

CHAIN OF CUSTODY RECORD

USE A BALLPOINT PEN, BLACK INK, AND PRESS FIRMLY. INSTRUCTIONS ARE ON THE BACK

PROJECT NAME: NAS FW Pipeline Abandonment

PROJECT NUMBER: 10X70100

WBS CODE:

SUBCONTRACT / D.O. No.

LABORATORY NAME & ADDRESS: Onsite Immunoassay Lab

SAMPLE NUMBER	COLLECTION DATE	COLLECTION TIME	SAMPLER'S INITIALS	NUMBER OF CONTAINERS	CONTAINER SIZE AND TYPE	PRESERVATIVE	MATRIX CODE	ANALYSES REQUESTED	QC	CONDITION ON RECEIPT
FW-A 902001	3/21/95	13:45	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX ~~& PAH~~ MJ		
FW-A 902002	3/21/95	14:15	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX ~~& PAH~~ MJ		
FW-A 902003	3/21/95	14:32	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX & PAH		
FW-A 902004	3/21/95	15:09	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX & PAH		
FW-A 902005	3/21/95	15:30	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX		
FW-A 902006	3/21/95	16:06	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX		
FW-A 902007	3/21/95	16:24	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX & PAH		
FW-A 902008	3/21/95	16:57	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX & PAH		
FW-A 902009	3/21/95	16:57	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX & PAH		

COMMENTS:

	DATE	TIME			
COLLECTED & RELEASED BY [signature]	3/21/95	18:12	TURNAROUND TIME		
RECEIVED BY [signature]	3/21/95	18:12	RELINQUISHED BY	DATE	TIME
				/ /	:
RECORD RETURNED BY	DATE / /	TIME :			
			SHIPPING NUMBER:		

INFORMATION IN THIS SECTION FOR JACOBS USE ONLY

LOCATION	SAMPLE TYPE	(FT) DEPTH	QC CODE
DP64 DP64A	DP	5-6	
DP64 DP64B	DP	21-22	
DP65 DP65A	DP	5-6	
DP65 DP65B	DP	21-22	
DP66 MJ DP66B A.	DP	4-4	
DP66 DP66B	DP	21-22	
DP67 DP67A	DP	4-5	
DP67 DP67B	DUP	21-22	
DP67 Field QC DP67BFD	DUP	21-22	

SAMPLING COMMENTS:

FORM-12.CDR 07-30-95

DOUBLE WHITE SUBJECT CAN LAB T / PV DATA MANAGEMENT GOLDENROD - FIELD

FW-A9025

JACOBS ENGINEERING GROUP INC.
800 SEVENTEENTH STREET, SUITE 1100N DENVER, COLORADO 80202
TELEPHONE (303) 595 - 8855 FAX (303) 595 - 8857

CHAIN OF CUSTODY RECORD

USE A BALLPOINT PEN, BLACK INK, AND PRESS FIRMLY. INSTRUCTIONS ARE ON THE BACK

PROJECT NAME: NAS FW Pipeline Abandonment

PROJECT NUMBER: 10X70100

WBS CODE:

SUBCONTRACT / D.O. No.

LABORATORY NAME & ADDRESS: Onsite Immunoassay Lab

SAMPLE NUMBER	COLLECTION DATE	COLLECTION TIME	SAMPLER'S INITIALS	NUMBER OF CONTAINERS	CONTAINER SIZE AND TYPE	PRESERVATIVE	MATRIX CODE	ANALYSES REQUESTED	QC	CONDITION ON RECEIPT
FW-A 902501	4/10/95	9:16	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX & PAH		
FW-A 902502	4/10/95	10:01	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX & PAH		
FW-A 902503	4/10/95	10:33	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX		
FW-A 902504	4/10/95	10:33	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX		
FW-A 902505	4/10/95	10:58	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX		
FW-A 902506	4/10/95	11:29	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX		
FW-A 902507	4/11/95	8:35	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX & PAH		
FW-A 902508	4/11/95	8:59	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX		
FW-A 902509	4/11/95	9:22	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX		

COMMENTS:

COLLECTED & RELEASED BY	DATE	TIME	TURNAROUND TIME
[signature]	4/11/95	9:35	

RECEIVED BY	DATE	TIME	RELINQUISHED BY	DATE	TIME
David DSG	4/11/95	09:35		/ /	:

RECORD RETURNED BY	DATE	TIME
	/ /	:

INFORMATION IN THIS SECTION FOR JACOBS USE ONLY

LOCATION	SAMPLE TYPE	DEPTH (FT.)	QC CODE
DP-80 DP80A	DP	5-6 4.5-5 MJ	
DP-81 DP81A	DP	5-6	
DP-82 DP82A	DP	5-6 5 MJ	
DP-82 DP82AFD	DUP DP	5-6	DUP
DP-83 DP83A	DP	5-6	
DP84 DP84A	DP	4-5	
DP-85 DP85A	DP	5-6	
DP-86 DP86A	DP	4-5	
DP87 DP87A	DP	4-5	

SAMPLING COMMENTS:

FW-A9026

JACOBS ENGINEERING GROUP INC.
800 SEVENTEENTH STREET, SUITE 1100N DENVER, COLORADO 80202
TELEPHONE (303) 595 - 8855 FAX (303) 595 - 8857

CHAIN OF CUSTODY RECORD

USE A BALLPOINT PEN, BLACK INK, AND PRESS FIRMLY. INSTRUCTIONS ARE ON THE BACK

PROJECT NAME: NAS FW Pipeline Abandonment

PROJECT NUMBER: 10K70100

WBS CODE:

SUBCONTRACT / D.O. No.

LABORATORY NAME & ADDRESS: Onsite Immunoassay Lab

SAMPLE NUMBER	COLLECTION DATE	COLLECTION TIME	SAMPLER'S INITIALS	NUMBER OF CONTAINERS	CONTAINER SIZE AND TYPE	PRESERVATIVE	MATRIX CODE	ANALYSES REQUESTED	QC	CONDITION ON RECEIPT
FW-A 902601	4/11/95	10:26	mj	1	24" Sleeve	4 deg C	S	Immunoassay BTEX & PAH		
FW-A 902602	4/11/95	10:47	mj	1	24" Sleeve	4 deg C	S	Immunoassay BTEX & ~~PAH~~ mj		
FW-A 902603	4/11/95	11:08	mj	1	24" Sleeve	4 deg C	S	Immunoassay BTEX & PAH		
FW-A 902604	4/11/95	11:38	mj	1	24" Sleeve	4 deg C	S	Immunoassay BTEX		
FW-A 902605	4/11/95	11:38	mj	1	24" Sleeve	4 deg C	S	Immunoassay BTEX		
FW-A 902606	4/11/95	11:57	mj	1	24" Sleeve	4 deg C	S	Immunoassay BTEX & PAH		
FW-A 902607	4/11/95	12:22	mj	1	24" Sleeve	4 deg C	S	Immunoassay BTEX & PAH		
FW-A 902608	4/11/95	13:47	mj	1	24" Sleeve	4 deg C	S	Immunoassay BTEX & PAH		
FW-A 902609	4/11/95	14:32	mj	1	24" Sleeve	4 deg C	S	Immunoassay BTEX & PAH		

COMMENTS:

	DATE	TIME
COLLECTED & RELEASED BY mj	4/11/95	18:09
RECEIVED BY David D S	4/11/95	18:09
RECORD RETURNED BY	/ /	:

TURNAROUND TIME

RELINQUISHED BY	DATE	TIME
	/ /	:

SHIPPING NUMBER:

INFORMATION IN THIS SECTION FOR JACOBS USE ONLY

LOCATION	SAMPLE TYPE	DEPTH (FT)	QC CODE
DP-88 DP-88A	DP	4.5-5.0	
DP-~~88~~ mj 89 DP89A	DP	4.5-5.0	
DP-90 DP90A	DP	4.5-5.0	
DP-91 DP91A	DP	4.0-4.5	
DP-91 DP91AFD	DP	4.0-4.5	DUP
DP92 DP92A	DP	4.5-5.0	
DP-92 DP92B	DP	18.5-19.0	
DP-93 DP93A	DP	6.5-7.0	
DP-93 DP93B	DP	~~8.0-8.5~~	

SAMPLING COMMENTS:

FW-A9021

JACOBS ENGINEERING GROUP INC.
600 SEVENTEENTH STREET, SUITE 1100N DENVER, COLORADO 80202
TELEPHONE (303) 595 - 8855 FAX (303) 595 - 8857

CHAIN OF CUSTODY RECORD

USE A BALLPOINT PEN, BLACK INK, AND PRESS FIRMLY. INSTRUCTIONS ARE ON THE BACK

PROJECT NAME: NAS FW Pipeline Abandonment

PROJECT NUMBER: 10K70100

WBS CODE:

SUBCONTRACT / D.O. No.

LABORATORY NAME & ADDRESS: Onsite Immunoassay Lab

SAMPLE NUMBER	COLLECTION DATE	COLLECTION TIME	SAMPLER'S INITIALS	NUMBER OF CONTAINERS	CONTAINER SIZE AND TYPE	PRESERVATIVE	MATRIX CODE	ANALYSES REQUESTED	QC	CONDITION ON RECEIPT
FW-A 902101	3/22/95	8:19	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX		
FW-A 902102	3/22/95	8:43	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX		
FW-A 902103	3/22/95	9:04	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX & PAH		
FW-A 902104	3/22/95	9:37	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX & PAH		
FW-A 902105	3/22/95	9:56	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX & PAH		
FW-A 902106	3/22/95	10:37	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX & PAH		
FW-A 902107	3/22/95	10:37	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX & PAH		
FW-A 902108	3/22/95	11:03	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX & PAH		
FW-A 902109	3/22/95	11:35	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX & PAH		

COMMENTS:

	DATE	TIME		DATE	TIME
COLLECTED & RELEASED BY	3/22/95	13:26	TURNAROUND TIME		
RECEIVED BY Dan Sy	3/22/95	13:26	RELINQUISHED BY	/ /	:
RECORD RETURNED BY	/ /	:			
			SHIPPING NUMBER:		

INFORMATION IN THIS SECTION FOR JACOBS USE ONLY

LOCATION	SAMPLE TYPE	DEPTH (FT.)	QC CODE
DP68 DP68A	DP	4.5-6.0	
DP68 DP68B	DP	22-22.5	
DP69 DP69A	DP	4.5-5.0	
DP69 DP69B	DP	21.5-22.0	
DP70 DP70A	DP	5.5-6.0	
D70 DP70B	DP	23-24	
DP70 Field QC DP70BFD	DUP	23-24	
DP71 ~~DP71A~~	DP	6-6.5	
DP72 71 DP72B 71B	DP	25.5-26	

SAMPLING COMMENTS:

DISTRIBUTION: WHITE - PROJECT FILE / CANARY - LAB RECEIPT / PINK - DATA MANAGEMENT / GOLDENROD - FIELD

FORM-12.CDR 07/30/93

FW-A9022

JACOBS ENGINEERING GROUP INC.
600 SEVENTEENTH STREET, SUITE 1100N DENVER, COLORADO 80202
TELEPHONE (303) 595 - 8855 FAX (303) 595 - 8857

CHAIN OF CUSTODY RECORD

USE A BALLPOINT PEN, BLACK INK, AND PRESS FIRMLY. INSTRUCTIONS ARE ON THE BACK

PROJECT NAME: NAS FW Pipeline Abandonment

PROJECT NUMBER: 10K70100

WBS CODE:

SUBCONTRACT / D.O. No.

LABORATORY NAME & ADDRESS: Onsite Immunoassay Lab

SAMPLE NUMBER	COLLECTION DATE	COLLECTION TIME	SAMPLER'S INITIALS	NUMBER OF CONTAINERS	CONTAINER SIZE AND TYPE	PRESERVATIVE	MATRIX CODE	ANALYSES REQUESTED	QC	CONDITION ON RECEIPT
FW-A 902201	3/22/95	13:47	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX		
FW-A 902202 3 MJ	3/22/95	14:51 ~~14:23~~	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX & PAH		
FW-A 902203 2 MJ	3/22/95	14:23	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX ~~& PAH~~ MJ		
FW-A 902204	3/22/95	15:27	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX & PAH		
FW-A 902205	3/22/95	15:27	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX & PAH		
FW-A 902206	3/22/95	15:54	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX & PAH		
FW-A 902207	3/22/95	16:10	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX & PAH		
FW-A 902208	3/22/95	16:43	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX & PAH		
~~FW-A 902209~~				~~1~~	~~24" Sleeve~~	~~4 deg C~~	~~S~~	~~Immunoassay BTEX~~		DDS

COMMENTS:

COLLECTED & RELEASED BY	DATE	TIME	TURNAROUND TIME		
Michael [illegible]	3/22/95	18:12			
RECEIVED BY: Dan S[illegible]	3/22/95	18:12	RELINQUISHED BY	DATE / /	TIME :
RECORD RETURNED BY	DATE / /	TIME :			
			SHIPPING NUMBER:		

INFORMATION IN THIS SECTION FOR JACOBS USE ONLY

LOCATION	SAMPLE TYPE	DEPTH (FT.)	QC CODE
DP72 DP72A	DP	5.5 -6.0	
~~DP75~~ DP75A	DP	5.5 - 6.0	
DP72 DP72B	DP	22.5 -23	
DP75 DP75B Low/mid	DP	22.5 -23.0	
DP75 Field QC DP75BFD Low/mid	DUP	22.5 -23.0	
DP73 DP73A Low	DP	5.5 -6.0	
DP73 DP73B Low	DP	~~5.5~~ mid 6-8.0	
DP73 DP73C mid	DP	21 -23	

SAMPLING COMMENTS:

DISTRIBUTION: WHITE - PROJECT FILE / CANARY - LAB RECEIPT / PINK - DATA MANAGEMENT / GOLDENROD - FIELD

FW-A9023

JACOBS ENGINEERING GROUP INC.
800 SEVENTEENTH STREET, SUITE 1100N DENVER, COLORADO 80202
TELEPHONE (303) 595 - 8855 FAX (303) 595 - 8857

CHAIN OF CUSTODY RECORD

USE A BALLPOINT PEN, BLACK INK, AND PRESS FIRMLY. INSTRUCTIONS ARE ON THE BACK

PROJECT NAME: NAS FW Pipeline Abandonment

PROJECT NUMBER: 10K70100

WBS CODE:

SUBCONTRACT / D.O. No.

LABORATORY NAME & ADDRESS: Onsite Immunoassay Lab

SAMPLE NUMBER	COLLECTION DATE	COLLECTION TIME	SAMPLER'S INITIALS	NUMBER OF CONTAINERS	CONTAINER SIZE AND TYPE	PRESERVATIVE	MATRIX CODE	ANALYSES REQUESTED	QC	CONDITION ON RECEIPT
FW-A 902301	3/23/95	8:21	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX		
FW-A 902302	3/23/95	8:52	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX		
FW-A 902303	3/23/95	9:28	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX & PAH		
FW-A 902304	3/23/95	9:53	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX & PAH		
FW-A 902305	3/23/95	10:13	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX & ~~PAH~~ MJ		
FW-A 902306	3/23/95	10:41	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX		
FW-A 902307	3/23/95	11:06	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX		
FW-A 902308	3/23/95	11:33	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX		
FW-A 902309	3/23/95	11:53	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX		

COMMENTS:

	DATE	TIME		DATE	TIME
COLLECTED & RELEASED BY	3/23/95	12:20	TURNAROUND TIME		
RECEIVED BY	3/23/95	12:20	RELINQUISHED BY	/ /	:
RECORD RETURNED BY	/ /	:			
			SHIPPING NUMBER:		

INFORMATION IN THIS SECTION FOR JACOBS USE ONLY

LOCATION	SAMPLE TYPE	DEPTH (FT.)	QC CODE
DP72 DP72A	DP	5'-6'	
DP72 DP72B	DP	22.5'-23'	
DP76 DP76A	DP	5'-5.5'	
DP76 DP76B	DP	21.5'-22'	
DP77 DP77A	DP	5.5'-6'	
DP77 DP77B	DP	22.5'-23'	
DP78 DP78A	DP	5'-6'	
DP78 DP78B	DP	21.5'-22'	
DP78 DP78BFD	DUP	21.5'-22'	

SAMPLING COMMENTS:

DISTRIBUTION: WHITE - PROJECT FILE / CANARY - LAB RECEIPT / PINK - DATA MANAGEMENT / GOLDENROD - FIELD

FORM-12.CDR 07-28-95

JACOBS ENGINEERING GROUP INC.
600 SEVENTEENTH STREET, SUITE 1100N DENVER, COLORADO 80202
TELEPHONE (303) 595 - 8855 FAX (303) 595 - 8857

FW-A9024

CHAIN OF CUSTODY RECORD

USE A BALLPOINT PEN, BLACK INK, AND PRESS FIRMLY. INSTRUCTIONS ARE ON THE BACK

PROJECT NAME: NAS FW Pipeline Abandonment

PROJECT NUMBER: 10X70100

WBS CODE:

SUBCONTRACT / D.O. No.

LABORATORY NAME & ADDRESS: Onsite Immunoassay Lab

SAMPLE NUMBER	COLLECTION DATE	COLLECTION TIME	SAMPLER'S INITIALS	NUMBER OF CONTAINERS	CONTAINER SIZE AND TYPE	PRESERVATIVE	MATRIX CODE	ANALYSES REQUESTED	QC	CONDITION ON RECEIPT
FW-A 902401	3/23/95	11:53	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX + PAH		
FW-A 902402				1	24" Sleeve	4 deg C	S	Immunoassay BTEX		
FW-A 902403				1	24" Sleeve	4 deg C	S	Immunoassay BTEX		
FW-A 902404				1	24" Sleeve	4 deg C	S	Immunoassay BTEX		
FW-A 902405				1	24" Sleeve	4 deg C	S	Immunoassay BTEX		
FW-A 902406				1	24" Sleeve	4 deg C	S	Immunoassay BTEX		
FW-A 902407				1	24" Sleeve	4 deg C	S	Immunoassay BTEX		
FW-A 902408				1	24" Sleeve	4 deg C	S	Immunoassay BTEX		
FW-A 902409				1	24" Sleeve	4 deg C	S	Immunoassay BTEX		DDS

COMMENTS:

COLLECTED & RELEASED BY	DATE	TIME	TURNAROUND TIME		
	3/23/95	12:20			
RECEIVED BY	DATE	TIME	RELINQUISHED BY	DATE	TIME
	3/23/95	12:20		/ /	:
RECORD RETURNED BY	DATE	TIME			
	/ /	:	SHIPPING NUMBER:		

INFORMATION IN THIS SECTION FOR JACOBS USE ONLY

LOCATION	SAMPLE TYPE	DEPTH (FT.)	QC CODE
DP-79	DP	53	
DP-79A		61	
			DDS

SAMPLING COMMENTS:

DISTRIBUTION: WHITE - PROJECT FILE / CANARY - LAB RECEIPT / PINK - DATA MANAGEMENT / GOLDENROD - FIELD

FORM-12 COR 07-30-93

FW-A90227

JACOBS ENGINEERING GROUP INC.
600 SEVENTEENTH STREET, SUITE 1100N DENVER, COLORADO 80202
TELEPHONE (303) 595 - 8855 FAX (303) 595 - 8857

CHAIN OF CUSTODY RECORD

USE A BALLPOINT PEN, BLACK INK, AND PRESS FIRMLY. INSTRUCTIONS ARE ON THE BACK

PROJECT NAME: NAS FW Pipeline Abandonment

PROJECT NUMBER: 10K70100

WBS CODE:

SUBCONTRACT / D.O. No.

LABORATORY NAME & ADDRESS: Onsite Immunoassay Lab

SAMPLE NUMBER	COLLECTION DATE	COLLECTION TIME	SAMPLER'S INITIALS	NUMBER OF CONTAINERS	CONTAINER SIZE AND TYPE	PRESERVATIVE	MATRIX CODE	ANALYSES REQUESTED	QC	CONDITION ON RECEIPT
FW-A 902701	4/11/95	15:17	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX		
FW-A 902702	4/11/95	14:57	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX		
FW-A 902703	4/11/95	15:42	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX		
FW-A 902704	4/11/95	16:00	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX		
FW-A 902705	4/11/95	16:17	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX		
FW-A 902706	4/11/95	16:30	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX		
FW-A 902707	4/11/95	16:55	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX & PAH		
FW-A 902708	4/11/95	17:14	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX & PAH		
FW-A 902709	4/11/95	17:14	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX & PAH		

COMMENTS:

COLLECTED & RELEASED BY	DATE	TIME	TURNAROUND TIME		
MJ	4/11/95	18:16			
RECEIVED BY: David D S	4/11/95	18:16	RELINQUISHED BY	DATE	TIME
				/ /	:
RECORD RETURNED BY	DATE	TIME			
	/ /	:	SHIPPING NUMBER:		

INFORMATION IN THIS SECTION FOR JACOBS USE ONLY

LOCATION	SAMPLE TYPE	DEPTH (FT.)	QC CODE
DP-94 DP94B	DP	16.5-17	
DP94 DP94A	DP	4-4.5	
DP-95 DP95A	DP	3-3.5	
DP-95 DP95B	DP	9.5-10	
DP96 DP96A	DP	3.5-4.0	
DP-96 DP96B	DP	9.5-10.0	
DP-97 DP-97A	DP	2.5-3.0	
DP97 DP97B	DP	8.5-9.5	
DP97 Field QC DP97BFD	DUP	8.5-9.5	DUP

SAMPLING COMMENTS:

DISTRIBUTION: WHITE - PROJECT FILE / CANARY - LAB RECEIPT / PINK - DATA MANAGEMENT / GOLDENROD - FIELD

FORM-12.CDR 07-20-94

FW-A 9028

JACOBS ENGINEERING GROUP INC.
800 SEVENTEENTH STREET, SUITE 1100N DENVER, COLORADO 80202
TELEPHONE (303) 595 - 8855 FAX (303) 595 - 8857

CHAIN OF CUSTODY RECORD

USE A BALLPOINT PEN, BLACK INK, AND PRESS FIRMLY. INSTRUCTIONS ARE ON THE BACK

PROJECT NAME: NAS FW Pipeline Abandonment

PROJECT NUMBER: 10X70100

WBS CODE:

SUBCONTRACT / D.O. No.

LABORATORY NAME & ADDRESS: Onsite Immunoassay Lab

SAMPLE NUMBER	COLLECTION DATE	COLLECTION TIME	SAMPLER'S INITIALS	NUMBER OF CONTAINERS	CONTAINER SIZE AND TYPE	PRESERVATIVE	MATRIX CODE	ANALYSES REQUESTED	QC	CONDITION ON RECEIPT
FW-A 902801	4/12/95	8:12	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX & PAH		
FW-A 902802	4/12/95	8:33	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX & PAH		
FW-A 902803	4/12/95	8:54	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX		
FW-A 902804	4/12/95	9:06	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX		
FW-A 902805	4/12/95	9:19	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX & PAH		
FW-A 902806	4/12/95	9:32	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX & PAH		
FW-A 902807	4/12/95	10:31	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX		
FW-A 902808	4/12/95	10:54	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX		
FW-A 902809	4/12/95	10:54	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX		

COMMENTS:

	DATE	TIME
COLLECTED & RELEASED BY	4/12/95	18:47
RECEIVED BY Daniel DSG	4/12/95	18:47
RECORD RETURNED BY	/ /	:

TURNAROUND TIME

RELINQUISHED BY	DATE	TIME
	/ /	:

SHIPPING NUMBER:

INFORMATION IN THIS SECTION FOR JACOBS USE ONLY

LOCATION	SAMPLE TYPE	DEPTH (FT.)	QC CODE
DP-98 High DP98A	DP	4.5-5'	
DP-98 High DP98B	DP	9-10	
DP-99 DP99A	DP	4.5-5'	
DP-99 DP99B	DP	11.5-12'	
DP-100 DP100A	DP	2.5-3'	
DP-100 DP100B	DP	9.5-10'	
DP-101 DP101A	DP	5.5-6'	
DP-101 DP101B	DP	21-22	
DP-101 Field QC DP101BFD	DUP QC	21-22	DUP

SAMPLING COMMENTS:

FW-A 1027

JACOBS ENGINEERING GROUP INC.
600 SEVENTEENTH STREET, SUITE 1100N DENVER, COLORADO 80202
TELEPHONE (303) 595 - 8855 FAX (303) 595 - 8857

CHAIN OF CUSTODY RECORD

USE A BALLPOINT PEN, BLACK INK, AND PRESS FIRMLY. INSTRUCTIONS ARE ON THE BACK

PROJECT NAME: NAS FW Pipeline Abandonment

PROJECT NUMBER: 10K70100

WBS CODE:

SUBCONTRACT / D.O. No.

LABORATORY NAME & ADDRESS: Onsite Immunoassay Lab

SAMPLE NUMBER	COLLECTION DATE	COLLECTION TIME	SAMPLER'S INITIALS	NUMBER OF CONTAINERS	CONTAINER SIZE AND TYPE	PRESERVATIVE	MATRIX CODE	ANALYSES REQUESTED	QC	CONDITION ON RECEIPT
FW-A 902901	4/12/95	11:14	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX		
FW-A 902902	4/12/95	11:34	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX		
FW-A 902903	4/12/95	11:59	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX & PAH		
FW-A 902904	4/12/95	12:16	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX & PAH		
FW-A 902905	4/12/95	14:29	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX & PAH		
FW-A 902906	4/12/95	14:41	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX		
FW-A 902907	4/12/95	14:59	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX		
FW-A 902908	4/12/95	15:18	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX		
FW-A 902909	4/12/95	15:49	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX & PAH		

COMMENTS:

COLLECTED & RELEASED BY	DATE	TIME	TURNAROUND TIME
[illegible]	4/12/95	18:42	

RECEIVED BY	DATE	TIME	RELINQUISHED BY	DATE	TIME
David DS	4/12/95	18:42		/ /	:

RECORD RETURNED BY	DATE	TIME
	/ /	:

SHIPPING NUMBER:

INFORMATION IN THIS SECTION FOR JACOBS USE ONLY

LOCATION	SAMPLE TYPE	DEPTH (FT.)	QC CODE
DP-102 DP102A	DP	5-6'	
DP-102 DP102B	DP	21-22'	
DP-103 DP103A	DP	5-6'	
DP-103 DP103B	DP	14-15'	
DP-103 DP-103C	DP	21-22	
DP-104 DP-104A	DP	5-6'	
DP-104 DP104B	DP	14-15'	
DP-104 DP104C	DP	21-22	
DP-105 DP-105B	DP	14-14'	

SAMPLING COMMENTS:

DISTRIBUTION: WHITE - PROJECT FILE / CANARY - LAB RECEIPT / PINK - DATA MANAGEMENT / GOLDENROD - FIELD

FORM-12.CDR 07 [illegible]

FW-A9030

JACOBS ENGINEERING GROUP INC.
600 SEVENTEENTH STREET, SUITE 1100N DENVER, COLORADO 80202
TELEPHONE (303) 595 - 8855 FAX (303) 595 - 8857

CHAIN OF CUSTODY RECORD

USE A BALLPOINT PEN, BLACK INK, AND PRESS FIRMLY. INSTRUCTIONS ARE ON THE BACK

PROJECT NAME: NAS FW Pipeline Abandonment

PROJECT NUMBER: 10K70100

WBS CODE:

SUBCONTRACT / D.O. No.

LABORATORY NAME & ADDRESS: Onsite Immunoassay Lab

SAMPLE NUMBER	COLLECTION DATE	COLLECTION TIME	SAMPLER'S INITIALS	NUMBER OF CONTAINERS	CONTAINER SIZE AND TYPE	PRESERVATIVE	MATRIX CODE	ANALYSES REQUESTED	QC	CONDITION ON RECEIPT
FW-A 903001	4/12/95	16:10	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX & PAH		
FW-A 903002	4/12/95	16:53	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX		
FW-A 903003	4/12/95	17:12	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX		
FW-A 903004	4/12/95	15:34	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX & PAH		
FW-A 903005	4/12/95	16:31	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX		
FW-A 903006	4/13/95	8:11	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX & PAH		
FW-A 903007	4/13/95	8:11	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX & PAH		
FW-A 903008	4/13/95	8:35	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX & PAH		
FW-A 903009	4/13/95	8:51	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX & ~~PA~~ MJ		

COMMENTS:

	DATE	TIME			
COLLECTED & RELEASED BY	4/13/95	17:25	TURNAROUND TIME		
RECEIVED BY	4/13/95	17:25	RELINQUISHED BY	DATE / /	TIME :
RECORD RETURNED BY	/ /	:			
			SHIPPING NUMBER:		

INFORMATION IN THIS SECTION FOR JACOBS USE ONLY

LOCATION	SAMPLE TYPE	DEPTH (FT.)	QC CODE
DP-105 DP105C	DP	21.5-22.0	
DP-106 DP-106B	DP	14-15	
DP-106 DP106C	DP	21.5-21.0	
DP-105 DP105A	DP	5.5-6.0	
DP-106 DP106A	DP	5.5-6.0	
DP-107 DP107A	DP	4-5	
DP-107 FieldDup DP107AFD	DUP DP	4-5	DUP
DP-107 DP107B	DP	20.5-20.5	
DP-108 DP108A	DP	5.5-6.0	

SAMPLING COMMENTS:

BUTIC ITE - CT FI ANAL AB RE / PIN TA M EMEN OLDEN FIELD FOR

FW-A903

JACOBS ENGINEERING GROUP INC.
600 SEVENTEENTH STREET, SUITE 1100N DENVER, COLORADO 80202
TELEPHONE (303) 595 - 8855 FAX (303) 595 - 8857

CHAIN OF CUSTODY RECORD

USE A BALLPOINT PEN, BLACK INK, AND PRESS FIRMLY. INSTRUCTIONS ARE ON THE BACK

PROJECT NAME: NAS FW Pipeline Abandonment

PROJECT NUMBER: 10K70100

WBS CODE:

SUBCONTRACT / D.O. No.

LABORATORY NAME & ADDRESS: Onsite Immunoassay Lab

SAMPLE NUMBER	COLLECTION DATE	COLLECTION TIME	SAMPLER'S INITIALS	NUMBER OF CONTAINERS	CONTAINER SIZE AND TYPE	PRESERVATIVE	MATRIX CODE	ANALYSES REQUESTED	QC	CONDITION ON RECEIPT
FW-A 903101	4/13/95	9:11	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX		
FW-A 903102	4/13/95	9:30	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX & PAH		
FW-A 903103	4/13/95	10:04	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX & PAH		
FW-A 903104	4/13/95	10:16	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX & PAH		
FW-A 903105	4/13/95	10:53 ~~10:32~~ MJ	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX ~~& PAH~~ DOS		
FW-A 903106	4/13/95	11:12	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX		
FW-A 903107	4/13/95	10:38	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX & PAH		
FW-A 903108	4/13/95	11:39	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX		
FW-A 903109	4/13/95	11:57	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX		

COMMENTS:

	DATE	TIME			
COLLECTED & RELEASED BY	4/13/95	17:25	TURNAROUND TIME		
RECEIVED BY	4/13/95	17:25	RELINQUISHED BY	DATE / /	TIME :
RECORD RETURNED BY	DATE / /	TIME :			
			SHIPPING NUMBER:		

INFORMATION IN THIS SECTION FOR JACOBS USE ONLY

LOCATION	SAMPLE TYPE	DEPTH (FT.)	QC CODE
DP-108 DP108B	DP	20-21	
DP-109 DP109A	DP	4-6	
DP-110 DP110A	DP	5-6	
DP-110 DP110B	DP	11-12	
DP-~~110~~ 111 DP~~110C~~ 111A	DP	5-6 ~~21-22~~ MJ	
DP-111 DP-111B	DP	18-19	
DP110 DP110C	DP	21-22	
DP-113 DP-113A	DP	5-6	
DP-113 DP113B	DP	20-21	

SAMPLING COMMENTS:

DISTRIBUTION: WHITE - PROJECT FILE / CANARY - LAB RECEIPT / PINK - DATA MANAGEMENT / GOLDENROD - FIELD

FORM-12.CDR 07/30/95

FW-A 9032

JACOBS ENGINEERING GROUP INC.
600 SEVENTEENTH STREET, SUITE 1100N DENVER, COLORADO 80202
TELEPHONE (303) 595 - 8855 FAX (303) 595 - 8857

CHAIN OF CUSTODY RECORD

USE A BALLPOINT PEN, BLACK INK, AND PRESS FIRMLY. INSTRUCTIONS ARE ON THE BACK

PROJECT NAME: NAS FW Pipeline Abandonment

PROJECT NUMBER: 10K70100

WBS CODE:

SUBCONTRACT / D.O. No.

LABORATORY NAME & ADDRESS: Onsite Immunoassay Lab

SAMPLE NUMBER	COLLECTION DATE	COLLECTION TIME	SAMPLER'S INITIALS	NUMBER OF CONTAINERS	CONTAINER SIZE AND TYPE	PRESERVATIVE	MATRIX CODE	ANALYSES REQUESTED	QC	CONDITION ON RECEIPT
FW-A 903201	4/13/95	13:51	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX		
FW-A 903202	4/13/95	14:16	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX		
FW-A 903203	4/13/95	14:36	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX		
FW-A 903204	4/13/95	14:47	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX / PAH		
FW-A 903205	4/13/95	15:05	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX / PAH		
FW-A 903206	4/13/95	15:05	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX / PAH		
FW-A 903207	4/13/95	15:34	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX		
FW-A 903208	4/13/95	15:47	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX		
FW-A 903209	4/13/95	16:07	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX / PAH		

COMMENTS:

	DATE	TIME
COLLECTED & RELEASED BY	4/13/95	17:25
RECEIVED BY	4/13/95	17:25
RECORD RETURNED BY	/ /	:

TURNAROUND TIME

RELINQUISHED BY	DATE	TIME
	/ /	:

SHIPPING NUMBER:

INFORMATION IN THIS SECTION FOR JACOBS USE ONLY

LOCATION	SAMPLE TYPE	(FT) DEPTH	QC CODE
DP114 DP114A	DP	5-6'	
DP-114 DP114B	DP	19-20	
DP-115 DP-115A	DP	5-6'	
DP-115 DP115B	DP	11-12	
DP-115 DP115C	DP	19-20	
DP-115 Field QC DP115CFD	DP	19-20	DUP
DP-116 DP116A	DP	5-6	
DP-116 DP116B	DP	19-20'	
DP-117 DP117A	DP	5-6'	

SAMPLING COMMENTS:

HW-A7033

JACOBS ENGINEERING GROUP INC.
600 SEVENTEENTH STREET, SUITE 1100N DENVER, COLORADO 80202
TELEPHONE (303) 595 - 8855 FAX (303) 595 - 8857

CHAIN OF CUSTODY RECORD

USE A BALLPOINT PEN, BLACK INK, AND PRESS FIRMLY. INSTRUCTIONS ARE ON THE BACK

PROJECT NAME: NAS FW Pipeline Abandonment

PROJECT NUMBER: 10K70100

WBS CODE:

SUBCONTRACT / D.O. No.

LABORATORY NAME & ADDRESS: Onsite Immunoassay Lab

SAMPLE NUMBER	COLLECTION DATE	COLLECTION TIME	SAMPLER'S INITIALS	NUMBER OF CONTAINERS	CONTAINER SIZE AND TYPE	PRESERVATIVE	MATRIX CODE	ANALYSES REQUESTED	QC	CONDITION ON RECEIPT
FW-A 903301	4/13/95	16:30	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX /PAH		
FW-A 903302	4/13/95	16:46	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX		
FW-A 903303	4/13/95	17:02	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX		
FW-A 903304	4/14/95	8:53	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX		
FW-A 903305	4/14/95	9:13	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX		
FW-A 903306	4/14/95	9:27	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX /PAH		
FW-A 903307	4/14/95	9:51	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX		
FW-A 903308	4/14/95	10:07	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX /PAH		
FW-A 903309	4/14/95	10:22	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX /PAH		

COMMENTS:

	DATE	TIME		DATE	TIME
COLLECTED & RELEASED BY	4/14/95	15:50	TURNAROUND TIME		
RECEIVED BY Dan DSJ	4/14/95	15:50	RELINQUISHED BY	/ /	:
RECORD RETURNED BY	/ /	:			
			SHIPPING NUMBER:		

INFORMATION IN THIS SECTION FOR JACOBS USE ONLY

LOCATION	SAMPLE TYPE	(FT) DEPTH	QC CODE
DP-117 DP117B	DP	19.5-20	
DP-118 DP118A	DP	5.5-6.0	
DP-118 DP118B	DP	18.5-19.0	
DP-120 DP120A	DP	5.5-6.0	
DP-120 DP120B	DP	18-19	
DP-121 DP121A	DP	5.5-6.0	
DP-121 DP-121B	DP	18.5-19	
DP-122 DP122A	DP	5.5-6.0	
DP-122 DP122B	DP	11-12	

SAMPLING COMMENTS:

DISTRIBUTION: WHITE - PROJECT FILE / CANARY - LAB RECEIPT / PINK - DATA MANAGEMENT / GOLDENROD - FIELD

FORM-12 CDR 07/20/95

FW-A9034

JACOBS ENGINEERING GROUP INC.
600 SEVENTEENTH STREET, SUITE 1100N DENVER, COLORADO 80202
TELEPHONE (303) 595 - 8855 FAX (303) 595 - 8857

CHAIN OF CUSTODY RECORD

USE A BALLPOINT PEN, BLACK INK, AND PRESS FIRMLY. INSTRUCTIONS ARE ON THE BACK

PROJECT NAME: NAS FW Pipeline Abandonment

PROJECT NUMBER: 10X70100

WBS CODE:

SUBCONTRACT / D.O. No.

LABORATORY NAME & ADDRESS: Onsite Immunoassay Lab

SAMPLE NUMBER	COLLECTION DATE	COLLECTION TIME	SAMPLER'S INITIALS	NUMBER OF CONTAINERS	CONTAINER SIZE AND TYPE	PRESERVATIVE	MATRIX CODE	ANALYSES REQUESTED	QC	CONDITION ON RECEIPT
FW-A 903401	4/14/95	10:22	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX / PAH		
FW-A 903402	4/14/95	10:45	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX / PAH		
FW-A 903403	4/14/95	11:04	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX		
FW-A 903404	4/14/95	11:24	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX		
FW-A 903405	4/14/95	11:41	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX / PAH		
FW-A 903406	4/14/95	12:06	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX / PAH		
FW-A 903407	4/14/95	14:35	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX / PAH		
FW-A 903408	4/14/95	14:58	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX / PAH		
FW-A 903409	4/14/95	15:30	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX		

COMMENTS:

	DATE	TIME			
COLLECTED & RELEASED BY	4/14/95	15:50	TURNAROUND TIME		
RECEIVED BY	4/14/95	15:50	RELINQUISHED BY	DATE	TIME
RECORD RETURNED BY	DATE	TIME			
			SHIPPING NUMBER:		

INFORMATION IN THIS SECTION FOR JACOBS USE ONLY

LOCATION	SAMPLE TYPE	(FT) DEPTH	QC CODE
DP-122 Field QC DP122BFD	DP	11-12	Hi DP
DP-122 DP122C	DP	18-20	Hi
DP-123 DP123A	DP	5-6	
DP-123 DP123B	DP	19-20	Low
DP-124 DP124A	DP	5-6	
DP-124 DP124B	DP	19-21 ~~20-22~~	
DP-125 DP125A	DP	5-5	
DP-125 DP125B	DP	18-12	
DP-126 DP126A	DP	5-6	

SAMPLING COMMENTS:

DISTRIBUTION: WHITE - PROJECT FILE / CANARY - LAB RECEIPT / PINK - DATA MANAGEMENT / GOLDENROD - FIELD

FW-A9035

JACOBS ENGINEERING GROUP INC.
600 SEVENTEENTH STREET, SUITE 1100N DENVER, COLORADO 80202
TELEPHONE (303) 595 - 8855 FAX (303) 595 - 8857

CHAIN OF CUSTODY RECORD

USE A BALLPOINT PEN, BLACK INK, AND PRESS FIRMLY. INSTRUCTIONS ARE ON THE BACK

PROJECT NAME: NAS FW Pipeline Abandonment

PROJECT NUMBER: 10K70100

WBS CODE:

SUBCONTRACT / D.O. No.

LABORATORY NAME & ADDRESS: Onsite Immunoassay Lab

SAMPLE NUMBER	COLLECTION DATE	COLLECTION TIME	SAMPLER'S INITIALS	NUMBER OF CONTAINERS	CONTAINER SIZE AND TYPE	PRESERVATIVE	MATRIX CODE	ANALYSES REQUESTED	QC	CONDITION ON RECEIPT
FW-A 903501	4/14/95	16:08	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX		
FW-A 903502	4/14/95	16:08	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX		
FW-A 903503	4/14/95	16:47	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX		
FW-A 903504	4/17/95	8:32	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX /PAH		
FW-A 903505	4/17/95	8:32	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX /PAH		
FW-A 903506	4/17/95	8:55	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX /PAH		
FW-A 903507	4/17/95	9:24	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX		
FW-A 903508	4/17/95	9:44	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX		
FW-A 903509	4/17/95	9:44	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX		

COMMENTS:

COLLECTED & RELEASED BY	DATE	TIME	TURNAROUND TIME
[signature]	4/17/95	17:40	

RECEIVED BY	DATE	TIME	RELINQUISHED BY	DATE	TIME
[signature]	4/17/95	17:40		/ /	:

RECORD RETURNED BY	DATE	TIME
	/ /	:

SHIPPING NUMBER:

INFORMATION IN THIS SECTION FOR JACOBS USE ONLY

LOCATION	SAMPLE TYPE	DEPTH (FT.)	QC CODE
DP-127 DP127A	DP	5-6	
DP-127 Field QC DP127AFD	DUP	5-6	
DP-127 DP127B	DP	20.5-21	
DP-128 DP128A	DP	5-6	
DP-128 Field QC DP128AFD	DUP	5-6	
DP-128 DP128B	DP	20.5-21	
DP-129 DP129A	DP	5-5.5	
DP-130 DP130A	DP	4-4.5	
DP-130 Field QC DP130AFD	DUP	4-4.5	

SAMPLING COMMENTS:

DISTRIBUTION: WHITE - PROJECT FILE / CANARY - LAB RECEIPT / PINK - DATA MANAGEMENT / GOLDENROD - FIELD

FORM-12.CDR 07-30-93

FW-A9036

JACOBS ENGINEERING GROUP INC.
600 SEVENTEENTH STREET, SUITE 1100N DENVER, COLORADO 80202
TELEPHONE (303) 595 - 8855 FAX (303) 595 - 8857

CHAIN OF CUSTODY RECORD

USE A BALLPOINT PEN, BLACK INK, AND PRESS FIRMLY. INSTRUCTIONS ARE ON THE BACK

PROJECT NAME: NAS FW Pipeline Abandonment

PROJECT NUMBER: 10K70100

WBS CODE:

SUBCONTRACT / D.O. No.

LABORATORY NAME & ADDRESS: Onsite Immunoassay Lab

SAMPLE NUMBER	COLLECTION DATE	COLLECTION TIME	SAMPLER'S INITIALS	NUMBER OF CONTAINERS	CONTAINER SIZE AND TYPE	PRESERVATIVE	MATRIX CODE	ANALYSES REQUESTED	QC	CONDITION ON RECEIPT
FW-A 903601	4/17/95	10:09	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX / PAH		
FW-A 903602	4/17/95	10:28	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX		
FW-A 903603	4/17/95	10:41	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX		
FW-A 903604	4/17/95	10:52	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX / PAH		
FW-A 903605	4/17/95	10:56	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX / PAH		
FW-A 903606	4/17/95	11:13	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX		
FW-A 903607	4/17/95	11:26	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX		
FW-A 903608	4/17/95	11:47	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX / PAH		
FW-A 903609	4/17/95	11:58	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX / PAH		

COMMENTS:

COLLECTED & RELEASED BY	DATE	TIME	TURNAROUND TIME		
[signature]	4/17/95	17:40			
RECEIVED BY [signature]	DATE 4/17/95	TIME 17:40	RELINQUISHED BY	DATE / /	TIME :
RECORD RETURNED BY	DATE / /	TIME :			
			SHIPPING NUMBER:		

INFORMATION IN THIS SECTION FOR JACOBS USE ONLY

LOCATION	SAMPLE TYPE	DEPTH (FT.)	QC CODE
DP-131 DP131A	DP	4.5-5.0	
DP-132 DP132A	DP	4.5-5.0	
DP-132 D132B	DP	11.5-12	
DP-133 DP133A	DP ~~DO~~	5.5-6.5	
DP-133 field QC DP133AFD	DUP	5.5-6.5	
DP-134 DP134A	DP	6-6.5	
DP-134 DP134B	DP	11.5-12.0	
DP-135 DP135A	DP	6-6.5	
DP-135 DP135B	DP	8.5-9.0	

SAMPLING COMMENTS:

DISTRIBUTION: WHITE - PROJECT FILE / CANARY - LAB RECEIPT / PINK - DATA MANAGEMENT / GOLDENROD - FIELD

FOR JACOBS USE ONLY

FW-A9037

JACOBS ENGINEERING GROUP INC.
600 SEVENTEENTH STREET, SUITE 1100N DENVER, COLORADO 80202
TELEPHONE (303) 595 - 8855 FAX (303) 595 - 8857

CHAIN OF CUSTODY RECORD

USE A BALLPOINT PEN, BLACK INK, AND PRESS FIRMLY. INSTRUCTIONS ARE ON THE BACK

PROJECT NAME: NAS FW Pipeline Abandonment

PROJECT NUMBER: 10K70100

WBS CODE:

SUBCONTRACT / D.O. No.

LABORATORY NAME & ADDRESS: Onsite Immunoassay Lab

SAMPLE NUMBER	COLLECTION DATE	COLLECTION TIME	SAMPLER'S INITIALS	NUMBER OF CONTAINERS	CONTAINER SIZE AND TYPE	PRESERVATIVE	MATRIX CODE	ANALYSES REQUESTED	QC	CONDITION ON RECEIPT
FW-A 903701	4/17/95	14:21	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX / PAH		
FW-A 903702	4/17/95	14:32	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX / PAH		
FW-A 903703	4/17/95	14:50	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX		
FW-A 903704	4/17/95	14:50	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX		
FW-A 903705	4/17/95	14:59	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX		
FW-A 903706	4/17/95	15:23	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX / PAH		
FW-A 903707	4/17/95	15:29	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX / PAH		
FW-A 903708	4/17/95	16:14	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX		
FW-A 903709	4/17/95	16:30	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX		

COMMENTS:

COLLECTED & RELEASED BY	DATE	TIME	TURNAROUND TIME
[signature]	4/17/95	17:40	

RECEIVED BY	DATE	TIME	RELINQUISHED BY	DATE	TIME
[signature]	4/17/95	17:40		/ /	:

RECORD RETURNED BY	DATE	TIME
	/ /	:

SHIPPING NUMBER:

INFORMATION IN THIS SECTION FOR JACOBS USE ONLY

LOCATION	SAMPLE TYPE	DEPTH (FT)	QC CODE
DP-136 DP136A	DP	5-6	
DP-136 DP136B	DP	9-10	
DP-137 DP-137A	DP	4-5	
DP-137 FieldQC DP137AFD	DUP	4-5	
DP-137 DP137B	DP	9-10	
~~DP-138~~ DP138	DP	4-5	
DP-138 DP138B	DP	9-10	
DP-139 DP139A	DP	5-6	
DP-139 D139B	DP	10-11 ~~9-10~~	

SAMPLING COMMENTS:

FW-A 9038

JACOBS ENGINEERING GROUP INC.
600 SEVENTEENTH STREET, SUITE 1100N DENVER, COLORADO 80202
TELEPHONE (303) 595 - 8855 FAX (303) 595 - 8857

CHAIN OF CUSTODY RECORD

USE A BALLPOINT PEN, BLACK INK, AND PRESS FIRMLY. INSTRUCTIONS ARE ON THE BACK

PROJECT NAME: NAS FW Pipeline Abandonment

PROJECT NUMBER: 10K70100

WBS CODE:

SUBCONTRACT / D.O. No.

LABORATORY NAME & ADDRESS: Onsite Immunoassay Lab

SAMPLE NUMBER	COLLECTION DATE	COLLECTION TIME	SAMPLER'S INITIALS	NUMBER OF CONTAINERS	CONTAINER SIZE AND TYPE	PRESERVATIVE	MATRIX CODE	ANALYSES REQUESTED	QC	CONDITION ON RECEIPT
FW-A 903801	4/18/95	8:30	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX / PAH		
FW-A 903802	4/18/95	8:30	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX / PAH		
FW-A 903803	4/18/95	8:43	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX / PAH		
FW-A 903804	4/18/95	8:59	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX / PAH		
FW-A 903805	4/18/95	9:13	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX		
FW-A 903806	4/18/95	9:26	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX		
FW-A 903807	4/18/95	9:59	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX / PAH		
FW-A 903808	4/18/95	10:12	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX / PAH		
FW-A 903809	4/18/95	10:41	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX		

COMMENTS:

	DATE	TIME
COLLECTED & RELEASED BY [signature]	4/18/95	18:10
RECEIVED BY [signature]	4/18/95	18:10
RECORD RETURNED BY	/ /	:

TURNAROUND TIME

RELINQUISHED BY	DATE	TIME
	/ /	:

SHIPPING NUMBER:

INFORMATION IN THIS SECTION FOR JACOBS USE ONLY

LOCATION	SAMPLE TYPE	DEPTH (FT)	BC CODE
DP-140 DP140A	DP	4-5	
DP-140 Field QC DP140AFD	DUP	4-5	
DP-140 DP140B	DP	10.5-11.0	
DP-140 DP140C	DP	14.5-15	
DP-141 DP141A	DP	5.5-6	
DP-141 DP141B	DP	11.5-12	
DP-142 DP142A	DP	5.5-6.0	
DP-142 DP142B	DP	11.5-12	
DP-143 DP143A	DP	5.5-6.0	

SAMPLING COMMENTS:

FW-A90039

JACOBS ENGINEERING GROUP INC.
600 SEVENTEENTH STREET, SUITE 1100N DENVER, COLORADO 80202
TELEPHONE (303) 595 - 8855 FAX (303) 595 - 8857

CHAIN OF CUSTODY RECORD

USE A BALLPOINT PEN, BLACK INK, AND PRESS FIRMLY. INSTRUCTIONS ARE ON THE BACK

PROJECT NAME: NAS FW Pipeline Abandonment
PROJECT NUMBER: 10K70100
WBS CODE:
SUBCONTRACT / D.O. No.
LABORATORY NAME & ADDRESS: Onsite Immunoassay Lab

SAMPLE NUMBER	COLLECTION DATE	COLLECTION TIME	SAMPLER'S INITIALS	NUMBER OF CONTAINERS	CONTAINER SIZE AND TYPE	PRESERVATIVE	MATRIX CODE	ANALYSES REQUESTED	QC	CONDITION ON RECEIPT
FW-A 903901	4/18/95	10:54	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX / PAH		
FW-A 903902	4/18/95	11:14	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX		
FW-A 903903	4/18/95	11:25	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX		
FW-A 903904	4/18/95	11:52	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX / PAH		
FW-A 903905	4/18/95	12:02	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX / PAH		
FW-A 903906	4/18/95	12:02	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX / PAH		
FW-A 903907	4/18/95	14:14	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX / PAH		
FW-A 903908	4/18/95	14:22	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX / PAH		
FW-A 903909	4/18/95	14:45	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX / PAH		

COMMENTS:

	DATE	TIME
COLLECTED & RELEASED BY	4/18/95	18:10
RECEIVED BY	4/18/95	18:10
RECORD RETURNED BY	/ /	:

TURNAROUND TIME

RELINQUISHED BY	DATE	TIME
	/ /	:

SHIPPING NUMBER:

INFORMATION IN THIS SECTION FOR JACOBS USE ONLY

LOCATION	SAMPLE TYPE	DEPTH (FT)	QC CODE
DP-143 DP143B	DP	11-12"	
DP-144 DP144A	DP	5-6	
DP-144 DP144B	DP	10-10'	
DP-145 DP145A	DP	5-6"	
DP-145 DP145B	DP	11-12	
DP-145 FIELD QC DP145BFD	DUP	11-12	
DP-146 DP146A	DP	5-6	
DP-~~147~~ 146 DP~~147~~ 146B	DP	10-11	
DP-147 DP147A	DP	5-6	

SAMPLING COMMENTS:

DISTRIBUTION: WHITE - PROJECT FILE / CANARY - LAB RECEIPT / PINK - DATA MANAGEMENT / GOLDENROD - FIELD

FORM-12.CDR 07 28 95

FW-A 9040

JACOBS ENGINEERING GROUP INC.
600 SEVENTEENTH STREET, SUITE 1100N DENVER, COLORADO 80202
TELEPHONE (303) 595 - 8855 FAX (303) 595 - 8857

CHAIN OF CUSTODY RECORD

USE A BALLPOINT PEN, BLACK INK, AND PRESS FIRMLY. INSTRUCTIONS ARE ON THE BACK

PROJECT NAME: NAS FW Pipeline Abandonment

PROJECT NUMBER: 10X70100

WBS CODE:

SUBCONTRACT / D.O. No.

LABORATORY NAME & ADDRESS: Onsite Immunoassay Lab

SAMPLE NUMBER	COLLECTION DATE	COLLECTION TIME	SAMPLER'S INITIALS	NUMBER OF CONTAINERS	CONTAINER SIZE AND TYPE	PRESERVATIVE	MATRIX CODE	ANALYSES REQUESTED	QC	CONDITION ON RECEIPT
FW-A 904001	4/18/95	11:36	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX / PAH		
FW-A 904002	4/18/95	15:24	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX / PAH		
FW-A 904003	4/18/95	15:39	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX / PAH		
FW-A 904004	4/18/95	16:03	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX / PAH		
FW-A 904005	4/18/95	16:16	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX / PAH		
FW-A 904006	4/19/95	8:18	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX / PAH		
FW-A 904007	4/19/95	8:35	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX / PAH		
FW-A 904008	4/19/95	8:43	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX		
FW-A 904009	4/19/95	8:51	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX		

COMMENTS:

	DATE	TIME		DATE	TIME
COLLECTED & RELEASED BY	4/19/95	09:30	TURNAROUND TIME		
RECEIVED BY	4/19/95	13:10	RELINQUISHED BY	/ /	:
RECORD RETURNED BY	/ /	:			

SHIPPING NUMBER:

INFORMATION IN THIS SECTION FOR JACOBS USE ONLY

LOCATION	SAMPLE TYPE	(DEPTH) (FT.)	QC CODE
DP-147 DP147B	DP	10-11	
DP-148 DP148A High	DP	5-6	
DP-148 DP148B High	DP	10-11	
DP-149 DP149A High	DP	5-6	
DP-149 DP149B mod	DP	10-11	
DP-150 DP150A Hi	DP	5-6	
DP-150 DP150B mod	DP	10-11	
DP-151 DP151A Hi	DP	5-6	
DP-151 DP151B Hi	DP	9-10	

SAMPLING COMMENTS:

FW-A904 1

JACOBS ENGINEERING GROUP INC.
600 SEVENTEENTH STREET, SUITE 1100N DENVER, COLORADO 80202
TELEPHONE (303) 595 - 8855 FAX (303) 595 - 8857

CHAIN OF CUSTODY RECORD

USE A BALLPOINT PEN, BLACK INK, AND PRESS FIRMLY. INSTRUCTIONS ARE ON THE BACK

PROJECT NAME: NAS FW Pipeline Abandonment

PROJECT NUMBER: 10K70100

WBS CODE:

SUBCONTRACT / D.O. No.

LABORATORY NAME & ADDRESS: Onsite Immunoassay Lab

SAMPLE NUMBER	COLLECTION DATE	COLLECTION TIME	SAMPLER'S INITIALS	NUMBER OF CONTAINERS	CONTAINER SIZE AND TYPE	PRESERVATIVE	MATRIX CODE	ANALYSES REQUESTED	QC	CONDITION ON RECEIPT
FW-A 904101	4/20/95	8:37 8:44	mj	1	24" Sleeve	4 deg C	S	Immunoassay BTEX		
FW-A 904102	4/20/95	8:44	mj	1	24" Sleeve	4 deg C	S	Immunoassay BTEX		
FW-A 904103	4/20/95	9:09	mj	1	24" Sleeve	4 deg C	S	Immunoassay BTEX / PAH		
FW-A 904104	4/20/95	9:09	mj	1	24" Sleeve	4 deg C	S	Immunoassay BTEX / PAH		
FW-A 904105	4/20/95	9:21	mj	1	24" Sleeve	4 deg C	S	Immunoassay BTEX / PAH		
FW-A 904106	4/20/95	9:34	mj	1	24" Sleeve	4 deg C	S	Immunoassay BTEX		
FW-A 904107	4/20/95	9:47	mj	1	24" Sleeve	4 deg C	S	Immunoassay BTEX		
FW-A 904108	4/20/95	10:05	mj	1	24" Sleeve	4 deg C	S	Immunoassay BTEX		
FW-A 904109	4/20/95	10:05	mj	1	24" Sleeve	4 deg C	S	Immunoassay BTEX		

COMMENTS:

	DATE	TIME		DATE	TIME
COLLECTED & RELEASED BY	4/20/95	16:25	TURNAROUND TIME		
RECEIVED BY	4/20/95	16:25	RELINQUISHED BY	/ /	:
RECORD RETURNED BY	/ /	:			
			SHIPPING NUMBER:		

INFORMATION IN THIS SECTION FOR JACOBS USE ONLY

LOCATION	SAMPLE TYPE	DEPTH (FT.)	QC CODE
DP-152 DP152A	DP	5-6	
DP-152 DP152B Hi	DP	9-10	
DP-153 DP152A	DP	5-6	
DP-153 DP152AFD	DUP	5-6	
DP-153 DP-152B Hi	DP	10-11	
DP-154 DP153A	DP	5-6	
DP-154 DP-153B Hi	DP	10-11	
DP-155 DP155A	DP	5-6	
DP-155 DP155AFD	DP	5-6	

SAMPLING COMMENTS:

DISTRIBUTION: WHITE - PROJECT FILE / CANARY - LAB RECEIPT / PINK - DATA MANAGEMENT / GOLDENROD - FIELD

FORM-12.CDR 07/30/95

FW-A9042

JACOBS ENGINEERING GROUP INC.
600 SEVENTEENTH STREET, SUITE 1100N DENVER, COLORADO 80202
TELEPHONE (303) 595 - 8855 FAX (303) 595 - 8857

CHAIN OF CUSTODY RECORD

USE A BALLPOINT PEN, BLACK INK, AND PRESS FIRMLY. INSTRUCTIONS ARE ON THE BACK

PROJECT NAME: NAS FW Pipeline Abandonment

PROJECT NUMBER: 10K70100

WBS CODE:

SUBCONTRACT / D.O. No.

LABORATORY NAME & ADDRESS: Onsite Immunoassay Lab

SAMPLE NUMBER	COLLECTION DATE	COLLECTION TIME	SAMPLER'S INITIALS	NUMBER OF CONTAINERS	CONTAINER SIZE AND TYPE	PRESERVATIVE	MATRIX CODE	ANALYSES REQUESTED	QC	CONDITION ON RECEIPT
FW-A 904201	4/20/95	10:20	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX		
FW-A 904202	4/20/95	10:40	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX		
FW-A 904203	4/20/95	10:50	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX		
FW-A 904204	4/20/95	11:11	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX		
FW-A 904205	4/20/95	11:20	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX		
FW-A 904206	4/20/95	11:43	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX		
FW-A 904207	4/20/95	11:53	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX		
FW-A 904208	4/20/95	11:53	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX		
FW-A 904209	4/20/95	14:34	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX		

COMMENTS:

	DATE	TIME
COLLECTED & RELEASED BY	4/20/95	16:25
RECEIVED BY	4/20/95	16:25
RECORD RETURNED BY	/ /	:

TURNAROUND TIME

RELINQUISHED BY	DATE	TIME
	/ /	:

SHIPPING NUMBER:

INFORMATION IN THIS SECTION FOR JACOBS USE ONLY

LOCATION	SAMPLE TYPE	DEPTH (FT.)	QC CODE
DP-155 DP155A B	DP	10-11	
DP-156 DP156A	DP	5-6	
DP-156 DP156B	DP	9-10	
DP-157 DP157A	DP	5-6	
DP-157 DP-157B	DP	9-10	
DP-158 DP158A	DP	5-6	
DP-158 DP-158B	DP	10-11	
DP-158 Fld QC DP158BFD	DUP	10-11	
DP-159 DP159A	DP	5-6	

SAMPLING COMMENTS:

FW-A9043

JACOBS ENGINEERING GROUP INC.
600 SEVENTEENTH STREET, SUITE 1100N DENVER, COLORADO 80202
TELEPHONE (303) 595 - 8855 FAX (303) 595 - 8857

CHAIN OF CUSTODY RECORD

USE A BALLPOINT PEN, BLACK INK, AND PRESS FIRMLY. INSTRUCTIONS ARE ON THE BACK

PROJECT NAME: NAS FW Pipeline Abandonment

PROJECT NUMBER: 10K70100

WBS CODE:

SUBCONTRACT / D.O. No.

LABORATORY NAME & ADDRESS: Onsite Immunoassay Lab

SAMPLE NUMBER	COLLECTION DATE	COLLECTION TIME	SAMPLER'S INITIALS	NUMBER OF CONTAINERS	CONTAINER SIZE AND TYPE	PRESERVATIVE	MATRIX CODE	ANALYSES REQUESTED	QC	CONDITION ON RECEIPT
FW-A 904301	4/20/95	14:49	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX		
FW-A 904302	4/20/95	15:24	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX /PAH		
FW-A 904303	4/20/95	15:42	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX /PAH		
FW-A 904304	4/20/95	15:56	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX /PAH		
FW-A 904305	4/20/95	16:21	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX /PAH		
FW-A 904306	4/20/95	16:37	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX /PAH		
FW-A 904307	4/20/95	16:37	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX /PAH		
FW-A 904308	4/20/95	17:00	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX /PAH		
FW-A 904309	4/20/95	17:13	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX /PAH		

COMMENTS:

COLLECTED & RELEASED BY	DATE 4/20/95	TIME 16:25	TURNAROUND TIME		
RECEIVED BY	DATE 4/20/95	TIME 16:25	RELINQUISHED BY	DATE / /	TIME :
RECORD RETURNED BY	DATE / /	TIME :			
			SHIPPING NUMBER:		

INFORMATION IN THIS SECTION FOR JACOBS USE ONLY

LOCATION	SAMPLE TYPE	DEPTH (FT.)	QC CODE
DP-159 DP159B			
DP-160 DP160A	DP	5-11	
DP-161 DP161A	DP	5-6	
DP-161 DP161B	DP	10-11	
DP-162 DP162A	DP	5-6	
DP-162 DP-162B	DP	10-11	
DP-162 FRQC DP162BFD	DUP	10-11	
DP-163 DP163A	DP	5-6	
DP-163 DP163B COW	DP	10-11	

SAMPLING COMMENTS:

DISTRIBUTION: WHITE - PROJECT FILE / CANARY - LAB RECEIPT / PINK - DATA MANAGEMENT / GOLDENROD - FIELD

FORM-12 CDR 07-30-95

FW-A9044

JACOBS ENGINEERING GROUP INC.
600 SEVENTEENTH STREET, SUITE 1100N DENVER, COLORADO 80202
TELEPHONE (303) 595 - 8855 FAX (303) 595 - 8857

CHAIN OF CUSTODY RECORD

USE A BALLPOINT PEN, BLACK INK, AND PRESS FIRMLY. INSTRUCTIONS ARE ON THE BACK

PROJECT NAME: NAS FW Pipeline Abandonment

PROJECT NUMBER: 10K70100

WBS CODE:

SUBCONTRACT / D.O. No.

LABORATORY NAME & ADDRESS: Onsite Immunoassay Lab

SAMPLE NUMBER	COLLECTION DATE	COLLECTION TIME	SAMPLER'S INITIALS	NUMBER OF CONTAINERS	CONTAINER SIZE AND TYPE	PRESERVATIVE	MATRIX CODE	ANALYSES REQUESTED	QC	CONDITION ON RECEIPT
FW-A 904401	4/21/95	8:42	mj	1	24" Sleeve	4 deg C	S	Immunoassay BTEX / PAH		
FW-A 904402	4/21/95	8:55	mj	1	24" Sleeve	4 deg C	S	Immunoassay BTEX / PAH		
FW-A 904403	4/21/95	8:55	mj	1	24" Sleeve	4 deg C	S	Immunoassay BTEX / PAH		
FW-A 904404	4/21/95	9:18	mj	1	24" Sleeve	4 deg C	S	Immunoassay BTEX		
FW-A 904405	4/21/95	9:27	mj	1	24" Sleeve	4 deg C	S	Immunoassay BTEX		
FW-A 904406	4/21/95	9:41	mj	1	24" Sleeve	4 deg C	S	Immunoassay BTEX / PAH		
FW-A 904407	4/21/95	9:53	mj	1	24" Sleeve	4 deg C	S	Immunoassay BTEX / PAH		
FW-A 904408	4/21/95	10:06	mj	1	24" Sleeve	4 deg C	S	Immunoassay BTEX		
FW-A 904409	4/21/95	10:15	mj	1	24" Sleeve	4 deg C	S	Immunoassay BTEX		

COMMENTS:

COLLECTED & RELEASED BY	DATE	TIME	TURNAROUND TIME		
	4/21/95	18:00			
RECEIVED BY	DATE	TIME	RELINQUISHED BY	DATE	TIME
Dan SS	4/21/95	18:00		/ /	:
RECORD RETURNED BY	DATE	TIME			
	/ /	:	SHIPPING NUMBER:		

INFORMATION IN THIS SECTION FOR JACOBS USE ONLY

LOCATION	SAMPLE TYPE	(FT.) DEPTH	QC CODE
DP-164 DP164A	DP	5-6	
DP-164 DP-164B	DP	10-11	
DP-164 DP164BFD	DUP	10-11	
DP-165 DP165A	DP	5-6	
DP-165 DP165B	DP	10-11	
DP-166 DP166A	DP	5-6	
DP-166 DP166B	DP	10-11	
DP-167 DP167A	DP	5-6	
DP-167 DP167B	DP	10-11	

SAMPLING COMMENTS:

FORM-12 COR 07/30/92

FW-A9045

JACOBS ENGINEERING GROUP INC.
600 SEVENTEENTH STREET, SUITE 1100N DENVER, COLORADO 80202
TELEPHONE (303) 595 - 8855 FAX (303) 595 - 8857

CHAIN OF CUSTODY RECORD

USE A BALLPOINT PEN, BLACK INK, AND PRESS FIRMLY. INSTRUCTIONS ARE ON THE BACK

PROJECT NAME: NAS FW Pipeline Abandonment

PROJECT NUMBER: 10K70100

WBS CODE:

SUBCONTRACT / D.O. No.

LABORATORY NAME & ADDRESS: Onsite Immunoassay Lab

SAMPLE NUMBER	COLLECTION DATE	COLLECTION TIME	SAMPLER'S INITIALS	NUMBER OF CONTAINERS	CONTAINER SIZE AND TYPE	PRESERVATIVE	MATRIX CODE	ANALYSES REQUESTED	QC	CONDITION ON RECEIPT
FW-A 904501	4/21/95	14:44	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX /PAH		
FW-A 904502	4/21/95	14:54	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX /PAH		
FW-A 904503	4/21/95	15:20	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX /PAH		
FW-A 904504	4/21/95	15:44 ~~15:50~~	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX /PAH		
FW-A 904506 MJ	4/21/95	15:56 ~~16:12~~	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX /PAH		
FW-A 904507 MJ	4/21/95	16:12	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX /PAH		
FW-A 904505 MJ	4/21/95	15:44	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX /PAH		
FW-A 904508	4/24/95	8:43	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX /PAH		
FW-A 904509	4/24/95	8:58	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX /PAH		

COMMENTS:

COLLECTED & RELEASED BY	DATE	TIME	TURNAROUND TIME
[illegible]	4/24/95	16:50	
RECEIVED BY [illegible]	4/24/95	16:50	RELINQUISHED BY / DATE / TIME
RECORD RETURNED BY	DATE / /	TIME :	SHIPPING NUMBER:

INFORMATION IN THIS SECTION FOR JACOBS USE ONLY

LOCATION	SAMPLE TYPE	DEPTH (FT.)	QC CODE
DP-119 DP119A low	DP	5-6	
DP-119 DP119B Low	DP	11-12	
DP-119 DP-119C High	DP	20-21	
DP-112 DP112A mod	DP	5-6 ~~11-12~~	
DP-112 DP112B low	DP	11-12 ~~20-21~~	
DP-112 DP112C low	DP	20-21	
DP112 Field QC DP112AFD mod	DUP	5-6	
DP-168 DP168A	DP	5-6	
DP-168 DP168B	DP	11-11.5	

SAMPLING COMMENTS:

FW-A9046

JACOBS ENGINEERING GROUP INC.
800 SEVENTEENTH STREET, SUITE 1100N DENVER, COLORADO 80202
TELEPHONE (303) 595 - 8856 FAX (303) 595 - 8857

CHAIN OF CUSTODY RECORD

USE A BALLPOINT PEN, BLACK INK, AND PRESS FIRMLY. INSTRUCTIONS ARE ON THE BACK

PROJECT NAME: NAS FW Pipeline Abandonment

PROJECT NUMBER: 10K70100

WBS CODE:

SUBCONTRACT / D.O. No.

LABORATORY NAME & ADDRESS: Onsite Immunoassay Lab

SAMPLE NUMBER	COLLECTION DATE	COLLECTION TIME	SAMPLER'S INITIALS	NUMBER OF CONTAINERS	CONTAINER SIZE AND TYPE	PRESERVATIVE	MATRIX CODE	ANALYSES REQUESTED	QC	CONDITION ON RECEIPT
FW-A 904601	4/24/95	9:23	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX / PAH		
FW-A 904602	4/24/95	9:38	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX		
FW-A 904603	4/24/95	9:50	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX		
FW-A 904604	4/24/95	10:31	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX / PAH		
FW-A 904605	4/24/95	10:44	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX / PAH		
FW-A 904606	4/24/95	10:44	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX / PAH		
FW-A 904607	4/24/95	11:02	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX / PAH		
FW-A 904608	4/24/95	11:21	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX		
FW-A 904609	4/24/95	11:21	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX		

COMMENTS:

	DATE	TIME
COLLECTED & RELEASED BY	4-24-95	16:50
RECEIVED BY	4-24-95	16:50
RECORD RETURNED BY	/ /	:

TURNAROUND TIME

RELINQUISHED BY	DATE	TIME
	/ /	:

SHIPPING NUMBER:

INFORMATION IN THIS SECTION FOR JACOBS USE ONLY

LOCATION	SAMPLE TYPE	DEPTH (FT.)	QC CODE
DP-168 DP168C	DP	19-19	
DP-169 DP169A	DP	5-6	
DP-169 DP169B	DP	11-12	
DP-170 DP170A	DP	4-6	
DP-170 DP170B	DP	11-12	
DP-170 Field QC DP170BFD	DUP	11-12	
DP-170 DP170C	DP	21-22	
DP-171 DP171A	DP	5-6	
DP-171 DP171AFD	DUP	5-6	

SAMPLING COMMENTS:

FW-A 9047

JACOBS ENGINEERING GROUP INC.
600 SEVENTEENTH STREET, SUITE 1100N DENVER, COLORADO 80202
TELEPHONE (303) 595 - 8855 FAX (303) 595 - 8857

CHAIN OF CUSTODY RECORD

USE A BALLPOINT PEN, BLACK INK, AND PRESS FIRMLY. INSTRUCTIONS ARE ON THE BACK

PROJECT NAME: NAS FW Pipeline Abandonment

PROJECT NUMBER: 10K70100

WBS CODE:

SUBCONTRACT / D.O. No.

LABORATORY NAME & ADDRESS: Onsite Immunoassay Lab

SAMPLE NUMBER	COLLECTION DATE	COLLECTION TIME	SAMPLER'S INITIALS	NUMBER OF CONTAINERS	CONTAINER SIZE AND TYPE	PRESERVATIVE	MATRIX CODE	ANALYSES REQUESTED	QC	CONDITION ON RECEIPT
FW-A 904701	4/24/95	11:39	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX		
FW-A 904702	4/24/95	11:49	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX		
FW-A 904703	4/24/95	14:07	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX/PAH		
FW-A 904704	4/24/95	14:07	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX/PAH		
FW-A 904705	4/24/95	14:22	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX/PAH		
FW-A 904706	4/24/95	14:37	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX/PAH		
FW-A 904707	4/24/95	15:31	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX/PAH		
FW-A 904708	4/24/95	15:43	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX/PAH		
FW-A 904709	4/24/95	15:43	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX/PAH		

COMMENTS:

	DATE	TIME
COLLECTED & RELEASED BY	4/24/95	16:50
RECEIVED BY	4/24/95	16:50
RECORD RETURNED BY	/ /	:

TURNAROUND TIME

RELINQUISHED BY	DATE	TIME
	/ /	:

SHIPPING NUMBER:

INFORMATION IN THIS SECTION FOR JACOBS USE ONLY

LOCATION	SAMPLE TYPE	(FT.) DEPTH	QC CODE
DP-171 DP171B	DP	11.5-12	
DP-171 DP171C	DP	21.5-22	
DP-172 DP172A	DP	5.5-6	
DP-172 Field QC DP172AFD	DUP	5.5-6	
DP172 DP172B	DP	10-12	
DP-172 DP172C	DP	20.5-21	
DP-176 DP176A	DP	4.5-5.0	
DP-176 DP176B	DP	9-10	
DP-176 Field QC DP176BFD	DUP	9-10	

SAMPLING COMMENTS:

WHITE - ACC FOST FILE / CANARY - LAB RECEIPT / PINK - DATA MANAGEMENT / GOLDENROD - FIELD

FORM-12 CDR 07/30/93

FW-A9048

JACOBS ENGINEERING GROUP INC.
600 SEVENTEENTH STREET, SUITE 1100N DENVER, COLORADO 80202
TELEPHONE (303) 595 - 8855 FAX (303) 595 - 8857

CHAIN OF CUSTODY RECORD

USE A BALLPOINT PEN, BLACK INK, AND PRESS FIRMLY. INSTRUCTIONS ARE ON THE BACK

PROJECT NAME: NAS FW Pipeline Abandonment

LABORATORY NAME & ADDRESS: Onsite Immunoassay Lab

PROJECT NUMBER: 10K70100

WBS CODE:

SUBCONTRACT / D.O. No.

SAMPLE NUMBER	COLLECTION DATE	COLLECTION TIME	SAMPLER'S INITIALS	NUMBER OF CONTAINERS	CONTAINER SIZE AND TYPE	PRESERVATIVE	MATRIX CODE	ANALYSES REQUESTED	QC	CONDITION ON RECEIPT
FW-A 904801	4/24/95	16:02	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX		
FW-A 904802	4/24/95	16:15	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX		
FW-A 904803	4/25/95	8:25	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX /PAH		
FW-A 904804	4/25/95	8:25	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX /PAH		
FW-A 904805	4/25/95	8:38	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX /PAH		
FW-A 904806	4/25/95	8:57	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX		
FW-A 904807	4/25/95	8:57	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX		
FW-A 904808	4/25/95	9:11	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX		
FW-A 904809	4/25/95	9:31	MJ	1	24" Sleeve	4 deg C	S	Immunoassay BTEX		

COMMENTS:

COLLECTED & RELEASED BY	DATE	TIME	TURNAROUND TIME		
[signature]	4/25/95	12:00			
RECEIVED BY	DATE	TIME	RELINQUISHED BY	DATE	TIME
[signature]	4/25/95	12:05		/ /	:
RECORD RETURNED BY	DATE	TIME			
	/ /	:			
			SHIPPING NUMBER:		

INFORMATION IN THIS SECTION FOR JACOBS USE ONLY

LOCATION	SAMPLE TYPE	(FT.) DEPTH	QC CODE
DP-175 DP175A	DP	5-6	
DP-175 DP175B	DP	7.5-8	
DP-174 DP174A	DP	5-6	
DP-174 FW QC DP174AFD	DUP	5-6	
DP-174 DP174B	DP	9.5-10	
DP-173 DP173A	DP	4-5	
DP-173 FW QC DP173AFD	DUP	4-5	
DP-173 DP173B	DP	9.5-10	
DP-177 DP177A	DP	5-6	

SAMPLING COMMENTS:

JACOBS ENGINEERING GROUP INC.
600 SEVENTEENTH STREET, SUITE 1100N DENVER, COLORADO 80202
TELEPHONE (303) 595 - 8855 FAX (303) 595 - 8857

FW-A9049

CHAIN OF CUSTODY RECORD

USE A BALLPOINT PEN, BLACK INK, AND PRESS FIRMLY. INSTRUCTIONS ARE ON THE BACK

PROJECT NAME: NAS FW Pipeline Abandonment

PROJECT NUMBER: 10K70100

WBS CODE:

SUBCONTRACT / D.O. No.

LABORATORY NAME & ADDRESS: Onsite Immunoassay Lab

SAMPLE NUMBER	COLLECTION DATE	COLLECTION TIME	SAMPLER'S INITIALS	NUMBER OF CONTAINERS	CONTAINER SIZE AND TYPE	PRESERVATIVE	MATRIX CODE	ANALYSES REQUESTED	QC	CONDITION ON RECEIPT
FW-A 904901	4/25/95	9:51	MJ	1	24" Sleeve	4° C	S	Immunoassay BTEX /PAH		
FW-A 904902	4/25/95	10:29	MJ	1	24" Sleeve	4° C	S	Immunoassay BTEX		
FW-A 904903	4/25/95	10:29	MJ	1	24" Sleeve	4° C	S	Immunoassay BTEX		
FW-A 904904	4/25/95	10:47	MJ	1	24" Sleeve	4° C	S	Immunoassay BTEX		
FW-A 904905	4/25/95	11:28	MJ	1	24" Sleeve	4° C	S	Immunoassay BTEX		
FW-A 904906	4/25/95	11:36	MJ	1	24" Sleeve	4° C	S	Immunoassay BTEX		
FW-A 904907	4/25/95	11:36	MJ	1	24" Sleeve	4° C	S	Immunoassay BTEX		
~~FW-A 904908~~				1	24" Sleeve	4° C	S	Immunoassay BTEX		
FW-A 904909				1	24" Sleeve	4° C	S	Immunoassay BTEX		DOS

COMMENTS:

COLLECTED & RELEASED BY	DATE	TIME	TURNAROUND TIME		
	4/25/95	12:05			
RECEIVED BY Dan S	DATE	TIME	RELINQUISHED BY	DATE	TIME
	4/25/95	12:05		/ /	:
RECORD RETURNED BY	DATE	TIME			
	/ /	:	SHIPPING NUMBER:		

INFORMATION IN THIS SECTION FOR JACOBS USE ONLY

LOCATION	SAMPLE TYPE	DEPTH (FT)	QC CODE
DP-178 DP178A	DP	4-4.5	
DP-179 DP179A	DP	5-6	
DP-179 DP179AFD	DUP	5-6	
DP-~~180~~ 179 mg DP-179B	DP	21-22	
DP-180 DP180A	DP	5-6	
DP-180 DP180B	DP	21-22	
DP-180 FW QC DP180BFD	DUP	21-22	

SAMPLING COMMENTS:

DISTRIBUTION: WHITE - PROJECT FILE / CANARY - LAB RECEIPT / PINK - DATA MANAGEMENT / GOLDENROD - FIELD

FORM-12.CDR 07-10-95

FW-A1001

JACOBS ENGINEERING GROUP INC.
600 SEVENTEENTH STREET, SUITE 1100N DENVER, COLORADO 80202
TELEPHONE (303) 595 - 8855 FAX (303) 595 - 8867

CHAIN OF CUSTODY RECORD

USE A BALLPOINT PEN, BLACK INK, AND PRESS FIRMLY. INSTRUCTIONS ARE ON THE BACK

PROJECT NAME: NAS Ft. Worth

PROJECT NUMBER:

WBS CODE:

SUBCONTRACT / D.O. No.

LABORATORY NAME & ADDRESS: CKY INC
630 MAPLE AVE
TORRANCE, CA

SAMPLE NUMBER	COLLECTION DATE	COLLECTION TIME	SAMPLER'S INITIALS	NUMBER OF CONTAINERS	CONTAINER SIZE AND TYPE	PRESERVATIVE	MATRIX CODE	ANALYSES REQUESTED	QC	CONDITION ON RECEIPT
FW-A 100101	3/9/95	14:22	MJ	1	4 oz glass	—	S	BTEX & PAH		
FW-A 100102	3/9/95	14:45	MJ	1	4 oz glass	—	S	BTEX & PAH (48-hr)		
FW-A 100103	3/9/95	1840	DDS	2	40 ml VOA	HCl	W	BTEX ~~& PAH~~ DDS		
FW-A 100104	3/9/95	1840	DDS	1	1 Liter	$Na_2S_2O_3$	W	PAH		
FW-A 100201	3/10/95	10:30	MJ	1	4 oz glass	—	S	BTEX & PAH		
FW-A 100202	3/10/95	10:36	MJ	1	4 oz glass	—	S	BTEX & PAH (48-hr)		
FWA 100301	3/10/95	15:58	MJ	1	4 oz glass	—	S	BTEX (48-hr.)		
FW-A 100302	3/10/95	19:50	DDS	2	40 ml VOA	HCl	W	BTEX		
FW-A 100303	3/10/95	19:50	DDS	1	1-Liter	$Na_2S_2O_3$	W	PAH		

COMMENTS:

COLLECTED & RELEASED BY	DATE	TIME	TURNAROUND TIME 48-Hour on Selected Samples	DATE	TIME
[signature]	3/13/95	17:10			
RECEIVED BY	/ /	:	RELINQUISHED BY	/ /	:
RECORD RETURNED BY	/ /	:			
			SHIPPING NUMBER: 4786919826		

INFORMATION IN THIS SECTION FOR JACOBS USE ONLY

LOCATION	SAMPLE TYPE	DEPTH (')	QC CODE
DP-6 DP-6A	DP	5-6	
DP-6 DP-6B	DP	11-12	
FIELDQC DP8EB	QC	—	
FIELDQC DP-8EB	QC	—	
DP-11 Duplicate DP-11B	DUP QC	12.5-13	
DP-11 DP11B	DP	12.5-13	
DP-15 DP-15A	DP	5-6	
FIELDQC DP-15 EB	QC	—	
FIELDQC DP-15EB	QC	—	

SAMPLING COMMENTS:

DISTRIBUTION: WHITE - PROJECT FILE / CANARY - LAB RECEIPT / PINK - DATA MANAGEMENT / GOLDENROD - FIELD

FORM-12.CDR 07/30/95

FW-A1004

JACOBS ENGINEERING GROUP INC.
600 SEVENTEENTH STREET, SUITE 1100N DENVER, COLORADO 80202
TELEPHONE (303) 595 - 8855 FAX (303) 595 - 8857

CHAIN OF CUSTODY RECORD

USE A BALLPOINT PEN, BLACK INK, AND PRESS FIRMLY. INSTRUCTIONS ARE ON THE BACK

PROJECT NAME: NAS - Ft. Worth
PROJECT NUMBER: 10K70100
WBS CODE:
SUBCONTRACT / D.O. No.
LABORATORY NAME & ADDRESS: CKY INC.
630 MAPLE AVE
TORRANCE, CA

SAMPLE NUMBER	COLLECTION DATE	COLLECTION TIME	SAMPLER'S INITIALS	NUMBER OF CONTAINERS	CONTAINER SIZE AND TYPE	PRESERVATIVE	MATRIX CODE	ANALYSES REQUESTED	QC	CONDITION ON RECEIPT
FW-A 100401	3/13/95	1400	DOS	2	40 ml VOA	HCl	W	SW8020		
										DOS

COMMENTS:

COLLECTED & RELEASED BY	DATE	TIME	TURNAROUND TIME
Dan Sg	3/13/95	17:10	

RECEIVED BY	DATE	TIME	RELINQUISHED BY	DATE	TIME
	/ /	:		/ /	:

RECORD RETURNED BY	DATE	TIME
	/ /	:

SHIPPING NUMBER: 4786919826

INFORMATION IN THIS SECTION FOR JACOBS USE ONLY

LOCATION	SAMPLE TYPE	DEPTH (FT.)	QC CODE
FIELDQC DP-17T8	QC		
			DOS

SAMPLING COMMENTS:

Trip Blank

FW-A1005

JACOBS ENGINEERING GROUP INC.
600 SEVENTEENTH STREET, SUITE 1100N DENVER, COLORADO 80202
TELEPHONE (303) 595 - 8855 FAX (303) 595 - 8857

CHAIN OF CUSTODY RECORD

USE A BALLPOINT PEN, BLACK INK, AND PRESS FIRMLY. INSTRUCTIONS ARE ON THE BACK

PROJECT NAME: NAS - FT WORTH
PROJECT NUMBER: 10K 70100
WBS CODE:
SUBCONTRACT / D.O. No.
LABORATORY NAME & ADDRESS: CKY INC.
630 MAPLE AVE
TORRANCE CA

	SAMPLE NUMBER	COLLECTION DATE	COLLECTION TIME	SAMPLER'S INITIALS	NUMBER OF CONTAINERS	CONTAINER SIZE AND TYPE	PRESERVATIVE	MATRIX CODE	ANALYSES REQUESTED	QC	CONDITION ON RECEIPT
/	FW-A100501	3/13/95	1830	DDS	2	40 ml VOA	HCl	W	SW8020 BTEX		
/	FW-A100502	3/13/95	1830	DDS	1	1-L amber	$Na_2S_2O_3$	W	SW 8310 PAH		
/	FW-A100503	3/14/95	9:39	MJ	1	402 glass	4°C	S	SW 8020 BTEX SW 8310 PAH		
/	FW-A100504	3/14/95	18:00	MJ	2	40 ml VOA	HCl	W	SW8020 BTEX		
/	FW-A100505	3/14/95	18:00	MJ	1	1-L amber	$Na_2S_2O_3$	W	SW 8310 PAH		
/	FW-A100506	3/15/95	10:49	MJ	1	40 oz glass	4°C	S	SW 8020 BTEX		
/	FW-A100507	3/15/95	18:55	DDS	2	40 ml VOA	HCl	W	SW8020 BTEX		
/	FW-A100508	3/16/95	15:16	MJ	1	402 glass	4°C	S	SW 8020 BTEX		
/	FW-A100509	3/16/95	19:07	DDS	2	40 ml VOA	HCl	W	SW8020 BTEX		

COMMENTS:

COLLECTED & RELEASED BY	DATE	TIME	TURNAROUND TIME		
[illegible]	3/17/95	18:00			
RECEIVED BY	DATE	TIME	RELINQUISHED BY	DATE	TIME
	/ /	:		/ /	:
RECORD RETURNED BY	DATE	TIME			
	/ /	:	SHIPPING NUMBER:		

INFORMATION IN THIS SECTION FOR JACOBS USE ONLY

LOCATION	SAMPLE TYPE	DEPTH (FT.)	QC CODE
FIELDQC DP-21EB	QC		
FIELDQC DP-21EB	QC		
DP-23 DP-23A	DP		
FIELD QC DP-26B	QC		
FIELD QC DP-26B	QC		
~~FIELD QC~~ DP-29B	~~MJ~~ DP		
FIELDQC DP-29EB	QC		
DP38 DP38A	DP		
FIELDQC DP38A	QC		

SAMPLING COMMENTS:

DISTRIBUTION: WHITE - PROJECT FILE / CANARY - LAB RECEIPT / PINK - DATA MANAGEMENT / GOLDENROD - FIELD

FORM-12.CDR 07/20/95

JACOBS ENGINEERING GROUP INC.
600 SEVENTEENTH STREET, SUITE 1100N DENVER, COLORADO 80202
TELEPHONE (303) 595 - 8855 FAX (303) 595 - 8857

FW-A1006

CHAIN OF CUSTODY RECORD

USE A BALLPOINT PEN, BLACK INK, AND PRESS FIRMLY. INSTRUCTIONS ARE ON THE BACK

PROJECT NAME: NAS- FT. WORTH
PROJECT NUMBER: 10K70100
WBS CODE:
SUBCONTRACT / D.O. No.

LABORATORY NAME & ADDRESS: CKY INC.
630 MAPLE AVE.
TORRANCE CA

SAMPLE NUMBER	COLLECTION DATE	COLLECTION TIME	SAMPLER'S INITIALS	NUMBER OF CONTAINERS	CONTAINER SIZE AND TYPE	PRESERVATIVE	MATRIX CODE	ANALYSES REQUESTED	QC	CONDITION ON RECEIPT
FW-A100601	3/17/95	1110	MJ	1	4 oz glass	4°C	S	SW 8020 BTEX		
FW-A100602	3/17/95	1700	MJ	1	4 oz glass	4°C	S	SW 8020 BTEX SW 8310 PAH		
FW-A100603	3/17/95	1710	DDS	2	40 ml VOA	HCl	W	SW8020 BTEX		
FW-A100604	3/17/95	1815	DDS	2	40 ml VOA	HCl	W	SW8020 BTEX		
FW-A100605	3/17/95	1815	DDS	1	1 Liter AMBER	$Na_2S_2O_3$	W	SW8310 PAH		
										DDS

COMMENTS:

COLLECTED & RELEASED BY	DATE	TIME	TURNAROUND TIME
[signature]	3/17/95	1800	

RECEIVED BY	DATE	TIME	RELINQUISHED BY	DATE	TIME
	/ /	:		/ /	:

RECORD RETURNED BY	DATE	TIME	SHIPPING NUMBER:
	/ /	:	

INFORMATION IN THIS SECTION FOR JACOBS USE ONLY

LOCATION	SAMPLE TYPE	DEPTH FT	QC CODE
DP44 DP44B	DP	11-13	
DP16 DP16B	DP	13-14	
FIELDQC DP16TB	QC	—	
FIELDQC DP16EB	QC	—	
FIELDQC DP16EB	QC	—	

SAMPLING COMMENTS:

FW-A100T

JACOBS ENGINEERING GROUP INC.
600 SEVENTEENTH STREET, SUITE 1100N DENVER, COLORADO 80202
TELEPHONE (303) 595 - 8855 FAX (303) 595 - 8857

CHAIN OF CUSTODY RECORD

USE A BALLPOINT PEN, BLACK INK, AND PRESS FIRMLY. INSTRUCTIONS ARE ON THE BACK

PROJECT NAME: NAS Ft Worth

PROJECT NUMBER: 10K 20100

WBS CODE:

SUBCONTRACT / D.O. No.

LABORATORY NAME & ADDRESS: CKY INC
630 MAPLE AVE.
TORRANCE CA 90503

SAMPLE NUMBER	COLLECTION DATE	COLLECTION TIME	SAMPLER'S INITIALS	NUMBER OF CONTAINERS	CONTAINER SIZE AND TYPE	PRESERVATIVE	MATRIX CODE	ANALYSES REQUESTED	QC	CONDITION ON RECEIPT
FW-A100701	3/18/95	13:45	MJ	1	1 L Glass	4°C	S	SW 8020 BTEX		
FW-A100702	3/18/95	17:00	MJ	2	40 mL VOA	HCl	W	SW8020 BTEX		
~~FW-A100703~~	~~3/18/95~~	~~17:00~~	~~MJ~~	~~MJ~~						
FW-A100703	3/20/95	13:10	MJ	1	4 oz Glass	4°C	S	SW 8020 BTEX		
FW-A100806 ~~FW-A100704~~ DOS	3/20/95	18:20	DOS	2	40 ml VOA	HCl	W	SW8020 BTEX		
FW-A100705	3/21/95	9:07	MJ	1	4 oz Glass	4°C	S	SW 8020; 8310 BTEX & PAH		
FW-A100706	3/21/95	9:03	MJ	1	4 oz Glass	4°C	S	SW 8020 & 8310 BTEX & PAH		
FW-A100707	3/21/95	12:44	MJ	2	2 40 mL VOAs	HCl	W	SW 8020 BTEX		
FW-A100708	3/21/95	12:44	MJ		1 L Amber	NaOH	W	SW 8310 PAH		

COMMENTS:

COLLECTED & RELEASED BY	DATE	TIME	TURNAROUND TIME
Michael [illegible]	3/21/95	18:12	

RECEIVED BY	DATE	TIME	RELINQUISHED BY	DATE	TIME
	/ /	:		/ /	:

RECORD RETURNED BY	DATE	TIME
	/ /	:

SHIPPING NUMBER: 4786919756

INFORMATION IN THIS SECTION FOR JACOBS USE ONLY

LOCATION	SAMPLE TYPE	DEPTH (ft)	WBS CODE
DP12 DP12A	DP	4-6	
DP12 Field QC DP12AEB	EB	—	
DP56 DP56A	DP	5-6	
FIELD QC DP-56EB	QC	—	
DP61 DP61A	DP	4-6	
DP61 Field QC DP61AFD	DUP	4-6	
FIELD QC DP67 EB	QC	—	
FIELD QC DP67 EB	QC		

SAMPLING COMMENTS:

DISTRIBUTION: WHITE - PROJECT FILE / CANARY - LAB RECEIPT / PINK - DATA MANAGEMENT / GOLDENROD - FIELD

FORM-12 CDR 07 30 93

JACOBS ENGINEERING GROUP INC.
600 SEVENTEENTH STREET, SUITE 1100N DENVER, COLORADO 80202
TELEPHONE (303) 595 - 8655 FAX (303) 595 - 8657

FW-A1008

CHAIN OF CUSTODY RECORD

USE A BALLPOINT PEN, BLACK INK, AND PRESS FIRMLY. INSTRUCTIONS ARE ON THE BACK

PROJECT NAME: NAS FT. WORTH
PROJECT NUMBER: 10K70100
WBS CODE:
SUBCONTRACT / D.O. No.

LABORATORY NAME & ADDRESS: CKY INC.
630 MAPLE AVE.
TORRANCE CA 90503

SAMPLE NUMBER	COLLECTION DATE	COLLECTION TIME	SAMPLER'S INITIALS	NUMBER OF CONTAINERS	CONTAINER SIZE AND TYPE	PRESERVATIVE	MATRIX CODE	ANALYSES REQUESTED	QC	CONDITION ON RECEIPT
1 FW-A100801	3/22/95	16:10	MJ	1	1/02 glass	4°C	S	SW 8020 & 8310 BTEX & PAH		
1 FW-A100802	3/22/95	16:43	MJ	1	1 oz glass	4°C	S	SW 8020 & 8310 BTEX & PAH		
FW-A100803	3/22/95	17:43	MJ	2	40 ml Vial	HCl	W	SW 8020 BTEX		
1 FW-A100804	3/22/95	17:43	MJ	1	1 L Amber	$Na_2S_2O_3$	W	SW 8310 PAH		
1 ~~FW-A100805~~	3/23/95	0818	DAS	2	40 ml VOA	HCl	W	SW8020 BTEX		
			DAS 3/23/95							DAS 3/23/95

LOCATION	SAMPLE TYPE	DEPTH (FT)	QC CODE
DP73	DP	6-8	
DP73B			
DP73	DP	21-23	
DP73C			
FIELD QC DP73 EB	QC	—	
FIELD QC DP73 EB	QC	—	
FIELDQC DP73 TB	QC	—	

INFORMATION IN THIS SECTION FOR JACOBS USE ONLY

COMMENTS: Line 5 is valid sample. Line was drawn through by mistake
D. Schly 3/23/95

SAMPLING COMMENTS:

COLLECTED & RELEASED BY	DATE	TIME	TURNAROUND TIME
[signature]	3/22/95	18:11	

RECEIVED BY	DATE	TIME	RELINQUISHED BY	DATE	TIME
	/ /	:		/ /	:

RECORD RETURNED BY	DATE	TIME
	/ /	:

SHIPPING NUMBER: 4786919756

DISTRIBUTION: WHITE - PROJECT FILE / CANARY - LAB REPORT / PINK - DATA MANAGEMENT / GOLDENROD - FIELD

Addendum to FW-A1007/1008

JACOBS ENGINEERING GROUP INC.
600 SEVENTEENTH STREET, SUITE 1100N DENVER, COLORADO 80202
TELEPHONE (303) 595 - 8855 FAX (303) 595 - 8857

CHAIN OF CUSTODY RECORD

USE A BALLPOINT PEN, BLACK INK, AND PRESS FIRMLY. INSTRUCTIONS ARE ON THE BACK

PROJECT NAME: NAS Ft Worth
PROJECT NUMBER: 10K70100
WBS CODE:
SUBCONTRACT / D.O. No.

LABORATORY NAME & ADDRESS: CKY INC.
630 Maple Ave
Torrance CA 90503

SAMPLE NUMBER	COLLECTION DATE	COLLECTION TIME	SAMPLER'S INITIALS	NUMBER OF CONTAINERS	CONTAINER SIZE AND TYPE	PRESERVATIVE	MATRIX CODE	ANALYSES REQUESTED	QC	CONDITION ON RECEIPT
FW-A100704	3/20/95	14:59	MJ	1	4 oz. Glass	4°C	S	SW8020 BTEX		

COMMENTS:

COLLECTED & RELEASED BY	DATE	TIME	TURNAROUND TIME
Dan Sj	3/23/95	09:30	

RECEIVED BY	DATE	TIME	RELINQUISHED BY	DATE	TIME
	/ /	:		/ /	:

RECORD RETURNED BY	DATE	TIME
	/ /	:

SHIPPING NUMBER: 4786919756

INFORMATION IN THIS SECTION FOR JACOBS USE ONLY

LOCATION	SAMPLE TYPE	(FT DEPTH)	QC CODE
DP-56 DP56B	DP	21.5 - 22.0	

SAMPLING COMMENTS:

Sample was omitted from C of C FWA1007.

DISTRIBUTION: WHITE - PROJECT FILE / CANARY - LAB RECEIPT / PINK - DATA MANAGEMENT / GOLDENROD - FIELD

FORM-12 CDR 07-28-95

JACOBS ENGINEERING GROUP INC.
600 SEVENTEENTH STREET, SUITE 1100N DENVER, COLORADO 80202
TELEPHONE (303) 595 - 8855 FAX (303) 595 - 8857

FW-A1009

CHAIN OF CUSTODY RECORD

USE A BALLPOINT PEN, BLACK INK, AND PRESS FIRMLY. INSTRUCTIONS ARE ON THE BACK

PROJECT NAME: NAS FT WORTH
PROJECT NUMBER: 10K70100
WBS CODE:
SUBCONTRACT / D.O. No.

LABORATORY NAME & ADDRESS: CKY INC.
630 MAPLE AVE
TORRANCE CA

SAMPLE NUMBER	COLLECTION DATE	COLLECTION TIME	SAMPLER'S INITIALS	NUMBER OF CONTAINERS	CONTAINER SIZE AND TYPE	PRESERVATIVE	MATRIX CODE	ANALYSES REQUESTED	QC	CONDITION ON RECEIPT
FW-A100501	4/11/95	9:22	MJ	1	4 oz glass	4°C	S	BTEX SW-8020		
FW-A100502	4/11/95	18:35	MJ	2	40 ml vial	HCl	W	BTEX SW 8020		
FW-A100503	4/12/95	8:30	MJ	1	4 oz glass	4°C	S	BTEX SW 8020 PAH SW 8310		
FW-A100504	4/12/95	14:25	MJ	1	4 oz glass	4°C	S	BTEX SW-8020 PAH SW 8310		
FW-A100505	4/12/95	16:53	MJ	1	4 oz glass	4°C	S	BTEX SW 8020		
FW-A100506	4/12/95	18:22	MJ	1	1 L Amber	$Na_2S_2O_3$	W	PAH SW 8310		
FW-A100507	4/12/95	18:22	MJ	2	40 ml VOC	HCl	W	BTEX SW 8020		
FW-A100508	4/13/95	9:11	MJ	1	4 oz glass	4°C	S	BTEX SW 8020		
FW-A100509	4/13/95	9:30	MJ	1	4 oz glass	4°C	S	SW 8020, SW 8310 BTEX, PAH		

COMMENTS:

COLLECTED & RELEASED BY	DATE	TIME	TURNAROUND TIME
Dan Sg	4/14/95	18:44	

RECEIVED BY	DATE	TIME	RELINQUISHED BY	DATE	TIME
	/ /	:		/ /	:

RECORD RETURNED BY	DATE	TIME
	/ /	:

SHIPPING NUMBER: 478690 5443

INFORMATION IN THIS SECTION FOR JACOBS USE ONLY

LOCATION	SAMPLE TYPE	DEPTH (FT.)	QC CODE
DP-87 DP87A	DP	4-5	
DP-87 Field QC DP87AEB	EB	/	
DP-98 DP98B		9-10	
DP-103 DP103C	DP	21-22	
DP-106 DP-106B	DP	14-15	
Field QC DP98BEB	QC	/	
Field QC DP106BEB	QC	/	
DP-108 DP-108B	DP	20-21	
DP-109 DP109A	DP	4-6	

SAMPLING COMMENTS:

FW-A1010

JACOBS ENGINEERING GROUP INC.
600 SEVENTEENTH STREET, SUITE 1100N DENVER, COLORADO 80202
TELEPHONE (303) 595 - 8855 FAX (303) 595 - 8857

CHAIN OF CUSTODY RECORD

USE A BALLPOINT PEN, BLACK INK, AND PRESS FIRMLY. INSTRUCTIONS ARE ON THE BACK

PROJECT NAME: NAS Ft WORTH
PROJECT NUMBER: 101C70100
WBS CODE:
SUBCONTRACT / D.O. No.

LABORATORY NAME & ADDRESS: CKY INC.
630 MAPLE AVE
TORRANCE CA

SAMPLE NUMBER	COLLECTION DATE	COLLECTION TIME	SAMPLER'S INITIALS	NUMBER OF CONTAINERS	CONTAINER SIZE AND TYPE	PRESERVATIVE	MATRIX CODE	ANALYSES REQUESTED	QC	CONDITION ON RECEIPT
FW-A 101001	4/13/95	14:16	MJ	1	4 oz glass	4°C	S	SW 8020 BTEX		
FW-A 101002	4/13/95	14:47	MJ	1	4 oz glass	4°C	S	SW 8020 BTEX SW 8310 PAH		
FW-A 101003	4/13/95	18:29	MJ	2	40 ml Vial	HCl	W	SW 8020 BTEX		
FW-A 101004	4/13/95	18:29	MJ	1	1 L Amber	NaS_2O_3	W	SW 8310 PAH		
FW-A 101005	4/14/95	9:13	MJ	1	4 oz glass	4°C	S	SW 8020 BTEX		
FW-A 101006	4/14/95	10:45	MJ	1	4 oz glass	4°C	S	SW 8020 BTEX SW 8310 PAH		
FW-A 101007	4/14/95	12:06	MJ	1	4 oz glass	4°C	S	SW 8020 BTEX SW 8310 PAH		
FW-A 101008	4/14/95	1755	MJ DDS	2	40 ml VOA	HCl	W	SW8020 BTEX		
								DDS		

INFORMATION IN THIS SECTION FOR JACOBS USE ONLY

LOCATION	SAMPLE TYPE	DEPTH (FT.)	QC CODE
DP-114 DP114B	DP	15-20	
DP-115 DP115B	DP	11-12	
DP-115 FieldQC DP115BEB	EB	—	
DP-115 Field QC DP115BEB	EB	—	
DP-120 DP120B	DP	18-19	
DP-122 DP122B	DP	18-20	
DP-124 DP124B	DP	19-21	
FIELD QC DP124BTB	QC	—	

COMMENTS:

SAMPLING COMMENTS:

COLLECTED & RELEASED BY: [signature] DATE 4/14/95 TIME 14:00
TURNAROUND TIME

RECEIVED BY	DATE	TIME	RELINQUISHED BY	DATE	TIME
	/ /	:		/ /	:
RECORD RETURNED BY	/ /	:			

SHIPPING NUMBER: 4786905443

DISTRIBUTION: WHITE - PROJECT FILE / CANARY - LAB RECEIPT / PINK - DATA MANAGEMENT / GOLDENROD - FIELD

FORM-12.CDR 07-28-95

JACOBS ENGINEERING GROUP INC.
600 SEVENTEENTH STREET, SUITE 1100N DENVER, COLORADO 80202
TELEPHONE (303) 595 - 8855 FAX (303) 595 - 8857

FW-A1011

CHAIN OF CUSTODY RECORD

USE A BALLPOINT PEN, BLACK INK, AND PRESS FIRMLY. INSTRUCTIONS ARE ON THE BACK

PROJECT NAME: NAS FT WORTH

PROJECT NUMBER: 10K70100

WBS CODE:

SUBCONTRACT / D.O. No.

LABORATORY NAME & ADDRESS: CKY INC.
630 MAPLE AVE
TORRANCE CA

SAMPLE NUMBER	COLLECTION DATE	COLLECTION TIME	SAMPLER'S INITIALS	NUMBER OF CONTAINERS	CONTAINER SIZE AND TYPE	PRESERVATIVE	MATRIX CODE	ANALYSES REQUESTED	QC	CONDITION ON RECEIPT
FW-A 101101	11/14/95	1836	[illegible]	2	40 mL Vial	HCl	W	SW 8020 BTEX		
FW-A 101102	11/14/95	1836	[illegible]	1	1 L Amber	$Na_2S_2O_3$	W	SW 8310 PAH		

DDS

COMMENTS:

COLLECTED & RELEASED BY	DATE	TIME	TURNAROUND TIME
[illegible]	11/14/95	18:40	

RECEIVED BY	DATE	TIME	RELINQUISHED BY	DATE	TIME
	/ /	:		/ /	:

RECORD RETURNED BY	DATE	TIME
	/ /	:

SHIPPING NUMBER: 4786905443

INFORMATION IN THIS SECTION FOR JACOBS USE ONLY

LOCATION	SAMPLE TYPE	DEPTH (FT)	QC CODE
DP-122 Field QC DP122CEB	EB	—	
DP-122 Field QC DP122CEB	EB	—	

DDS

SAMPLING COMMENTS:

DISTRIB. WHITE - PROJECT FILE; CANARY - PAR REPORT / PINK - DATA MANAGEMENT / GOLDENROD - FIELD

FORM 12 CDR 07/30/95

FW-A101C

JACOBS ENGINEERING GROUP INC.
600 SEVENTEENTH STREET, SUITE 1100N DENVER, COLORADO 80202
TELEPHONE (303) 595 - 8855 FAX (303) 595 - 8857

CHAIN OF CUSTODY RECORD

USE A BALLPOINT PEN, BLACK INK, AND PRESS FIRMLY. INSTRUCTIONS ARE ON THE BACK

PROJECT NAME: NAS FT. WORTH

PROJECT NUMBER: 10K70100

WBS CODE:

SUBCONTRACT / D.O. No.

LABORATORY NAME & ADDRESS: CKY INC.
630 MAPLE AVE.
TORRANCE CA 90503

SAMPLE NUMBER	COLLECTION DATE	COLLECTION TIME	SAMPLER'S INITIALS	NUMBER OF CONTAINERS	CONTAINER SIZE AND TYPE	PRESERVATIVE	MATRIX CODE	ANALYSES REQUESTED	QC	CONDITION ON RECEIPT
FW-A 101201	4/18/95	14:14	MJ	1	1 L glass	4°C	S	SW 8020 BTEX SW 8310 PAH		
FW-A 101202	4/18/95	15:39	MJ	1	1 L glass	4°C	S	SW 8020 BTEX SW 8310 PAH		
FW-A 101203	4/18/95	16:40	MJ	1	1 L glass	4°C	S	SW 8020 BTEX SW 8310 PAH		
FW-A 101204	4/18/95	17:51	MJ	2	40 ml vial	HCl	W	SW 8020 BTEX		
FW-A 101205	4/18/95	17:51	MJ	1	1 L Amber	$Na_2S_2O_3$	W	SW 8310 PAH		
FW-A 101206	4/19/95	8:35	MJ	1	1 L glass	4°C	S	SW 8020 SW 8310		
FW-A 101207	4/20/95	9:17	MJ	1	1 L glass	4°C	S	SW 8020		
FW-A 101208	4/20/95	1320	DOS	2	40-ml VOA	HCl	W	SW8020 BTEX		
FW-A 101209	4/20/95	1320	DOS	1	1-Liter amber	$Na_2S_2O_3$	W	SW8310 PAH		

COMMENTS:

COLLECTED & RELEASED BY	DATE	TIME	TURNAROUND TIME
Dan Sg	4/21/95	10:00	

RECEIVED BY	DATE	TIME	RELINQUISHED BY	DATE	TIME
	/ /	:		/ /	:

RECORD RETURNED BY	DATE	TIME
	/ /	:

SHIPPING NUMBER: 4786905340

INFORMATION IN THIS SECTION FOR JACOBS USE ONLY

LOCATION	SAMPLE TYPE	DEPTH (FT.)	QC CODE
DP-146 DP146A	DP	5-6	
DP-148 DP148B	DP	10-11	
DP-149 DP149B	DP	10-11	
DP-149 FieldQC DP149BEB	EB	—	
DP-149 FieldQC DP149BEB	EB	—	
DP-150 DP150B	DP	5 10-11	
DP-154 DP154B	DP	10-11	
FIELDQC DP154BEB	EB	—	
FIELDQC DP154BEB	EB	—	

SAMPLING COMMENTS:

DISTRIBUTION: WHITE - PROJECT FILE / CANARY - LAB RECEIPT / PINK - DATA MANAGEMENT / GOLDENROD - FIELD

FORM-12.CDR 07-30-93

4186905362 CKY

FW-A1013

JACOBS ENGINEERING GROUP INC.
600 SEVENTEENTH STREET, SUITE 1100N DENVER, COLORADO 80202
TELEPHONE (303) 595 - 8855 FAX (303) 595 - 8857

CHAIN OF CUSTODY RECORD

USE A BALLPOINT PEN, BLACK INK, AND PRESS FIRMLY. INSTRUCTIONS ARE ON THE BACK

PROJECT NAME: [illegible]
PROJECT NUMBER: 10X70100
WBS CODE:
SUBCONTRACT / D.O. No.

LABORATORY NAME & ADDRESS: CKY Inc.
1630 [illegible] AVE
[illegible] CA 90502

SAMPLE NUMBER	COLLECTION DATE	COLLECTION TIME	SAMPLER'S INITIALS	NUMBER OF CONTAINERS	CONTAINER SIZE AND TYPE	PRESERVATIVE	MATRIX CODE	ANALYSES REQUESTED	QC	CONDITION ON RECEIPT
FW-A [illegible]	4/20/95	11:41	[illegible]	1	[illegible]	4°C	S	SW 8020		
FW-A [illegible]	4/21/95	1:53	[illegible]	1	40z [illegible]	4°C	S	SW 8020 SW 8310		
FW-A [illegible]	4/21/95	11:44	[illegible]	1	[illegible]	4°C	S	SW 8020 SW 8310		
FW-A [illegible]	4/21/95	11:59	[illegible]	1	40z glass	4°	S	SW 8020 SW 8310		
FW-A [illegible]	4/21/95	5:20	[illegible]	1	40z glass	4°C	S	SW 8020 SW 8310		
FW-A [illegible]	4/21/95	15:20	[illegible]	1	[illegible]	4°C	S	SW 8020 SW 8310		
FW-A [illegible]	4/21/95	[illegible]	[illegible]	1	[illegible]	4°C	S	SW 8020 SW 8310		
FW-A [illegible]08	4/21/95	18:02	[illegible]	1	1 L Amber	NaCl O3	W	SW 8310		
FW-A [illegible]09	4/21/95	18:02	[illegible]	2	40 ml VOC	HCl	W	SW 8020		

COMMENTS:

COLLECTED & RELEASED BY	DATE	TIME	TURNAROUND TIME
[illegible]	4/21/95	8:16	

RECEIVED BY	DATE	TIME	RELINQUISHED BY	DATE	TIME
	/ /	:		/ /	:

RECORD RETURNED BY	DATE	TIME	SHIPPING NUMBER:
	/ /	:	

INFORMATION IN THIS SECTION FOR JACOBS USE ONLY

LOCATION	SAMPLE TYPE	(FT) DEPTH	QC CODE
DP-159 DP159 B	DP	10-11 ~~5-6~~	
DP-166 DP166B	DP	10-11	
DP-119 DP119A Low	DP	5-6	
DP-119 DP119B Hi	DP	11-12	
DP-119 DP119C Hi	DP	20-21	
DP-112 DP112B Mid	DP	11-12	
DP-112 DP112C Low	DP	20-21	
DP-112 Field QC DP112CEB	EB	—	
DP-112 Field QC DP112CEB	EB		

SAMPLING COMMENTS:

DISTRIBUTION: WHITE - PROJECT FILE / CANARY - LAB RECEIPT / PINK - DATA MANAGEMENT / GOLDENROD - FIELD

FORM-12.CDR 07/30/93

JACOBS ENGINEERING GROUP INC.
600 SEVENTEENTH STREET, SUITE 1100N DENVER, COLORADO 80202
TELEPHONE (303) 595 - 8855 FAX (303) 595 - 8857

~~FW-A1013~~ FW-A1014 DAS

CHAIN OF CUSTODY RECORD

USE A BALLPOINT PEN, BLACK INK, AND PRESS FIRMLY. INSTRUCTIONS ARE ON THE BACK

PROJECT NAME: NAS FT WORTH
PROJECT NUMBER: 10K70100
WBS CODE:
SUBCONTRACT / D.O. No.

LABORATORY NAME & ADDRESS: CKY INC.
630 MAPLE AVE.
TORRANCE CA 90503

SAMPLE NUMBER	COLLECTION DATE	COLLECTION TIME	SAMPLER'S INITIALS	NUMBER OF CONTAINERS	CONTAINER SIZE AND TYPE	PRESERVATIVE	MATRIX CODE	ANALYSES REQUESTED	QC	CONDITION ON RECEIPT
FW-A101401	4/21/95	0850	DAS	2	40 ml VOA	HCl	W	SW8020 BTEX		

DAS

COMMENTS: NOTE: Chain of Custody Record FW-A1013 NOT included in this shipment.

COLLECTED & RELEASED BY	DATE	TIME	TURNAROUND TIME
Dan [illegible]	4/21/95	10:00	

RECEIVED BY	DATE	TIME	RELINQUISHED BY	DATE	TIME
	/ /	:		/ /	:
RECORD RETURNED BY	DATE / /	TIME :			

SHIPPING NUMBER: 4786905340

INFORMATION IN THIS SECTION FOR JACOBS USE ONLY

LOCATION	SAMPLE TYPE	DEPTH (FT.)	QC CODE
FIELDQC	TB	—	
DP154BTB	~~GR~~ DAS		

SAMPLING COMMENTS:

DISTRIBUTION: WHITE - PROJECT FILE / CANARY - LAB RECEIPT / PINK - DATA MANAGEMENT / GOLDENROD - FIELD

FORM-12.CDR 07/20/93

FW-H101A 5 4186705362 CKY

JACOBS ENGINEERING GROUP INC.
600 SEVENTEENTH STREET, SUITE 1100N DENVER, COLORADO 80202
TELEPHONE (303) 595 - 8855 FAX (303) 595 - 8857

CHAIN OF CUSTODY RECORD

USE A BALLPOINT PEN, BLACK INK, AND PRESS FIRMLY. INSTRUCTIONS ARE ON THE BACK

PROJECT NAME:

PROJECT NUMBER:

WBS CODE: SUBCONTRACT / D.O. No.

LABORATORY NAME & ADDRESS: CKY INC. 220 WALE AVE TUSCALOOSA, AL 35401

SAMPLE NUMBER	COLLECTION DATE	COLLECTION TIME	SAMPLERS INITIALS	NUMBER OF CONTAINERS	CONTAINER SIZE AND TYPE	PRESERVATIVE	MATRIX CODE	ANALYSES REQUESTED	QC	CONDITION ON RECEIPT
FW-H 101	11/20/95	10:31	MJ	1	40z glass	4°C	S	SW 8020 SW 8310		
FW-H 102	11/20/95	10:31	MJ	1	40z glass	4°C	S	SW 8020 SW 8310		
FW-H 101503	11/20/95	14:22	MJ	1	40z glass	4°C	S	SW 8020 SW 8310		
FW-H 101504	11/20/95	14:22	MJ	1	40z glass	4°C	S	SW 8020 SW 8310		
FW-H 101505	11/20/95	15:32	MJ	2	40ml VOC	HCL	W	SW 8020		
FW-H 101506	11/20/95	15:32	MJ	1	1 L amber	H_2SO_4	W	SW 8310		
FW-H 101507	11/20/95	15:40	MJ	2	40ml VOC	HCL	W	SW 8020		
FW-H 101508	11/20/95	16:01	MJ	1	40z glass	4°C	S	SW 8020		

COMMENTS:

COLLECTED & RELEASED BY	DATE	TIME	TURNAROUND TIME
[signature]	11/20/95	16:20	

RECEIVED BY	DATE	TIME	RELINQUISHED BY	DATE	TIME
	/ /	:		/ /	:

RECORD RETURNED BY	DATE	TIME	
	/ /	:	

SHIPPING NUMBER:

INFORMATION IN THIS SECTION FOR JACOBS USE ONLY

LOCATION	SAMPLE TYPE	DEPTH	QC CODE
DP-170 DP170A	DP	4-6	
DP-170 Field QC DP170A FD	DUP	4-6	
DP-172 DP17213	DP	10-12	
DP-172 Field QC DP172BFD	DUP	10-12	
DP-172 Field QC DP172EB	EB	—	
DP-172 Field QC DP172EB	EB	—	
DP-172 Field QC DP172TB	TB	—	
SPIKE B			

SAMPLING COMMENTS:

FORM 12 COR

FW-A1016

JACOBS ENGINEERING GROUP INC.
600 SEVENTEENTH STREET, SUITE 1100N DENVER, COLORADO 80202
TELEPHONE (303) 595 - 8656 FAX (303) 595 - 8657

CHAIN OF CUSTODY RECORD

USE A BALLPOINT PEN, BLACK INK, AND PRESS FIRMLY. INSTRUCTIONS ARE ON THE BACK

PROJECT NAME: NAS FW Pipeline Abandonment

PROJECT NUMBER: 10K70100

WBS CODE: 33020602

SUBCONTRACT / D.O. No.

LABORATORY NAME & ADDRESS: CET Inc.
630 Maple Avenue
Torrance, CA 90503 (310) 618-8889

SAMPLE NUMBER	COLLECTION DATE	COLLECTION TIME	SAMPLER'S INITIALS	NUMBER OF CONTAINERS	CONTAINER SIZE AND TYPE	PRESERVATIVE	MATRIX CODE	ANALYSES REQUESTED			QC	CONDITION ON RECEIPT
FW-A 101601	5/12/95	15:17	MD	2	4 oz. Glass	4° C	S	E418.1	SW8020	SW8310		
FW-A 101602	5/12/95	15:37	MD	2	4 oz. Glass	4° C	S	E418.1	SW8020	SW8310		
FW-A 101603	5/12/95	16:07	MD	2	4 oz. Glass	4° C	S	E418.1	SW8020	SW8310		
FW-A 101604	5/12/95	16:26	MD	2	4 oz. Glass	4° C	S	E418.1	SW8020	SW8310		
FW-A 101605	5/12/95	16:47	MD	2	4 oz. Glass	4° C	S	E418.1	SW8020	SW8310		
FW-A 101606	5/13/95	[illegible]	MD	2	4 oz. Glass	4° C	S	E418.1	SW8020	SW8310		
FW-A 101607	5/13/95	7:03	MD	2	4 oz. Glass	4° C	S	E418.1	SW8020	SW8310		
FW-A 101608	5/13/95	7:26	MD	2	4 oz. Glass	4° C	S	E418.1	SW8020	SW8310		
FW-A 101609	5/13/95	9:47 ~~7:36~~	MD	2	4 oz. Glass	4° C	S	E418.1	SW8020	SW8310		

COMMENTS:

COLLECTED & RELEASED BY	DATE	TIME	TURNAROUND TIME
[signature]	5/13/95	1200	

RECEIVED BY	DATE	TIME	RELINQUISHED BY	DATE	TIME
	/ /	:		/ /	:

RECORD RETURNED BY	DATE	TIME
	/ /	:

SHIPPING NUMBER:

INFORMATION IN THIS SECTION FOR JACOBS USE ONLY

LOCATION	SAMPLE TYPE	DEPTH (FT.)	QC CODE
Southwest end Stockpile #1	Grab	1°	
South center Stockpile #1	Grab	2°	
No. West end Stockpile #1	Grab	1°	
South end Stockpile #1	Grab	2°	
Top of Pile 3' from So. End	Grab	2°	
So. E. Side 28' from So. End #1	Grab	2°	
Center E. Pile #1	Grab	2°	
NO E. Corner Pile #1 3' from top	Grab	2°	
Field QC Dup of 608	Dup	2°	

SAMPLING COMMENTS:

FW-A1017

JACOBS ENGINEERING GROUP INC.
600 SEVENTEENTH STREET, SUITE 1100N DENVER, COLORADO 80202
TELEPHONE (303) 595 - 8656 FAX (303) 595 - 8657

CHAIN OF CUSTODY RECORD

USE A BALLPOINT PEN, BLACK INK, AND PRESS FIRMLY. INSTRUCTIONS ARE ON THE BACK

PROJECT NAME: NAS FW Pipeline Abandonment

PROJECT NUMBER: 10X70100

WBS CODE: 33020602

SUBCONTRACT / D.O. No.

LABORATORY NAME & ADDRESS: CET Inc.
630 Maple Avenue
Torrance, CA 90503 (310) 618-8889

SAMPLE NUMBER	COLLECTION DATE	COLLECTION TIME	SAMPLER'S INITIALS	NUMBER OF CONTAINERS	CONTAINER SIZE AND TYPE	PRESERVATIVE	MATRIX CODE	ANALYSES REQUESTED			NO.	CONDITION ON RECEIPT
FW-A 101701	5/18/95	10:24	MJ	3	4 oz. Glass	4° C	S	E418.1	SW8020	SW8310		
FW-A 101702	5/18/95	10:57	MJ	2	4 oz. Glass	4° C	S	E418.1	SW8020	SW8310		
FW-A 101703	5/18/95	11:35	MJ	2	4 oz. Glass	4° C	S	E418.1	SW8020	SW8310		
FW-A 101704	5/18/95	11:51	MJ	2	4 oz. Glass	4° C	S	E418.1	SW8020	SW8310		
FW-A 101705	5/18/95	12:04	MJ	2	4 oz. Glass	4° C	S	E418.1	SW8020	SW8310		
FW-A 101706	5/18/95	12:20	MJ	3	4 oz. Glass	4° C	S	E418.1	SW8020	SW8310		
FW-A 101707	5/18/95	12:37	MJ	2	4 oz. Glass	4° C	S	E418.1	SW8020	SW8310		
FW-A 101708	5/18/95	13:00	MJ	2	4 oz. Glass	4° C	S	E418.1	SW8020	SW8310		
FW-A 101709	5/18/95	13:11	MJ	2	4 oz. Glass	4° C	S	E418.1	SW8020	SW8310		

COMMENTS: FW-A101701 and FW-A101706 include 3 jars for MS/MSD's

COLLECTED & RELEASED BY	DATE	TIME	TURNAROUND TIME
[signature]	5/18/95	17:00	

RECEIVED BY	DATE	TIME	RELINQUISHED BY	DATE	TIME
	/ /	:		/ /	:
RECORD RETURNED BY	DATE / /	TIME :			

SHIPPING NUMBER:

INFORMATION IN THIS SECTION FOR JACOBS USE ONLY

LOCATION	TYPE	DEPTH	MS
No. End 3' from Bottom/MS/MSD.	Grab	2'	
No End 3' from end top #1	Grab	2'	
No End, 3' fr Bottom. Pile #2	Grab	2'	
No. E side Pile #2	Grab	2'	
So E Side Pile #2	Grab	2'	
So end Stockpile 2	Grab	2'	MS MSD
So W side Stp #2	Grab	2'	
No. W side Stp #2	Grab	2'	
No W. Side Field Dup	Dup	2'	
of # 708	"		

SAMPLING COMMENTS:

FW-1-01

JACOBS ENGINEERING GROUP INC.
600 SEVENTEENTH STREET, SUITE 1100N DENVER, COLORADO 80202
TELEPHONE (303) 595 - 8855 FAX (303) 595 - 8857

CHAIN OF CUSTODY RECORD

USE A BALLPOINT PEN, BLACK INK, AND PRESS FIRMLY. INSTRUCTIONS ARE ON THE BACK

PROJECT NAME: NAS FW Pipeline Abandonment

PROJECT NUMBER: 10K70100

WBS CODE: 33020602

SUBCONTRACT / D.O. No.

LABORATORY NAME & ADDRESS: CKY Inc.
630 Maple Avenue
Torrance, CA 90503 (310) 618-8889

SAMPLE NUMBER	COLLECTION DATE	COLLECTION TIME	SAMPLER'S INITIALS	NUMBER OF CONTAINERS	CONTAINER SIZE AND TYPE	PRESERVATIVE	MATRIX CODE	ANALYSES REQUESTED			CO	CONDITION ON RECEIPT
FW-A 101801	5/19/95	15:20	MJ	1 2 MJ	4 oz. Glass	4° C	S	E418.1	SW8020	~~SW8310~~ MJ		
FW-A 101802	5/19/95	15:28	MJ	1 2 MJ	4 oz. Glass	4° C	S	E418.1	SW8020	~~SW8310~~ MJ		
FW-A 101803	5/19/95	15:37	MJ	1 2 MJ	4 oz. Glass	4° C	S	E418.1	SW8020	~~SW8310~~ MJ		
FW-A 101804	5/19/95	15:46	MJ	1 2 MJ	4 oz. Glass	4° C	S	E418.1	SW8020	~~SW8310~~ MJ		
FW-A 101805	5/19/95	16:00	MJ	1 2 MJ	4 oz. Glass	4° C	S	E418.1	SW8020	~~SW8310~~ MJ		
FW-A 101806	5/19/95	16:11	MJ	1 2 MJ	4 oz. Glass	4° C	S	E418.1	SW8020	~~SW8310~~ MJ		
FW-A 101807				2	4 oz. Glass	4° C	S	E418.1	SW8020	SW8310		
FW-A 101808				2	4 oz. Glass	4° C	S	E418.1	SW8020	SW8310		
FW-A 101809				2	4 oz. Glass	4° C	S	E418.1	SW8020	SW8310		

COMMENTS:

COLLECTED & RELEASED BY	DATE	TIME	TURNAROUND TIME
[illegible]	5/19/95	18:14	7 days

RECEIVED BY	DATE	TIME	RELINQUISHED BY	DATE	TIME
	/ /	:		/ /	:

RECORD RETURNED BY	DATE	TIME
	/ /	:

SHIPPING NUMBER:

INFORMATION IN THIS SECTION FOR JACOBS USE ONLY

LOCATION	SAMPLE TYPE	TEMPERATURE	PH
Stp. #2 SW Corner	Grab	2°	
Center SW Side Stp #2	Grab	2°	
Center SW Side Stp #2	Grab	2°	
NW. Corner Stp #2	Grab	2°	
No. End top Stp pile #2	Grab	2°	
So. End top Stp #2	Grab	2°	

SAMPLING COMMENTS:

WHITE - FIELD UNIT - PROJECT FILE / CANARY - LAB RECEIPT / PINK - DATA MANAGEMENT / GOLDENROD - FIELD

FORM-12.CDR 07-28-94

FW-A 1019

JACOBS ENGINEERING GROUP INC.
600 SEVENTEENTH STREET, SUITE 1100N DENVER, COLORADO 80202
TELEPHONE (303) 595 - 8855 FAX (303) 595 - 8857

CHAIN OF CUSTODY RECORD

USE A BALLPOINT PEN, BLACK INK, AND PRESS FIRMLY. INSTRUCTIONS ARE ON THE BACK

PROJECT NAME: NAS FW Pipeline Abandonment

PROJECT NUMBER: 10K70100

WBS CODE: 33020602

SUBCONTRACT / D.O. No.

LABORATORY NAME & ADDRESS: CET Inc.
630 Maple Avenue
Torrance, CA 90503 (310) 618-8889

SAMPLE NUMBER	COLLECTION DATE	COLLECTION TIME	SAMPLER'S INITIALS	NUMBER OF CONTAINERS	CONTAINER SIZE AND TYPE	PRESERVATIVE	MATRIX CODE	ANALYSES REQUESTED			QC	CONDITION ON RECEIPT
FW-A 101901	6/1/95	15:40	MJ	2	4 oz. Glass	4° C	S	E418.1	SW8020	SW8310		
FW-A 101902	6/1/95	16:02	MJ	2	4 oz. Glass	4° C	S	E418.1	SW8020	SW8310		
FW-A 101903	6/1/95	16:22	MJ	2	4 oz. Glass	4° C	S	E418.1	SW8020	SW8310		
FW-A 101904	6/1/95	16:40	MJ	2	4 oz. Glass	4° C	S	E418.1	SW8020	SW8310		
FW-A 101905	6/1/95	16:58	MJ	2	4 oz. Glass	4° C	S	E418.1	SW8020	SW8310		
FW-A 101906	6/1/95	17:18	MJ	2	4 oz. Glass	4° C	S	E418.1	SW8020	SW8310		
FW-A 101907	6/1/95	17:31	MJ	2	4 oz. Glass	4° C	S	E418.1	SW8020	SW8310		
FW-A 101908	6/1/95	17:46	MJ	2	4 oz. Glass	4° C	S	E418.1	SW8020	SW8310		
FW-A 101909	6/2/95	8:31	MJ	2	4 oz. Glass	4° C	S	E418.1	SW8020	SW8310		

COMMENTS:

COLLECTED & RELEASED BY	DATE	TIME	TURNAROUND TIME
[signature]	6/2/95	20:00	

RECEIVED BY	DATE	TIME	RELINQUISHED BY	DATE	TIME
	/ /	:		/ /	:

RECORD RETURNED BY	DATE	TIME
	/ /	:

SHIPPING NUMBER:

INFORMATION IN THIS SECTION FOR JACOBS USE ONLY

LOCATION	SAMPLE TYPE	TEMP	
TANK 4 -0- Composite	Comp	15°	
TANK 5 -0- Composite	Comp	15°	
TANK 6 Low	Comp	16°	
TANK 1 High	Comp	16°	
TANK 2 High	Com	16°	
TANK 3 -0-	Com	16°	
NE Side wall east end.	Com	10°	
NE Side wall west end	Com	12°	
NW Side wall North corner end	Com	10°	

SAMPLING COMMENTS:

FORM 13 CDR

FW-A 102w

JACOBS ENGINEERING GROUP INC.
900 SEVENTEENTH STREET, SUITE 1100N DENVER, COLORADO 80202
TELEPHONE (303) 595 - 8858 FAX (303) 595 - 8857

CHAIN OF CUSTODY RECORD

USE A BALLPOINT PEN, BLACK INK, AND PRESS FIRMLY. INSTRUCTIONS ARE ON THE BACK

PROJECT NAME: NAS FW Pipeline Abandonment

PROJECT NUMBER: 10E70100

WBS CODE: 33020602

SUBCONTRACT / D.O. No.

LABORATORY NAME & ADDRESS: CKI Inc.
630 Maple Avenue
Torrance, CA 90503 (310) 618-8889

SAMPLE NUMBER	COLLECTION DATE	COLLECTION TIME	SAMPLER'S INITIALS	NUMBER OF CONTAINERS	CONTAINER SIZE AND TYPE	PRESERVATIVE	MATRIX CODE	ANALYSES REQUESTED			DQ	CONDITION ON RECEIPT
FW-A ~~102001~~ mj 102001	5/18/15	16:02	mj	2	40 ml Vial	HCl	W	~~E418.1~~ mj	SW8020	~~SW8310~~ mj		
FW-A ~~102002~~ mj 102002	5/18/15	16:02	mj	1	1 l Amber	H_2SO_4	W	E418.1	~~SW8020~~ mj	~~SW8310~~ mj		
FW-A ~~102003~~ mj 102003	5/18/15	16:02	mj	2	40 ml Vial	HCl	W	~~E418.1~~ mj	SW8020	~~SW8310~~ mj		
FW-A ~~102004~~ mj 102004	5/18/15	16:02	mj	1	1 l Amber	Nitric Ac	W	~~E418.1~~ mj	~~SW8020~~ mj	SW8310		
FW-A 102005								E418.1	SW8020	SW8310		
FW-A 102006								E418.1	SW8020	SW8310		
FW-A 102007								E418.1	SW8020	SW8310		
FW-A 102008								E418.1	SW8020	SW8310		
FW-A 102009								E418.1	SW8020	SW8310		

COMMENTS:

COLLECTED & RELEASED BY	DATE	TIME	TURNAROUND TIME
[signature]	5/18/15	17:00	

RECEIVED BY	DATE	TIME	RELINQUISHED BY	DATE	TIME
	/ /	:		/ /	:

RECORD RETURNED BY	DATE	TIME
	/ /	:

SHIPPING NUMBER:

INFORMATION IN THIS SECTION FOR JACOBS USE ONLY

LOCATION	SAMPLE TYPE	DEPTH	DQCR
Stockpile #2 ~~EB~~	~~EB~~		
Stockpile #2 ~~EB~~	~~EB~~		
Stockpile #2 ~~EB~~ mj TB	TB ~~EB~~ mj	Trip Blank	
Stockpile #2 EB	EB		

SAMPLING COMMENTS:

DISTRIBUTION: WHITE - PROJECT FILE / CANARY - LAB RECEIPT / PINK - DATA MANAGEMENT / GOLDENROD - FIELD

FORM-12.CDR 07.30.99

FW-A1021

JACOBS ENGINEERING GROUP INC.
600 SEVENTEENTH STREET, SUITE 1100N DENVER, COLORADO 80202
TELEPHONE (303) 595 - 8855 FAX (303) 595 - 8857

CHAIN OF CUSTODY RECORD

USE A BALLPOINT PEN, BLACK INK, AND PRESS FIRMLY. INSTRUCTIONS ARE ON THE BACK

PROJECT NAME: NAS FW Pipeline Abandonment

PROJECT NUMBER: 10X70100

WBS CODE: 33020602

SUBCONTRACT / D.O. No.

LABORATORY NAME & ADDRESS: CKI Inc.
630 Maple Avenue
Torrance, CA 90503 (310) 618-8889

SAMPLE NUMBER	COLLECTION DATE	COLLECTION TIME	SAMPLERS INITIALS	NUMBER OF CONTAINERS	CONTAINER SIZE AND TYPE	PRESERVATIVE	MATRIX CODE	ANALYSES REQUESTED		QC	CONDITION ON RECEIPT
FW-A 102101	6/2/95	11:25	mj	2	4 oz. Glass	4° C	S	E418.1	SW8020 Sw8310		
FW-A 102102	6/2/95	16:12	mj	1/2 mj	4 oz. Glass	4° C	S	E418.1	SW8020		
FW-A 102103	6/2/95	17:52	mj	1/2 mj	4 oz. Glass	4° C	S	E418.1	SW8020		
FW-A 102104				2	4 oz. Glass	4° C	S	E418.1	SW8020		
FW-A 102105				2	4 oz. Glass	4° C	S	E418.1	SW8020		
FW-A 102106				2	4 oz. Glass	4° C	S	E418.1	SW8020		
FW-A 102107				2	4 oz. Glass	4° C	S	E418.1	SW8020		
FW-A 102108				2	4 oz. Glass	4° C	S	E418.1	SW8020		
FW-A 102109				2	4 oz. Glass	4° C	S	E418.1	SW8020		

COMMENTS:

COLLECTED & RELEASED BY	DATE	TIME	TURNAROUND TIME
[signature]	6/2/95	20:00	

RECEIVED BY	DATE	TIME	RELINQUISHED BY	DATE	TIME
	/ /	:		/ /	:

RECORD RETURNED BY	DATE	TIME
	/ /	:

SHIPPING NUMBER:

INFORMATION IN THIS SECTION FOR JACOBS USE ONLY

LOCATION	SAMPLE TYPE	DEPTH (ft)	QC CODE
SE Sidewall NE End Field QC	DUP	8'	
Stockpile #3 Field QC FW-A102302	DUP	1'	
Stockpile #3 FW-A102309	DUP	1'	

SAMPLING COMMENTS:

INSTITUTION TE... CT FIL ANAL B PRE... PINK TA M... EMENT OLDEN... FIELD

FW-A 102b

JACOBS ENGINEERING GROUP INC.
600 SEVENTEENTH STREET, SUITE 1100N DENVER, COLORADO 80202
TELEPHONE (303) 595 - 8855 FAX (303) 595 - 8857

CHAIN OF CUSTODY RECORD

USE A BALLPOINT PEN, BLACK INK, AND PRESS FIRMLY. INSTRUCTIONS ARE ON THE BACK

PROJECT NAME: NAS FW Pipeline Abandonment
PROJECT NUMBER: 10X70100
WBS CODE: 33020602
SUBCONTRACT / D.O. No.

LABORATORY NAME & ADDRESS: CKY Inc.
630 Maple Avenue
Torrance, CA 90503 (310) 618-8889

SAMPLE NUMBER	COLLECTION DATE	COLLECTION TIME	SAMPLER'S INITIALS	NUMBER OF CONTAINERS	CONTAINER SIZE AND TYPE	PRESERVATIVE	MATRIX CODE	ANALYSES REQUESTED			QC	CONDITION ON RECEIPT
FW-A 102201	6/2/95	8:48	mg	2	4 oz. Glass	4° C	S	E418.1	SW8020	SW8310		
FW-A 102202	6/2/95	9:02	mg	2	4 oz. Glass	4° C	S	E418.1	SW8020	SW8310		
FW-A 102203	6/2/95	9:16	mg	2	4 oz. Glass	4° C	S	E418.1	SW8020	SW8310		
FW-A 102204	6/2/95	9:31	mg	2	4 oz. Glass	4° C	S	E418.1	SW8020	SW8310		
FW-A 102205	6/2/95	9:45	mg	2	4 oz. Glass	4° C	S	E418.1	SW8020	SW8310		
FW-A 102206	6/2/95	9:57	mg	2	4 oz. Glass	4° C	S	E418.1	SW8020	SW8310		
FW-A 102207	6/2/95	11:03	mg	2	4 oz. Glass	4° C	S	E418.1	SW8020	SW8310		
FW-A 102208	6/2/95	11:17	mg	3 ~~2~~ mg	4 oz. Glass	4° C	S	E418.1	SW8020	SW8310		
FW-A 102209	6/2/95	11:34	mg	2	4 oz. Glass	4° C	S	E418.1	SW8020	SW8310		

COMMENTS: FW-A102208 has 3 containers for MS/MSD.

COLLECTED & RELEASED BY	DATE	TIME	TURNAROUND TIME
[signature]	6/2/95	1000	

RECEIVED BY	DATE	TIME	RELINQUISHED BY	DATE	TIME
	/ /	:		/ /	:

RECORD RETURNED BY	DATE	TIME
	/ /	:

SHIPPING NUMBER:

INFORMATION IN THIS SECTION FOR JACOBS USE ONLY

LOCATION	SAMPLE TYPE	(°) DEPTH	QC CODE
NW Sidewall North end	grab	12°	
NW Sidewall Center	grab	11°	
SW. Corner	grab	11°	
SW. Sidewall NW end	grab	10°	
SW Sidewall SE End	grab	10°	
SE Corner	grab	10°	
SE Sidewall SE end	grab	12°	
SE Sidewall NE end	grab	8° ~~12°~~ mg	
NE Corner	grab	10°	

SAMPLING COMMENTS:

DISTRIBUTION: WHITE - PROJECT FILE / CANARY - LAB RECEIPT / PINK - DATA MANAGEMENT / GOLDENROD - FIELD

FORM-12.CDR 07/10/91

FW-A 1023

JACOBS ENGINEERING GROUP INC.
600 SEVENTEENTH STREET, SUITE 1100N DENVER, COLORADO 80202
TELEPHONE (303) 595 - 8855 FAX (303) 595 - 8857

CHAIN OF CUSTODY RECORD

USE A BALLPOINT PEN, BLACK INK, AND PRESS FIRMLY. INSTRUCTIONS ARE ON THE BACK

PROJECT NAME: NAS FW Pipeline Abandonment

PROJECT NUMBER: 10X70100

WBS CODE: 33020602

SUBCONTRACT / D.O. No.

LABORATORY NAME & ADDRESS: CKY Inc.
630 Maple Avenue
Torrance, CA 90503 (310) 618-8889

SAMPLE NUMBER	COLLECTION DATE	COLLECTION TIME	SAMPLER'S INITIALS	NUMBER OF CONTAINERS	CONTAINER SIZE AND TYPE	PRESERVATIVE	MATRIX CODE	ANALYSES REQUESTED		QC	CONDITION ON RECEIPT
FW-A 102301	6/2/95	15:57	mg	1x mg	4 oz. Glass	4° C	S	E418.1	SW8020		
FW-A 102302	6/2/95	16:07	mg	1x mg	4 oz. Glass	4° C	S	E418.1	SW8020		
FW-A 102303	6/2/95	16:25	mg	1x mg	4 oz. Glass	4° C	S	E418.1	SW8020		
FW-A 102304	6/2/95	16:31	mg	1x mg	4 oz. Glass	4° C	S	E418.1	SW8020		
FW-A 102305	6/2/95	16:38	mg	1x mg	4 oz. Glass	4° C	S	E418.1	SW8020		
FW-A 102306	6/2/95	16:47	mg	1x mg	4 oz. Glass	4° C	S	E418.1	SW8020		
FW-A 102307	6/2/95	16:56	mg	1x mg	4 oz. Glass	4° C	S	E418.1	SW8020		
FW-A 102308	6/2/95	17:04	mg	1x	4 oz. Glass	4° C	S	E418.1	SW8020		
FW-A 102309	6/2/95	17:12	mg	1x mg	4 oz. Glass	4° C	S	E418.1	SW8020		

COMMENTS:

INFORMATION IN THIS SECTION FOR JACOBS USE ONLY			
LOCATION	SAMPLE TYPE	DEPTH	
Stockpile #3 NE Corner	Grab	1°	
Stockpile #3	Grab	1°	
Stockpile #3	Grab	1°	
Stockpile #3	Grab	1°	
Stockpile #3	Grab	1°	
Stockpile #3	Grab	1°	
Stockpile #3	Grab	2°	
Stockpile #3	Grab	1°	
Stockpile #3	Grab	1°	

SAMPLING COMMENTS:

COLLECTED & RELEASED BY	DATE	TIME	TURNAROUND TIME
[signature]	6/2/95	2000	

RECEIVED BY	DATE	TIME	RELINQUISHED BY	DATE	TIME
	/ /	:		/ /	:

RECORD RETURNED BY	DATE	TIME	SHIPPING NUMBER:
	/ /	:	

DISTRIBUTION: ORIGINAL - PROJECT FILE; SECONDARY - RECORDS; PINK - MAIL AGENT; DENR; FIELD

FW-A-24

JACOBS ENGINEERING GROUP INC.
600 SEVENTEENTH STREET, SUITE 1100N DENVER, COLORADO 80202
TELEPHONE (303) 595 - 8855 FAX (303) 595 - 8857

CHAIN OF CUSTODY RECORD

USE A BALLPOINT PEN, BLACK INK, AND PRESS FIRMLY. INSTRUCTIONS ARE ON THE BACK

PROJECT NAME: NAS FW Pipeline Abandonment

PROJECT NUMBER: 10X70100

WBS CODE: 33020602

SUBCONTRACT / D.O. No.

LABORATORY NAME & ADDRESS: CKY Inc.
630 Maple Avenue
Torrance, CA 90503 (310) 618-8889

SAMPLE NUMBER	COLLECTION DATE	COLLECTION TIME	SAMPLER'S INITIALS	NUMBER OF CONTAINERS	CONTAINER SIZE AND TYPE	PRESERVATIVE	MATRIX CODE	ANALYSES REQUESTED		DO	CONDITION ON RECEIPT
FW-A 102401	6/2/95	17:54	mg	2	4 oz. Glass	4° C	S	E418.1	SW8020		
FW-A 102402	6/2/95	17:58	mg	2	4 oz. Glass	4° C	S	E418.1	SW8020		
FW-A 102403	6/2/95	18:03	mg	2	4 oz. Glass	4° C	S	E418.1	SW8020		
FW-A 102404				2	4 oz. Glass	4° C	S	E418.1	SW8020		
FW-A 102405				2	4 oz. Glass	4° C	S	E418.1	SW8020		
FW-A 102406				2	4 oz. Glass	4° C	S	E418.1	SW8020		
FW-A 102407				2	4 oz. Glass	4° C	S	E418.1	SW8020		
FW-A 102408				2	4 oz. Glass	4° C	S	E418.1	SW8020		
FW-A 102409				2	4 oz. Glass	4° C	S	E418.1	SW8020		

COMMENTS:

COLLECTED & RELEASED BY	DATE	TIME	TURNAROUND TIME		
	6/2/95	0600			
RECEIVED BY	DATE / /	TIME :	RELINQUISHED BY	DATE / /	TIME :
RECORD RETURNED BY	DATE / /	TIME :			
			SHIPPING NUMBER:		

INFORMATION IN THIS SECTION FOR JACOBS USE ONLY

LOCATION	SAMPLE TYPE	DEPTH (FT)	DO CODE
Stockpile #3 @ 64.0	Grab	1°	
Stockpile #3 @ 70.75	Grab	1°	
Stockpile 3 @ 81	Grab	1°	

SAMPLING COMMENTS:

6/2/95

DISTRIBUTION: WHITE - PROJECT FILE / CANARY - LAB RECEIPT / PINK - DATA MANAGEMENT / GOLDENROD - FIELD

FORM-12.CDR 07/31/95

FW-A1027

JACOBS ENGINEERING GROUP INC.
600 SEVENTEENTH STREET, SUITE 1100N DENVER, COLORADO 80202
TELEPHONE (303) 595 - 8855 FAX (303) 595 - 8857

CHAIN OF CUSTODY RECORD

USE A BALLPOINT PEN, BLACK INK, AND PRESS FIRMLY. INSTRUCTIONS ARE ON THE BACK

PROJECT NAME: NAS FW Pipeline Abandonment

PROJECT NUMBER: 10K70100

WBS CODE: 33020602

SUBCONTRACT / D.O. No.

LABORATORY NAME & ADDRESS: CKY Inc.
630 Maple Avenue
Torrance, CA 90503 (310) 618-8889

SAMPLE NUMBER	COLLECTION DATE	COLLECTION TIME	SAMPLER'S INITIALS	NUMBER OF CONTAINERS	CONTAINER SIZE AND TYPE	PRESERVATIVE	MATRIX CODE	ANALYSES REQUESTED			QC	CONDITION ON RECEIPT
FW-A 102701	6/1/95	18:54	MJ	2	40 ml Vial	HCl	W	~~E418.1~~ MJ	SW8020	~~SW8310~~ MJ		
FW-A 102702	6/1/95	18:54	MJ		1 L Amber	H_2SO_4	W	~~E418.1~~ MJ	~~SW8020~~ MJ	SW8310		
FW-A 102703	6/1/95	18:54	MJ		1 L Amber	H_2SO_4	W	E418.1	~~SW8020~~ MJ	~~SW8310~~ MJ		
FW-A 102704	6/1/95	18:54	MJ		40 ml Vial	HCl	W	E418.1	SW8020	SW8310		
FW-A 102705								E418.1	SW8020	SW8310		
FW-A 102706								E418.1	SW8020	SW8310		
FW-A 102707								E418.1	SW8020	SW8310		
FW-A 102708								E418.1	SW8020	SW8310		
FW-A 102709								E418.1	SW8020	SW8310		

COMMENTS:

COLLECTED & RELEASED BY	DATE	TIME	TURNAROUND TIME
[illegible]	6/2/95	2000	

RECEIVED BY	DATE	TIME	RELINQUISHED BY	DATE	TIME
	/ /	:		/ /	:

RECORD RETURNED BY	DATE	TIME	
	/ /	:	

SHIPPING NUMBER:

INFORMATION IN THIS SECTION FOR JACOBS USE ONLY

LOCATION	SAMPLE TYPE	[illegible]	[illegible]
TANK 3 Field QC			
TANK 3 EB	EB	—	
TANK 3 Field QC			
TANK 3 EB	EB	—	
TANK 3 Field QC			
TANK 3 EB	EB	—	
TANK 3 Field QC			
TANK 3 TB	TB	—	

SAMPLING COMMENTS:

APPENDIX D

Boring Logs

Time Start [illegible]
End time 16:08

Lithologic Borehole Log
Project #10K70100

Sheet 1 of 1

N

Site ID	NAS Ft. Worth	Location ID	DP-1
Northing	/	Easting	/
Elevation	/	T.D.	23'
Date Started	March 8, 1995	Date Completed	March 8, 1995
Drilling Contr.	KEI	Driller	Blake Riggs
Drill Method	Geo Probe	Rig Type	Geoprobe
Sample Type	Drive Point	Geo/Eng.	M. Johnson
Hammer Wt.	N/A	Backfilled Date	

Weather Conditions
CLR/Slight N. Bre

Names of Persons Present
Blake Riggs
Jack Brin
Mike Johnson

Depth in Feet	Sampled Interval	Sample Number	Percent Recovery	HNU or OVM Reading	N/A Blows Per 6"	Sampling Method	Water Content	USCS Code	Color	Graphic Log	Interval	Description
0												2" asphalt Base Course - 1/4"-1" rounded to subrounded gravel - Sandy gravel
14.5-15 .4 6	X	FWA-900101 DP-1A	100%	0ppm 0ppm		DP			7.5YR 4/6			90% Slightly Sandy Clay - plastic slightly moist. 1/4" gravel med to fine sand st. Brown
10												?
15	X	FWA-900102 DP1B	25%	~~100~~ ppm 0ppm ↑ 0.5ppm ↓ bottom	top	DP			7.5YR 4/6			~20% Silty Sand F-M - slightly plastic slightly moist. Soil logged from inside of probe tube (poor recovery - liner collapsed)
20												
22.5-23'	X	FWA-900103 DP-1C				DP			7.5YR 4/6			Silty Sand F-C not plastic wet rounded to subrounded grains, Ferro Mg Minerals ~1% ~10% silt
25												
30												TD = ~~24~~ 23 ft

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Lithologic Borehole Log
Project #10K70100

Sheet 1 of 1

N

Site ID	NAS Ft Worth	Location ID	DP-2
Northing	—	Easting	—
Elevation	—	T.D.	17'
Date Started	3/8/95	Date Completed	3/8/95
Drilling Contr.	KET	Driller	Blake Riggs
Drill Method	Geoprobe	Rig Type	Geoprobe
Sample Type	Drive Point / 1"	Geo/Eng.	M Johnson
Hammer Wt.	N/A	Backfilled Date	3/8/95

Weather Conditions: Clear Cool

Names of Persons Present: M Johnson, Blake Riggs, Jack Brian

Depth in Feet	Sampled Interval	Sample Number	Percent Recovery	HNU or OVM Reading	Time ~~Blows Per 6"~~	Sampling Method	Water Content	USCS Code	Color	Graphic Log	Interval	Description
0												
5												
Drive	6.5-7'	DP-2A	90%	0 ppm	16:40	DP	Slmst		7.5YR 4/4 str Brn			gravelly Clayey Sand - F-C gravel ~ 1/4" well rounded - ~ 10% Clay ~ 20% slightly plastic Sand - rounded to subrounded
10												
Drive	11.5/12'	~~11.5-12'~~ DP-2B	90%	0 ppm	16:52	DP	~~mst~~ mst					F-Clayey gravel 1/4" - 1/2" - gravel is limestone subrounded
15												Sand F-m w/clay ~ 5% Sand is subrounded to rounded - moist
	16.5-17	DP-2C	90%	0 ppm								
20									7.5YR 4/4 str Brn			Clayey Sand F-C, Clay ~ 25% interbedded w/ sandy gravel lenses.
25												TD 17'
30												

Lithologic Borehole Log
Project #10K70100

Sheet 1 of 1

N

Site ID	NAS Ft. Worth	Location ID	DP-3
Northing	—	Easting	—
Elevation	—	T.D.	18.5
Date Started	3/8/93	Date Completed	3/8/95
Drilling Contr.	KEF	Driller	Blake Riggs
Drill Method	Geoprobe	Rig Type	Geoprobe
Sample Type	Drive Point	Geo/Eng.	M. Johnson
Hammer Wt.	—	Backfilled Date	3/8/95

Weather Conditions
Cool Clear Calm

Names of Persons Present
M Johnson
Blake Riggs
Jake Brim
Randy

Depth in Feet	Sampled Interval	Sample Number	Percent Recovery	HNU or OVM Reading	Time ~~Blows Per 6"~~	Sampling Method	Water Content	USCS Code	Color	Graphic Log	Interval Description
0											grass
5											
6.5/7.0	X	DP-3-A FWA-900301	90%	0ppm	17:45	DP	moist		10YR 6/4		Clayey Sand F-C / Clay ~ 30-40% Limestone gravel tracer up to 1/2" subrounded slightly plastic / yellowish Brn.
10											
12-12.5	X	FWA-900302 DP-3-B	75%	0ppm	18:05	DP	sl moist		10YR 6/8		Sand F-C well graded, dense interbedded w/ Clayey Sand F-C sl. pl. yellowish Brn sl moist
15											
18-18.5		FWA-900303 DP-3-C		0ppm		DP	wet				gravel w/ sand (sand ~ 7%) fine gravel subrounded up to 1/2" groundwater encountered
20											
25											TD-18.5 ▽ encountered
30											

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Lithologic Borehole Log
Project #10K70100

Sheet 1 of 1

N

Site ID	NAS-Ft Worth	Location ID	DP-4
Northing	–	Easting	–
Elevation	–	T.D.	17'
Date Started	3/9/95	Date Completed	3/9/95
Drilling Contr.	KEL	Driller	Blake Riggs
Drill Method	Geoprobe	Rig Type	Geoprobe HTV
Sample Type	Direct Post	Geo/Eng.	M Johnson
Hammer Wt.	N/A	Backfilled Date	3/9/95

Weather Conditions: Clear, Cool, Breeze from South

Names of Persons Present: M Johnson, Blake Riggs, Jack Brim

Depth in Feet	Sampled Interval	Sample Number	Percent Recovery	HNU or OVM Reading	Blows Per 6"	Sampling Method	Water Content	USCS Code	Color	Graphic Log	Interval	Description
0												
5												
5-7'	X	FW-A-G00401 DP-2A DP-4H	0.8	0 ppm	9-44		Sit moist		7.5YR 6/6			Clayey silty Sand w/ TS fine gravel (1/4") c. l ~10% silt ~ 25%
5 10												
15 10												
20 15	16'-17'	FW-A-G00402 DP4B		0 ppm	10-18		moist		7.5YR 6/4			Sand - F.C well graded v. dense light Brn
												water noted in very end of sampler t.p - ▽ ≈ 17'
25 20												TD - 17'
30 25												

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Start 11:40
Fnl 12:05

Lithologic Borehole Log
Project #10K70100

Sheet 1 of 1

N

Site ID	NAS Ft Worth	Location ID	OP-5
Northing	—	Easting	—
Elevation	—	T.D.	17'
Date Started	3/9/95	Date Completed	3/9/95
Drilling Contr.	KEI	Driller	Mike Riggs
Drill Method	Soil probe	Rig Type	Geoprobe
Sample Type	1" Drive point	Geo/Eng.	M Johnson
Hammer Wt.	N/A	Backfilled Date	3/9/95

Weather Conditions

Names of Persons Present
M Johnson
R Riggs
J. Ram

Depth in Feet	Sampled Interval	Sample Number	Percent Recovery	HNU or OVM Reading	Blows Per 6"	Sampling Method	Water Content	USCS Code	Color	Graphic Log	Interval	Description
0												
5	6.5-7'	FW-A DP-5A	100% 75%	0ppm	11:00	DP	moist		7.5YR 4/6			Clayey Sandy Gravel Fine 1/4" to 1/2" Subangular limestone
									7.5YR 4/6			Clayey Sand / Clay ~40% trace of fine gravel
10												
15	No Recovery		0%	0ppm		DP	wet					Sandy Fine Gravel wet @ 16'-17' NO Recovery subrounded - Subangular
20												Note Small amount of sample was retained for logging and Hgb evaluation
25												
30												

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Start 14:05

Lithologic Borehole Log
Project #10K70100

Sheet ___ of ___

N

Site ID	NAS Ft Worth	Location ID	DP-6
Northing	—	Easting	—
Elevation	—	T.D.	12.5
Date Started	3/9/95	Date Completed	3/9/95
Drilling Contr.	KEI	Driller	Blake Riggs
Drill Method	Soil Probe	Rig Type	Geoprobe
Sample Type	Drive Pt 1" dia	Geo/Eng.	M. Johnson
Hammer Wt.	—	Backfilled Date	3/9/95

Weather Conditions
Clr. Cool Sunny
Bri

Names of Persons Present
M Johnson
Blake Riggs

Depth in Feet	Sampled Interval	Sample Number	Percent Recovery	HNU or OVM Reading	Time Blows Per 6"	Sampling Method	Water Content	USCS Code	Color	Graphic Log	Interval	Description
0												
5												
ND	~~4.5-5.5'~~	FW-A DP5A	900464 ND	0ppm	14:22		moist		7.5YR 6/6			Clayey gravelly Sand F-C Clay ~ 20% gravel ~ ~~35%~~ 25% Submitted to Subcont.
	5-6.5'	DP-6A	0/5%									
10												
	11-12.5'	DP-6B	75%	0ppm	14:45		v moist		7.5YR 7/4			Sand F-C
15												TD 12.5
20												
25												
30												

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Start 14:55

Lithologic Borehole Log
Project #10K70100

Sheet 1 of 1

N

Site ID	NAS Ft Worth	Location ID	DP-7
Northing	–	Easting	–
Elevation	–	T.D.	12'
Date Started	3/9/95	Date Completed	3/9/95
Drilling Contr.	KEI	Driller	BLAKE RIGGS
Drill Method	Soil Probe	Rig Type	Geoprobe
Sample Type	Drive Pt 1" Dia	Geo/Eng.	M. Johnson
Hammer Wt.	—	Backfilled Date	3/9/95

Weather Conditions
Cool Clr Southern Breeze

Names of Persons Present
M. Johnson
Blake Riggs
Jack Brim

Depth in Feet	Sampled Interval	Sample Number	Percent Recovery	HNU or OVM Reading	~~Blows Per 6"~~ TIME	Sampling Method	Water Content	USCS Code	Color	Graphic Log	Interval	Description
0												
5	5'-7'	FW-A DP7A	900406 100%	ND ~~10~~ 0ppm	15:00	DP	Sl. moist		7.5YR ~~4/8~~ 5/4			Sand F-M well graded
10	11'-12'	FW-A DP7B	900407			DP	wet		10YR 6/1			Sandy Gravel F. SubR to SubA. 1/4" to 1/2" dia gravel.
15												EOB 12'
20												
25												
30												

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Start 15:30

Lithologic Borehole Log
Project #10K70100

Sheet 1 of 1

N

Site ID	NAS Ft Worth	Location ID	DP-8
Northing	—	Easting	—
Elevation	—	T.D.	12'
Date Started	3/9/95	Date Completed	3/9/95
Drilling Contr.	KEE	Driller	Blake Riggs
Drill Method	Soil Probe	Rig Type	Geoprobe
Sample Type	Drive Pb 1" Dia	Geo/Eng.	M. Johnson
Hammer Wt.	N/A	Backfilled Date	3/9/95

Weather Conditions
CLR South Bre
Cool

Names of Persons Present
M Johnson
B Riggs
J Brian

Depth in Feet	Sampled Interval	Sample Number	Percent Recovery	HNU or OVM Reading	Time Blows Per 6"	Sampling Method	Water Content	USCS Code	Color	Graphic Log	Interval	Description
0												Asphalt 2"
5	6.5-7'	FW-A9200408 DP-8A	100%	0ppm	16:06	DP	Slmoist		7.5YR 4/6			10% 25% Clayey Silty Sand F-m
10	11.5-12'	FW-A9200409 DP-8B	80%	0ppm	16:26	DP	moist		7.5YR 5/6			Sandy gravel - Fine (1/4"-1/2" dia) interbedded w/ F-m poorly graded sand
15												TD = 12'
20												
25												
30												

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Project #10K70100

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N

Site ID	NAS Ft Worth	Location ID	DP-9
Northing	—	Easting	—
Elevation	—	T.D.	12"
Date Started	3/9/95	Date Completed	3/9/95
Drilling Contr.	KEI	Driller	Blake Riggs
Drill Method	Soil Probe	Rig Type	Geoprobe
Sample Type	Drive Pt. 1" Diam	Geo/Eng.	M. Johnson
Hammer Wt.	N/A	Backfilled Date	3/9/95

Weather Conditions: Sunny Breeze Cool - Clr

Names of Persons Present: M. Johnson, Blake Riggs, Jack Brim

Depth in Feet	Sampled Interval	Sample Number	Percent Recovery	HNU or OVM Reading	Time Blows Per 6"	Sampling Method	Water Content	USCS Code	Color	Graphic Log	Interval	Description
0												
5	5-7'	FW-A DP-9A	G00501	0ppm	17:00	DP	moist		7.5YR 3/2			Clayey silty Sand - appears to be discolored - Tr of fine gravel
10												10' Drillers report very hard soil - could be dense sand layer.
15												↑ refusal at 12" unable to collect a sample.
20												Because of discoloring and surface ambient odor PAH will be done on sample also
25												
30												

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PREX

Location moved to about 135° from DP-9 to south because of potential utilities

Lithologic Borehole Log
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N

Site ID	NAS A. Wathen	Location ID	DP-10
Northing	—	Easting	—
Elevation	—	T.D.	14.0 ft
Date Started	3/10/95	Date Completed	3/10/95
Drilling Contr.	KEI	Driller	Blake Riggs
Drill Method	Soil Probe	Rig Type	Geoprobe
Sample Type	1" drive point	Geo/Eng.	M Johnson
Hammer Wt.	N/A	Backfilled Date	3/10/95

Weather Conditions

Names of Persons Present
M. Johnson
R. Riggs
J. Brim

Depth in Feet	Sampled Interval	Sample Number	Percent Recovery	HNU or OVM Reading	Time ~~Blows Per 6"~~	Sampling Method	Water Content	USCS Code	Color	Graphic Log	Interval	Description
0												
5	5-5.5	DP-10A	100%	0ppm	8:34	DP	V. moist		7.5YR 3/1			Clayey Sand f-c, Tr fine gravel V. Dark gray
10	11.0-11.5	DP-10B	75%	0ppm	9:03	DP	moist		7.5YR 6/2			Sandy Gravel, Fine light gray
MJ	~~11.5-12.0~~	DP-10C		0ppm								
15												14.0 Refusal - Attempted to collect sample @ 15-17° but found refusal @ 14°
20												
25												
30												

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BTEX & PAH

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N

Site ID	NAS Ft Worth	Location ID	DP-11
Northing	–	Easting	–
Elevation	–	T.D.	–
Date Started	3/10/95	Date Completed	3/10/95
Drilling Contr.	KEF	Driller	Blake Riggs
Drill Method	Soil Probe	Rig Type	Geoprobe
Sample Type	1" Dia Drive Point	Geo/Eng.	M. Johnson
Hammer Wt.	–	Backfilled Date	–

Weather Conditions

Names of Persons Present
M Johnson
R. Riggs
J. Brown

Depth in Feet Drill	Sampled Interval	Sample Number	Percent Recovery	HNU or OVM Reading	Time ~~Blows Per 6"~~	Sampling Method	Water Content	USCS Code	Color	Graphic Log	Interval	Description
0												
5	5'-5.5	DP-11A	25%	0ppm	10:04	DP	U. Mst		7.5YR 4/3			Clayey sand w/ ~ 7% fine gravel Clay ~ 40% - plastic Dark Brn U. moist.
10	12.5-13'	DP-11B	80%	0 ppm	10:30	DP	Wet		7.5YR 3/2 Dk Brn			Clayey Sand / Sandy Clay Tr of F gravel, plastic - interbedded with clayey gravel Lt Brn
15												wet at 13'
20												
25												
30												

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Note High reading indicates ppm above 1/2 ppm background

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N

Site ID	NAS FORT WORTH	Location ID	DP-12
Northing	—	Easting	
Elevation	—	T.D.	13'
Date Started	3/18/95	Date Completed	3/18/95
Drilling Contr.	KEI	Driller	Blake Riggs
Drill Method	Drive point	Rig Type	Geoprobe
Sample Type	1" drive point	Geo/Eng.	M. Johnson
Hammer Wt.	NA	Backfilled Date	3/18/95

Weather Conditions: Clr, Calm

Names of Persons Present: M Johnson, B Riggs, J Prim

Depth in Feet	Sampled Interval	Sample Number	Percent Recovery	HNU or OVM Reading	Time Blows Per 6"	Sampling Method	Water Content	USCS Code	Color	Graphic Log	Interval	Description
0												
5	☒ 4-6	FW-A9001505 DP12A DP12A FW-A100701	100%	0ppm	8 19	DP	moist		7.5YR 4/6			Clayey Sand F-C w/ Tr fine gravel and organics, plastic
10												
	☒ 12.5-13	FW-A9001506 DP12B	50%	0ppm	18 36	DP	wet		7.5YR 7/6			Sandy Gravel - F up to 1/2" dia subrounded w Tr of silt or clay. TD-13'
15												
20												
25												
30												

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N

Site ID	NAS Ft Worth	Location ID	DP-13
Northing	–	Easting	–
Elevation	–	T.D.	22'
Date Started	3/10/95	Date Completed	3/10/95
Drilling Contr.	KEI	Driller	B. Riggs
Drill Method	Soil Probe	Rig Type	GeoProbe
Sample Type	Drive Point	Geo/Eng.	M Johnson
Hammer Wt.	–	Backfilled Date	3/10/95

Weather Conditions

Names of Persons Present
M Johnson
B. Riggs
J. Brim

Depth in Feet	Sampled Interval	Sample Number	Percent Recovery	HNU or OVM Reading	Time Blows Per 6"	Sampling Method	Water Content	USCS Code	Color	Graphic Log	Interval	Description
0	Drive Interval											
5												
	X 5-7'	FW-A 900606 DP13-A		DAPM	11:33	DP	moist		7.5YR 4/6			Clayey Silty Sand F-C Clay ~15% silt ~20% sl. plastic moist - Strong Brn, Tr. of organics.
10												
15												
20												
	X 21'-22'	FW-B 900607 DP13B		OPPM		DP	moist		7.5YR 6/6			Sandy Gravel - Fine well graded moist - Brn
25												TD 22'
30												

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BTEX & PAH

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N

Site ID	NAS Ft Worth	Location ID	DP-14
Northing	–	Easting	–
Elevation	–	T.D.	23
Date Started	3/10/95	Date Completed	3/10/95
Drilling Contr.	KEI	Driller	B Riggs
Drill Method	Soil Probe	Rig Type	Geoprobe Mike
Sample Type	1" Drive Pt.	Geo/Eng.	M Johnson
Hammer Wt.	–	Backfilled Date	3/10/95

Weather Conditions: Rain

Names of Persons Present: M Johnson, B Riggs, L Brim

Depth in Feet	Sampled Interval	Sample Number	Percent Recovery	HNU or OVM Reading	Time Blows Per 6"	Sampling Method	Water Content	USCS Code	Color	Graphic Log	Interval	Description
0												
5	5-5.5	FW-H 000608 DP-14A	100%	1 PPM	14:50				5Y 5/1			Sample discolored - lt grey 1 ppm
	5-5.5			0 ppm					7.5YR 4/6		5'	grey clayey Sand f-c, plastic mottled w/ organics (black)
10												
15												
20												
	22.5-23	FW-A 000609 DP-14B		0 ppm	15:15	DP	moist		7.5YR 6/6			Fine poorly graded sand interbedded with sandy gravel - fine moist. Sampler was damp - capillary fringe or groundwater
25												
30												

Are Intervals

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N

Site ID	NAS Ft Worth	Location ID	DP-15
Northing	—	Easting	—
Elevation	—	T.D.	22
Date Started	3/10/95	Date Completed	3/10/95
Drilling Contr.	KEE	Driller	B. Riggs
Drill Method	Soil Probe	Rig Type	Geoprobe
Sample Type	Drive Pt.	Geo/Eng.	M. Johnson
Hammer Wt.	—	Backfilled Date	3/10/95

Weather Conditions: Rain

Names of Persons Present: M Johnson, B. Riggs, J. Brim

Depth in Feet	Drive interval	Sampled Interval	Sample Number	Percent Recovery	HNU or OVM Reading	Time Blows Per 6"	Sampling Method	Water Content	USCS Code	Color	Graphic Log	Interval	Description
0													
5	X	5-6	FW-A 900701 DP-5A	100%	1 ppm	15:58	DP	moist		5Y 5/1			Fe Clayey Sand - grey - mottled reddish brn w/ organics
	X									7.5YR 4/6			SAME - Brown
10													
15													
20													
	X	21.5-22	FW-B 900702 DP-15B	100%	0ppm	16:14		wet		7.5YR 6/6			Fine sand poorly graded wet
25													TD = 22'
30													

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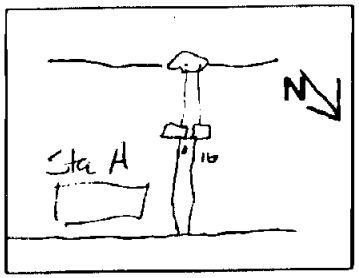

Site ID	NAS FT WORTH	Location ID	DP-16
Northing	–	Easting	–
Elevation	–	T.D.	195
Date Started	3/17/95	Date Completed	3/17/95
Drilling Contr.	KET	Driller	B Riggs
Drill Method	Coil Probe	Rig Type	Geoprobe Rig
Sample Type	Drive Pt. 1" dia	Geo/Eng.	M Johnson
Hammer Wt.	–	Backfilled Date	3/17/95

Weather Conditions: Sunny

Names of Persons Present: M Johnson; B Riggs; M J. Brown

Depth in Feet	Sampled Interval	Sample Number	Percent Recovery	HNU or OVM Reading	Time Blows Per 6"	Sampling Method	Water Content	USCS Code	Color	Graphic Log	Interval	Description
0												
5	5-6	FW-A 901501 DP16B DP16AFD FW-A 901502	100%	150ppm	16 42	DP	moist		7.5YR 5/2			Clayey Sand, fn-c, clay ~ 20%, w/ tr of fine gravel
10												
15	13-14	FW-A 901503 DP16B DP16B	100%	150ppm	1700	DP	wet		7.5YR 6/1			Sand f-m poorly graded saturated with fuel.
20	19-19.5	FW-A 901504 DP16C	100%	125ppm	1727	DP	wet		7.5YR 6/4			Sand f-m poorly graded w tr fine gravel.
25												195
30												

Drive Hammer

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N

Site ID	NAS Ft. Worth	Location ID	DP-17
Northing	—	Easting	
Elevation	—	T.D.	20'
Date Started	3/10/95	Date Completed	3/10/95
Drilling Contr.	KEF	Driller	B. Riggs
Drill Method	Soil Probe	Rig Type	Geoprobe
Sample Type	Drive Pt.	Geo/Eng.	M. Johnson
Hammer Wt.	—	Backfilled Date	3/10/95

Weather Conditions

Names of Persons Present
M. Johnson
B. Riggs
J. Brim

Depth in Feet	Sampled Interval	Sample Number	Percent Recovery	HNU or OVM Reading	Time Blows Per 6"	Sampling Method	Water Content	USCS Code	Color	Graphic Log	Interval	Description
0	Drive Entrance											
5	5'-6.5'	FW-A900703 DP-17A	100%	2ppm	17:12	DP	moist	SM	5Y 5/1			Sandy Clay / Clay Sand F-C discolored with fuel?
		DP-17B		FW-A900704								
10												
15	13'-14'	FW-A900705 DP-17C		20ppm	17:37				7.5YR 5/3			Sand F-m poorly graded interbedded w/ silty Sand lenses
20		Attempted to Sample		2ppm								Sandy gravel - Refusal very small amount of soil in sampler - 2ppm on HNu
25												20' TD
30												

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Site ID	NAS Pt Mugu	Location ID	DP-18
Northing	–	Easting	–
Elevation	–	T.D.	19
Date Started	3/13/95	Date Completed	3/13/95
Drilling Contr.	MEI	Driller	B Riggs
Drill Method	Soil Probe	Rig Type	Geoprobe 1 Mile
Sample Type	Drive Pt 1"	Geo/Eng.	A J Johnson
Hammer Wt.	–	Backfilled Date	3/13/95

Weather Conditions
Rain West Wind 55°F & Mg

Names of Persons Present
A J Johnson
B Riggs
J Brim

Depth in Feet	Sampled Interval	Sample Number	Percent Recovery	HNU or OVM Reading	Time Blows Per 6"	Sampling Method	Water Content	USCS Code	Color	Graphic Log	Interval	Description
0												Asphalt 2"
5	X 6.5-7.0	FW-A900808 DP-18A	100%	0 ppm	46:47	DP	moist		7.5YR 4/6			Sandy Clay / Clayey Sand Tr Gravel Plastic, Brown, moist
10												
15												
20	X 18.5-19	FW-A900802 DP-18B	100%	0 ppm	4.21	DP	Sat		7.5YR 5/6			Sand Fin well graded Lt Brn Sl. Moist, 1 foot Drive
25												TD=19'
30												

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N

Site ID	NAS Ft. Worth	Location ID	DP-19
Northing	—	Easting	—
Elevation	—	T.D.	18
Date Started	3/13/95	Date Completed	3/13/95
Drilling Contr.	KEI	Driller	B. Riggs
Drill Method	Geo. Probe	Rig Type	Geoprobe
Sample Type	1" Drive Pt.	Geo/Eng.	M Johnson
Hammer Wt.	—	Backfilled Date	3/13/95

Weather Conditions
Overcast 58°
West Breeze

Names of Persons Present
M Johnson
B Riggs
J Brim

Depth in Feet	Sampled Interval	Sample Number	Percent Recovery	HNU or OVM Reading	Time ~~Blows Per 6"~~	Sampling Method	Water Content	USCS Code	Color	Graphic Log	Interval	Description
0												
5	X 5'-6'	FW-A900803 19-A	25%	2ppm	9:47	DP	✓ moist		5YR 5/1			Clayey Sand F-C w/ fine gravel Clay ~40% plastic v moist gray (discolored)
10	X 11'-12'	FW-A900804 DP-19B	100%	22ppm	10:12	DP	moist		5YR 5/1			Clayey Sand F-C, Clay ~20%. Sl. ltly plastic, moist, grey - interbedded w clean F-m Sand, also discolored grey (note Sample had to be dug out of Sampler with a spatula)
15												
20	X 17'-18'	FW-A900805 DP-19C		18ppm	10:45	DP	moist		N.5YR 5/6			Clayey Sand, Clay ~20% Slight discoloring
25												TD - 18'
30												

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N

Site ID	NAS FT WORTH	Location ID	DP-20
Northing	—	Easting	—
Elevation	—	T.D.	19'
Date Started	3/13/95	Date Completed	3/13/95
Drilling Contr.	KEI	Driller	B. Riggs
Drill Method	Soil Probe	Rig Type	Geoprobe
Sample Type	1" Drive Pt.	Geo/Eng.	M Johnson
Hammer Wt.	—	Backfilled Date	3/13/95

Weather Conditions
OVERCAST ~65°
CALM

Names of Persons Present
M JOHNSON
B. RIGGS
J. PRIM

Depth in Feet	Sampled Interval	Sample Number	Percent Recovery	HNU or OVM Reading	Time Blows per 6"	Sampling Method	Water Content	USCS Code	Color	Graphic Log	Interval	Description
0												Clayey Sand [illegible] w sand-FC mottled [illegible] FLC green to light brown
5	5'-6'	FW-A900806 D1204	100%	0ppm	12:12	DP	moist		7.5YR 3/1			Clayey Sand FC, Clay 40% v. Dk Gray,
10												
15												
20	18'-19'	FW-A900807 D1203	100%	0ppm	12:44	DP	moist		7.5YR 6/6			Sand F-M well graded light brn, moist, somewhat mottled.
25												TD = 19'
30												

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N

Site ID	NAS FT WORTH	Location ID	DP-21
Northing	—	Easting	—
Elevation	—	T.D.	24'
Date Started	3/13/95	Date Completed	3/13/95
Drilling Contr.	KEI	Driller	B. Riggs
Drill Method	Soil Probe	Rig Type	Geoprobe
Sample Type	Spl Drive Pt.	Geo/Eng.	M. Johnson
Hammer Wt.	—	Backfilled Date	3/13/95

Weather Conditions
Rain

Names of Persons Present
M Johnson
B. Riggs
J Brim

Depth in Feet	Sampled Interval	Sample Number	Percent Recovery	HNU or OVM Reading	Blows Per 6"	Sampling Method	Water Content	USCS Code	Color	Graphic Log	Interval	Description
0												
5												
	X	FW-A	90%						7.5YR			Clayey Sand w/ Tr Gr.
	7-8'	DP21A	96%	0ppm		DP	moist		4/4			Clay ~ 20%
10												
15												
20												
												Sand F-M well graded
25			100%	0ppm	17:03	DP	moist					
												TD = 24'
30												

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N

Site ID	NAS FT WORTH	Location ID	DP-22
Northing	–	Easting	–
Elevation	–	T.D.	24'
Date Started	3/14/95	Date Completed	3/14/95
Drilling Contr.	KEL	Driller	B Riggs
Drill Method	Soil Probe	Rig Type	Geoprobe
Sample Type	Drive Pt.	Geo/Eng.	M. Johnson
Hammer Wt.	–	Backfilled Date	3/14/95

Weather Conditions
Drizzle Wet Brac

Names of Persons Present
M Johnson
B Riggs
J Bon

Depth in Feet	Sampled Interval	Sample Number	Percent Recovery	HNU or OVM Reading	~~Blows Per 6"~~ Time	Sampling Method	Water Content	USCS Code	Color	Graphic Log	Interval	Description
0												~2" Asphalt
5	X 5'-5.5'	DP-22A	100%	0ppm	8.29	DP	Moist		7.5YR 3/1			Clayey Sand / Sandy Clay F-M Dark Brn moist, v. plastic, very stiff.
	5.5-6'	DP-22B										
10												
15												~14' Driller reports high resistance
20												
25	X 23-24					DP	V. Moist		7.5YR 5/6			Clayey Sand - F-C, plastic Brn, TR Gravel (fine) Sample stuck in sampler
30												TD-24'

Drive Point

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N

Site ID	NAS FT WORTH	Location ID	DP-23
Northing	–	Easting	–
Elevation	—	T.D.	18.5
Date Started	3/14/95	Date Completed	3/14/95
Drilling Contr.	KEI	Driller	D Riggs
Drill Method	Soil Probe	Rig Type	Geoprobe
Sample Type	Drive Pt.	Geo/Eng.	M Johnson
Hammer Wt.	–	Backfilled Date	3/14/95

Weather Conditions
Drizzle Light
Wind

Names of Persons Present
M Johnson
B Riggs
J Brim

Depth in Feet	Sampled Interval	Sample Number	Percent Recovery	HNU or OVM Reading	TIME ~~Blows~~ Per 6"	Sampling Method	Water Content	USCS Code	Color	Graphic Log	Interval	Description
0												Asphalt ~ 2" NOTE: C130 upwind is performing an engine run up - exhaust in the air
5	5-6	FW-A100503 DP-23H FW-A900901	100%	-LWD 0PPM -IA	9:39	DP	Sl. Moist		7.5YR 4/3			Clayey Sand F-C w/ TR Fine Gravel, Slightly plastic, moderately soft.
10												
15												
18°	18-18.5	FW-A900902 DP23D	100%	0PPM	10:18	DP	DRY		10YR 7/2			Drill Refusal at 18°, will try sample 6". Clayey Sandy Gravel Fine rounded to subrounded, v. Dense
20												EOB 18.5, Dry, light tray
25												
30												

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N

Site ID	NAS FT WORTH	Location ID	DP-~~25~~ 24
Northing	—	Easting	—
Elevation	—	T.D.	24"
Date Started	3/14/95	Date Completed	3/14/95
Drilling Contr.	KEF	Driller	B. Riggs
Drill Method	Soil Probe	Rig Type	Geoprobe
Sample Type	1" Dove Pt.	Geo/Eng.	M. Johnson
Hammer Wt.	—	Backfilled Date	3/14/95

Weather Conditions

Names of Persons Present
M. Johnson
B. Riggs
J. Brim

Depth in Feet	Sampled Interval	Sample Number	Percent Recovery	HNU or OVM Reading	TM Blows Per 6"	Sampling Method	Water Content	USCS Code	Color	Graphic Log	Interval	Description
0												2" Asphalt.
5												
10	8'-9'	FW-A 900903 01234	100%	0ppm	14:09	DP	SI Mst		7.5YR 5/6			Clayey Sand w Tr Fine gravel F-C Brown, moderately stiff paste w/ organics ~ 10%
15												
20												
25	23'-24	FW-HG900907 01233	33%	0ppm	14:38	DP	wet		7.5YR 6/6			Sand F-C well graded (under water table)
30												TD = 24"

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BTEX & PAH mg

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N

Site ID	NAS FT WORTH	Location ID	DP-25
Northing	—	Easting	—
Elevation	—	T.D.	21'
Date Started	3/14/95	Date Completed	3/14/95
Drilling Contr.	HFE	Driller	B. Riggs
Drill Method	Soil Probe	Rig Type	Geoprobe
Sample Type	1" Drive Pt	Geo/Eng.	M Johnson
Hammer Wt.	—	Backfilled Date	3/14/95

Weather Conditions: Rain

Names of Persons Present: M Johnson, B Riggs, J Bien

Depth in Feet	Sampled Interval	Sample Number	Percent Recovery	HNU or OVM Reading	Time ~~Blows Per 6"~~	Sampling Method	Water Content	USCS Code	Color	Graphic Log	Interval	Description
0												
5	X 5'-6'	FW-A9100908 DP25A	100%	0ppm	14:51	DP	wet		7.5YR 2.5/1			Sandy Clay, sand ~20% very plastic, organics ~10% Black, wet
10												
15												
20	X 20'-21'	FW-A9100909 DP25B B mg	100%	0ppm	15:31	DP	Moist		7.5YR 5/6			Sand f-m poor graded w/ interbeds of Clayey sand f-m.
25												TD 21'
30												

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N

Site ID	NAS FT WORTH	Location ID	DP-26
Northing	—	Easting	—
Elevation	—	T.D.	21'
Date Started	3/14/95	Date Completed	3/14/95
Drilling Contr.	KEI	Driller	B. Riggs
Drill Method	Soil Probe	Rig Type	Geoprobe
Sample Type	1" Drive Pt.	Geo/Eng.	M Johnson
Hammer Wt.	—	Backfilled Date	3/14/95

Weather Conditions: Cloudy

Names of Persons Present: MJN, BR, J Brim

Depth in Feet	Sampled Interval	Sample Number	Percent Recovery	HNU or OVM Reading	~~Blows Per 6"~~ Time	Sampling Method	Water Content	USCS Code	Color	Graphic Log	Interval	Description
0												
5	☒ 5'-5'	FW-A 901001 DP26A	100%	0ppm	16:18	DP	moist to dry		7.5YR 2.5/1			Sandy Clay - crumbley, soft black - dk gray, plastic
10												
15												
20	☒ 20'-21'	FW-A 901002 DP26B	100%	0ppm	17:01	DP	wet		7.5YR 4/6			Sand F-C, wet (▽)
												TD 21'
25												
30												

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Lithologic Borehole Log BTEX
Project #10K70100

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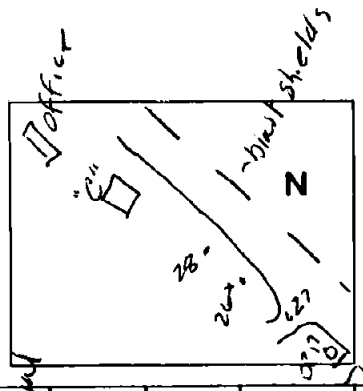

Site ID	NAS Ft Worth	Location ID	DP-27
Northing	—	Easting	—
Elevation	—	T.D.	19.5
Date Started	3/15/95	Date Completed	3/15/95
Drilling Contr.	KEI	Driller	B Riggs
Drill Method	Soil Probe	Rig Type	Geoprobe
Sample Type	Drive Pt.	Geo/Eng.	M. Johnson
Hammer Wt.	—	Backfilled Date	3/15/95

Weather Conditions: drizzle

Names of Persons Present: MRJ, BE, JBrim

Depth In Feet	Sampled Interval	Sample Number	Percent Recovery	HNU or OVM Reading	~~Blows Per 6"~~ Time	Sampling Method	Water Content	USCS Code	Color	Graphic Log	Interval	Description
0	Drive Interval											
5	5.5-6'	FW-A901003 DP27A	50%	0ppm	8:35		moist		7.5YR 3/1			Clayey Sand/Sandy clay, plastic organics ~ 5%, roots etc Dk gray
10												
15												
20	18.5-19'	FW-A901004 DP27B		0ppm	9:00		wet		7.5YR 5/6			Sand f-m, wet, dense TD = 19.5'
25												
30												

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Lithologic Borehole Log BTEX ½ PAH
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N

Site ID	NAS FT WORTH	Location ID	DP-28
Northing	–	Easting	–
Elevation	–	T.D.	18'
Date Started	3/15/95	Date Completed	3/15/95
Drilling Contr.	KET	Driller	B Riggs
Drill Method	Soil Probe	Rig Type	Geoprobe
Sample Type	Drive Pt.	Geo/Eng.	M Johnson
Hammer Wt.	–	Backfilled Date	3/15/95

Weather Conditions: Drizzle

Names of Persons Present: M Johnson, B Riggs, J Brim

Depth in Feet	Sampled Interval	Sample Number	Percent Recovery	HNU or OVM Reading	Time ~~Blows Per 6"~~	Sampling Method	Water Content	USCS Code	Color	Graphic Log	Interval	Description
0												
5		FW-A901005		DP28A								
		FW-A901006		DUP DP28B								
	5-10'	DP28A	75%	~~0ppm~~ 0ppm	9:21	DP	V Moist		7.5YR 4/2			Clayey Sand F-M w/Tr fine gravel and organics, plastic, clay % ~35
		DP28B										
10												
15												
		FW-A901007										
	17-18'	DP28C	100%	4ppm	9:59		Moist		7.5YR 5/6			Sand F-M
20												TD=18'
25												
30												

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N

Site ID	DAS FT WORTH	Location ID	DP-29
Northing	–	Easting	–
Elevation	–	T.D.	19'
Date Started	3/15/95	Date Completed	3/15/95
Drilling Contr.	[illegible]	Driller	J Riggs
Drill Method	Vol Probe	Rig Type	Geoprobe
Sample Type	Drive Pt	Geo/Eng.	M Johnson
Hammer Wt.	–	Backfilled Date	3/15/95

Weather Conditions: Rain

Names of Persons Present: M Johnson, B Riggs, [illegible]

Depth in Feet	Sampled Interval	Sample Number	Percent Recovery	HNU or OVM Reading	Blows Per 6"	Sampling Method	Water Content	USCS Code	Color	Graphic Log	Interval	Description
0												
5	☒ 5-6	FW-A910028 DP29A	75%	0ppm	10:17	DP	Moist		7.5YR 3/4			Clayey Sand w/ Trace Fine gravel, clay ~40% - trace organics.
10												
15												
20	☒ 18-19	FW-A910029 DP29B	100%	0ppm	10:41	DP	moist		7.5YR 5/6		lab sample FW-A100506 DP29B	Sand F-m TD 19'
25												
30												

Drive Interval

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N

Site ID	NAS Ft Worth	Location ID	DP-30
Northing	–	Easting	–
Elevation	–	T.D.	20'
Date Started	3/15/95	Date Completed	3/15/95
Drilling Contr.	KEI	Driller	B Riggs
Drill Method	Soil Probe	Rig Type	Geoprobe
Sample Type	Drive Pt.	Geo/Eng.	M Johnson
Hammer Wt.	–	Backfilled Date	3/15/95

Weather Conditions
Drizzle

Names of Persons Present
M Johnson
B Riggs
J B-im

Depth in Feet	Sampled Interval	Sample Number	Percent Recovery	HNU or OVM Reading	Time Blows Per 6"	Sampling Method	Water Content	USCS Code	Color	Graphic Log	Interval	Description
0												
5	5-6'	FW-A-901101 DP30A	25%	4.2ppm	11:07	DP	v moist		7.5YR 3/1			Clayey Sand F-M Tr. fine gravel Tr organics.
10												
15												
20	19-20'	FW-A-901102 DP30B	100%	0ppm	11:36	DP	moist		7.5YR 4/4			Sand F-M poorly graded, dense
25												TD=20'
30												

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N

Site ID	NAS Ft. Worth	Location ID	DP-31
Northing	–	Easting	–
Elevation	–	T.D.	20'
Date Started	3/15/95	Date Completed	3/15/95
Drilling Contr.	KEI	Driller	B Riggs
Drill Method	Soil Probe	Rig Type	Geoprobe
Sample Type	Drive Point	Geo/Eng.	M. Johnson
Hammer Wt.	–	Backfilled Date	3/15/95

Weather Conditions
Drizzle

Names of Persons Present
M Johnson
B. Riggs
J Brim

Depth in Feet	Sampled Interval	Sample Number	Percent Recovery	HNU or OVM Reading	~~Blows Per 6"~~ Time	Sampling Method	Water Content	USCS Code	Color	Graphic Log	Interval	Description
0												
5	☒ 5-7.6'	FW-A DP31A	90110 3 100%	0ppm	12:08	DP	v. moist		7.5YR 3/2			Clayey Sand / Sandy Clay - vf-f grained, plastic
10												
15												
20	☒ 19-20	FW-A-90110 4 DP31B	100%	0ppm	12:12	DP	moist		7.5YR 4/6			Silty Sand f-m and Sand f-m interbedded TD - 20'
25												
30												

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N

Site ID	NAS Ft Worth	Location ID	DP-32
Northing	–	Easting	–
Elevation	–	T.D.	23.5
Date Started	3/15/95	Date Completed	3/15/95
Drilling Contr.	KEF	Driller	B Riggs
Drill Method	Soil Probe	Rig Type	Geoprobe
Sample Type	Drive Pt	Geo/Eng.	M Johnson
Hammer Wt.	–	Backfilled Date	3/15/95

Weather Conditions: Overcast

Names of Persons Present: M Johnson, B Riggs, J Brin

Depth in Feet	Sampled Interval	Sample Number	Percent Recovery	HNU or OVM Reading	Time Blows Per 6"	Sampling Method	Water Content	USCS Code	Color	Graphic Log	Interval	Description
0												3" Asphalt
5	5-6'	FW-A DP32A	901105 100%	0ppm	15:21	DP	Sl moist		7.5YR 3/3			Clayey Sand, Clay ~30%, Tr F gravel plastic.
10												Sampler drive pt. broke at about 15'
15												
20												
25	23-23.5	FW-A DP32B	901106 100%	0ppm	16:29	DP	Very moist to wet		7.5YR 6/6			Clayey Sand F-m, Tr Fine gravel TD 23.5
30												

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Lithologic Borehole Log
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N

Site ID	NAS FT WORTH	Location ID	DP-33
Northing	–	Easting	–
Elevation	–	T.D.	18'
Date Started	3/15/95	Date Completed	3/15/95
Drilling Contr.	KEI	Driller	B Riggs
Drill Method	Soil Probe	Rig Type	Geoprobe
Sample Type	1" Drive Pt.	Geo/Eng.	M Johnson
Hammer Wt.	–	Backfilled Date	3/15/95

Weather Conditions: Drizzle

Names of Persons Present: MRJ, BR, JBcm

Depth in Feet	Sampled Interval	Sample Number	Percent Recovery	HNU or OVM Reading	~~Blows Per 6"~~ Time	Sampling Method	Water Content	USCS Code	Color	Graphic Log	Interval	Description
0												
5	☒ 5'-6'	FW-A-901107 DP33A	100%	0ppm	1654	DP	Si moist		7.5YR 5/6			Clayey Sand w Fine gravel Clay ~35% gravel ~10% Subrounded to rounded. Plastic Trace of organics. Very dense from 12' to 15'
		FW-A-901108	Duplicate									
10												
15												Pin pulled out of sampler @ 15' Driller reports that soil gets soft just past 15' to about 16.5 He says this has been typical in the C-130 parking area
	☒ 17-18	FW-A-901109 DP33B	100%	0ppm	1737	DP	moist		7.5YR 5/6			Sandy Clay, very plastic
20												
25												TD = 18'
30												

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N

Site ID	NAS Ft Worth	Location ID	DP-35
Northing	—	Easting	—
Elevation	—	T.D.	23'
Date Started	3/16/95	Date Completed	3/16/95
Drilling Contr.	KEI	Driller	B. Riggs
Drill Method	Soil Probe	Rig Type	Geoprobe
Sample Type	1" Drive Pt.	Geo/Eng.	M. Johnson
Hammer Wt.	—	Backfilled Date	3/16/95

Weather Conditions
Partly Cloudy
60°

Names of Persons Present
M. Johnson
B. Riggs
J. Brim

Depth in Feet	Sampled Interval	Sample Number	Percent Recovery	HNU or OVM Reading	Time Blows Per 6"	Sampling Method	Water Content	USCS Code	Color	Graphic Log	Interval	Description
0												3" Asphalt
5	5-6'	FW-A901202 DP35A	50%	0ppm	9:53	DP	moist		7.5YR 3/1			
10												Easy pushing - suspect sampler tripped - at 21' tried to sample verify sampler trip
15	12-14'	FW-A901203 DP35B	100%	0ppm	9:22	DP	V. moist		7.5YR 3/3			Clayey Sand / Sandy Clay w/Tr fine gravel. had to remove sample from barrel with spatula.
20												
25	22-23				10:12	DP	V. moist to wet		7.5YR 5/4		22.5' ▽	Sand F-C well graded
30												

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Lithologic Borehole Log
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N

Site ID	NAS Ft Worth	Location ID	DP-34
Northing	—	Easting	—
Elevation	—	T.D.	6"
Date Started	3/16/95	Date Completed	3/16/95
Drilling Contr.	KEF	Driller	B. Riggs
Drill Method	Soil Probe	Rig Type	Geoprobe
Sample Type	1" Drive Pt.	Geo/Eng.	M. Johnson
Hammer Wt.	—	Backfilled Date	3/16/95

Weather Conditions
Partly Cloudy
60°

Names of Persons Present
M Johnson
B. Riggs
J Brim

Depth in Feet	Sampled Interval	Sample Number	Percent Recovery	HNU or OVM Reading	Time, Blows per 6"	Sampling Method	Water Content	USCS Code	Color	Graphic Log	Interval	Description
0												3" Asphalt
5	5'-6'	FW-A DP34A	201201 100%	0ppm	8:27	DP	SI moist		N SLR 5/4			Clayey Sand F-M w Tr fine gravel, plastic, Tr organics
10												TD=6"
15												
20												
25												
30												

Drive Interval

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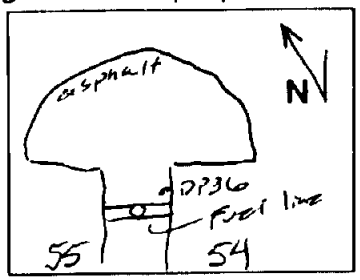
C-130 Parking Apron



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Site ID	NAS Ft. Worth	Location ID	DP-36
Northing	—	Easting	—
Elevation	—	T.D.	23'
Date Started	3/16/95	Date Completed	3/16/95
Drilling Contr.	KEI	Driller	B. Riggs
Drill Method	Soil Probe	Rig Type	Geoprobe
Sample Type	1" Drive Pt.	Geo/Eng.	M Johnson
Hammer Wt.	—	Backfilled Date	3/16/95

Weather Conditions: Sunny 70°

Names of Persons Present: M Johnson, B. Riggs, J Brim.

Depth in Feet	Sampled Interval	Sample Number	Percent Recovery	HNU or OVM Reading	Time Blows Per 6"	Sampling Method	Water Content	USCS Code	Color	Graphic Log	Interval	Description
0												3" Asphalt
5	X 5'-6'	FW-A901205 DP-36A	100%	0ppm	10:44	DP	V. moist		7.5YR 4/2			Clayey Sand/Sandy Clay w Trace of fine gravel, Plastic
10												
15												
20	X 22-23	FW-A901206 DP36B	50%	0ppm	11:27	DP	moist		7.5YR 6/4			Sand Fm poorly graded / interbedded w/ sandy clay lenses. (plastic) ≈ 2 inch
25												TD 23'
30												

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BTEX & PAH

Lithologic Borehole Log
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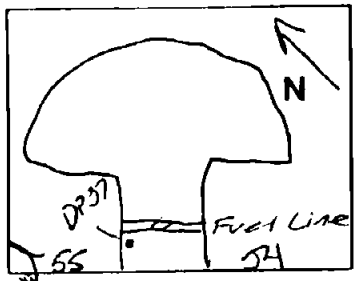

Site ID	NAS FT WORTH	Location ID	DP-37
Northing	—	Easting	—
Elevation	—	T.D.	23'
Date Started	3/16/95	Date Completed	3/16/95
Drilling Contr.	KEE	Driller	B. Riggs
Drill Method	Soil Probe	Rig Type	Geoprobe
Sample Type	1" Dme Pt.	Geo/Eng.	M. Johnson
Hammer Wt.	—	Backfilled Date	3/16/95

Weather Conditions

Names of Persons Present
M. Johnson
B. Riggs
[illegible] Brim

Depth in Feet	Sampled Interval	Sample Number	Percent Recovery	HNU or OVM Reading	Time Blows Per 6"	Sampling Method	Water Content	USCS Code	Color	Graphic Log	Interval	Description
0												3" Asphalt
5	5-6	DP37A (FWA901207) DP37AFD (FW-A901208)	75%	0ppm	11:57	DP	moist		7.5YR 5/2			Clayey Sand (Sandy Clay w/ Tr fine gravel rounded to subrounded Tr organics, Plastic.
10												
15												sampler tip retainer failed - sampler full @ 22' (intended depth) will resample - Lunch 12:30-1300
20												
25	22-23	FW-A DP37B 901209	100%	0ppm	14:52	DP	moist		7.5YR 5/2			Clayey Sand w/ Tr gravel
30												

Direct Push

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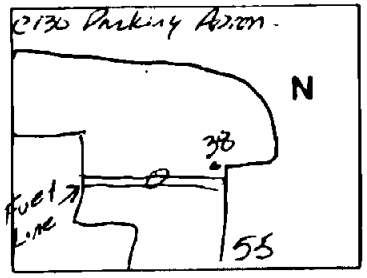

Site ID	NAS FT WORTH	Location ID	DP-38
Northing	—	Easting	—
Elevation	—	T.D.	23'
Date Started	3/16/95	Date Completed	3/16/95
Drilling Contr.	KEI	Driller	B. Riggs.
Drill Method	Soil Probe	Rig Type	Geoprobe
Sample Type	1" Drive Point	Geo/Eng.	M Johnson
Hammer Wt.		Backfilled Date	3/16/95

Weather Conditions
Windy Partly Cldy

Names of Persons Present
M. Johnson
B. Riggs
J. Brim

Depth in Feet	Sampled Interval	Sample Number	Percent Recovery	HNU or OVM Reading	TIME Blows Per 6"	Sampling Method	Water Content	USCS Code	Color	Graphic Log	Interval	Description
0												3" Asphalt
5	4-6	FW-A 001301 DP38A FW-A 100508	100%	0ppm Lab	15:16	DP	MOIST		7.5YR 1/1			~100% Clayey Sand F-C, plastic
10												Punch down to 19' with a blank probe
15												replace blind probe w/ Sampler
20	22-23	FW-A 001302 DP38B		0ppm	16:03	DP	V moist		7.5YR 6/4			Clayey Sand ~16% clay F-M Slightly plastic
25												
30												

Lithologic Borehole Log
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BTEX & PAH

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N

Site ID	NWO Ft. Worth	Location ID	DP-39
Northing	—	Easting	—
Elevation	—	T.D.	25'
Date Started	3/16/95	Date Completed	3/16/95
Drilling Contr.	KEI	Driller	B. Riggs
Drill Method	Soil Probe	Rig Type	Geoprobe
Sample Type	1" Drive Pt.	Geo/Eng.	M Johnson
Hammer Wt.	—	Backfilled Date	3/16/95

Weather Conditions
Windy Partly Cloudy

Names of Persons Present
M. Johnson
B. Riggs
J. Brim

Depth in Feet	Sampled Interval (Drive Interval)	Sample Number	Percent Recovery	HNU or OVM Reading	Time ~~Blows~~ Per 6"	Sampling Method	Water Content	USCS Code	Color	Graphic Log	Interval	Description
0												3" Asphalt
5	X 5-6	FW-A DP39A	901203 100%	~~mg~~ 0ppm	16 24	DP	moist		7.5YR 1/1	Asphalt		Clayey Sand, Clay ~30%, FC
10												
15												
20												
25	X 24-25	FW-A DP39B	901303 100%	mg 4 0ppm	17 15	DP	moist to wet		7.5YR 6/6			Clayey Sandy Gravel, Fine (up to 1/2") rounded to subrounded
30												

BTEX & PAH

Lithologic Borehole Log
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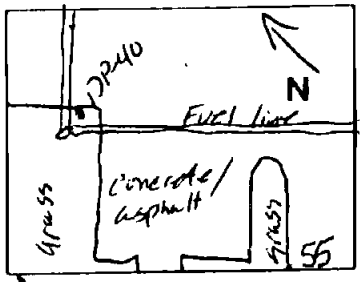

Site ID	NAS Ft worth	Location ID	DP-40
Northing		Easting	—
Elevation	—	T.D.	23.5
Date Started	3/17/95	Date Completed	3/17/95
Drilling Contr.	KEI	Driller	B. 12:555.
Drill Method	Soil Probe	Rig Type	Geoprobe
Sample Type	Drive Pt.	Geo/Eng.	MRS
Hammer Wt.	—	Backfilled Date	3/17/95

Weather Conditions: Sunny/calm

Names of Persons Present: MRS, BR, J. Bam.

Depth in Feet	Sampled Interval	Sample Number	Percent Recovery	HNU or OVM Reading	Time Blows Per 6"	Sampling Method	Water Content	USCS Code	Color	Graphic Log	Interval	Description
0												
5	5.5-6	FW-A901305 DP40A	100%	0ppm	0817	DP	V moist		7.5YR 4/1			Clayey Sand F-C, w/ Tr fine gravel Clay ~ 35%, organics, roots etc. plastic
10												
15												
20												
25	22.5-23.5	FW-A901305 DP40B	100%	0ppm	9:35	DP	wet		7.5YR 6/6			Clayey Sandy Gravel up to 1/2" dia Subrounded
30												TD=23.5

Drive Entrance

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N

Site ID	NAS FT WORTH	Location ID	DP-41
Northing	—	Easting	—
Elevation	—	T.D.	23'
Date Started	3/17/95	Date Completed	3/17/95
Drilling Contr.	KEF	Driller	C Riggs
Drill Method	Soil Probe	Rig Type	Geoprobe
Sample Type	1" Drive Pt	Geo/Eng.	M Johnson
Hammer Wt.	—	Backfilled Date	3/17/95

Weather Conditions
Sunny Calm

Names of Persons Present
M Johnson
B. Riggs
J Brim

Depth in Feet	Sampled Interval	Sample Number	Percent Recovery	HNU or OVM Reading	Time Blows Per 6"	Sampling Method	Water Content	USCS Code	Color	Graphic Log	Interval	Description
0												3" Asphalt
5	☒ 5-6'	FW-A 901307 DP41A DP41AFD	50%	0ppm	4:58	DP	moist		7.5YR 4/1			Clayey Sand F-C, clay ~ 35% organics, roots etc. plastic
		FW-A 901308		0ppm								
10												
15												
20	☒ 22.5-23	FW-A 01309 DP41B	50%	0ppm	1038	DP	wet		7.5YR 6/3			Sand F-C Well graded, interbedded w/ 2" lenses of Sandy gravel-fine 1/2" dia subrounded w/ clay (~ 1%)
25												TD = 23'
30												

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Lithologic Borehole Log
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BTEX & PAH

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N

Site ID	NAS FT WORTH	Location ID	DP42
Northing	—	Easting	—
Elevation	—	T.D.	22'
Date Started	3/17/95	Date Completed	3/17/95
Drilling Contr.	KEI	Driller	B. Riggs
Drill Method	Soil Probe	Rig Type	Geoprobe
Sample Type	1" Drive Pt	Geo/Eng.	M. Johnson
Hammer Wt.	—	Backfilled Date	3/17/95

Weather Conditions: Partly Cloudy, windy

Names of Persons Present: M. Johnson, B. Riggs, J. Bitter

Depth in Feet	Sampled Interval	Sample Number	Percent Recovery	HNU or OVM Reading	Time ~~Blows Per 6"~~	Sampling Method	Water Content	USCS Code	Color	Graphic Log	Interval	Description
0												3" Asphalt
5	5'-6'	FW-A901406 DP42A		1.2ppm	14:38	DP	moist		7.5YR 3/1			Clayey Sand FC, w/ fine gravel organics, roots, plastic
10												
15												
20	21-22	FW-A901407 DP42B		0ppm	15:34	DP	wet		7.5YR 7/6			Clayey Sandy gravel
25												TD22
30												

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N

Site ID	NAS Ft Worth	Location ID	OP-213
Northing	—	Easting	—
Elevation	—	T.D.	21'
Date Started	3/17/95	Date Completed	3/17/95
Drilling Contr.	KEI	Driller	B. Riggs
Drill Method	Soil Probe	Rig Type	Geoprobe
Sample Type	1" Drive Pt.	Geo/Eng.	M. Johnson
Hammer Wt.	—	Backfilled Date	3/17/95

Weather Conditions

Names of Persons Present: M. Johnson, B. Riggs, J. Brim

Depth in Feet	Sampled Interval	Sample Number	Percent Recovery	HNU or OVM Reading	~~Blows Per 6"~~ TIME	Sampling Method	Water Content	USCS Code	Color	Graphic Log	Interval	Description
0	Drive Interval											
5	5'-6'	FW-A-01401 DP4BA	100%	0ppm	1052	DP	moist		7.5YR 1/1 and 4/4 mottled			Clayey Sand F-C, clay ~40%, plastic Tr fine sub round gravel.
10												
15												
20	20'-21'	FW-A-01402 DP420	50%	0ppm	11:28	DP	moist		7.5YR 4/6			Clayey Sand F-M, clay ~20%
25												TD=21'
30												

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Lithologic Borehole Log BTEX
Project #10K70100

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N

Site ID	NAS FT WORTH	Location ID	DP-44
Northing		Easting	—
Elevation	—	T.D.	~~22~~ 23
Date Started	3/17/95	Date Completed	3/17/95
Drilling Contr.	KEG	Driller	B. Riggs
Drill Method	Soil Probe	Rig Type	Geoprobe
Sample Type	Drive Point	Geo/Eng.	M Johnson
Hammer Wt.	—	Backfilled Date	3/17/95

Weather Conditions: Partly Cloudy ~75°

Names of Persons Present: M Johnson, B Riggs, J Brim

Depth in Feet	Sampled Interval	Sample Number	Percent Recovery	HNU or OVM Reading	Time Blows Per 6"	Sampling Method	Water Content	USCS Code	Color	Graphic Log	Interval	Description
0												3" Asphalt
			901403									
5	5'-6'	FW-A DP44A	40/30 75%	2ppm	1357	DP	Si moist		10Y 7/1			Clayey Sand F-C, Tr fine gravel discolored? plastic
10	11-13	FW-A DP44B FW-A	901404 100/60	0ppm Lab	1416	DP	Si moist		7.5YR 4/2			Clayey Sand F-C, Tr fine gravel plastic
15												
20	21-22	FW-A DP44C	901405	6ppm	1438	DP	wet		7.5YR 4/4			Sand F-M, poorly graded
												TD ~~22~~ 23 mbg
25												groundwater at 24'
30												

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BTEX & PAH

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N

Site ID	NAS FT WORTH	Location ID	DP-45
Northing	—	Easting	—
Elevation	—	T.D.	23'
Date Started	3/17/95	Date Completed	3/17/95
Drilling Contr.	KEE	Driller	B. Riggs
Drill Method	Soil Probe	Rig Type	Geoprobe
Sample Type	Drive Pt.	Geo/Eng.	M Johnson
Hammer Wt.	—	Backfilled Date	3/17/95

Weather Conditions
Partly Cloudy, Windy

Names of Persons Present
M Johnson
B. Riggs
J. Brown

Depth in Feet	Sampled Interval	Sample Number	Percent Recovery	HNU or OVM Reading	Time Blows Per 6"	Sampling Method	Water Content	USCS Code	Color	Graphic Log	Interval	Description
0												
5	5'-6'	FW-A901408 DP45A		1.5ppm	1549	DP	moist		7.5YR 7/1			Clayey Sand w/ gravel (Fine) Plastic, light gray
10												
15												
20												
	22'-23'	FW-A901409 DP45B		15ppm	16:16	DP	wet		7.5YR 7/6			Sand F-M.
25												
30												

Hyg Reading ppm above ½ ppm background

Lithologic Borehole Log
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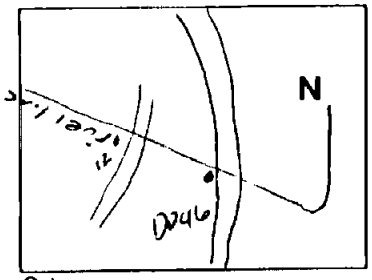

Site ID	NAS FT WORTH	Location ID	DP-46
Northing	–	Easting	–
Elevation	–	T.D.	12
Date Started	3/18/95	Date Completed	3/18/95
Drilling Contr.	KEI	Driller	B Riggs
Drill Method	Soil Probe	Rig Type	Geoprobe mob
Sample Type	Drive Pt.	Geo/Eng.	M. Johnson
Hammer Wt.	–	Backfilled Date	3/18/95

Weather Conditions: Clr Calm

Names of Persons Present: Mohnson, B Rigg, B Johnson

Depth in Feet	Sampled Interval	Sample Number	Percent Recovery	HNU or OVM Reading	Time ~~Blows Per 6"~~	Sampling Method	Water Content	USCS Code	Color	Graphic Log	Interval	Description
0												
5	3-6'	FW-A901507 DP46A	100%	0ppm	9.03	DP	Sl. moist		7.5YR 5/4			10% Gravelly 20% Clayey Sand F-C, plastic, Tr organics. Subrounded gravel
10	10-10.5'	FW-A901508 DP46B	50%	0ppm	9.21	DP	wet		7.5YR 6/4			Sandy Gravel v.f to ½" dia subround w/Tr clay & silt
												▽ 10.4 measured w/ slope.
15												TD = 12'
20												
25												
30												

Drive Refusal

Hnu readings indicate ppm units

Lithologic Borehole Log
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Site ID	NAS FT WORTH	Location ID	DP-47
Northing	—	Easting	—
Elevation	—	T.D.	20'
Date Started	3/18/95	Date Completed	3/18/95
Drilling Contr.	KEF	Driller	B Riggs
Drill Method	Soil Probe	Rig Type	Geoprobe Mate
Sample Type	Drive Pt.	Geo/Eng.	M. Johnson
Hammer Wt.	—	Backfilled Date	3/18/95

N

Weather Conditions
Partly Cloudy

Names of Persons Present
M Johnson
B Riggs
B Johnson

Depth in Feet	Drive Interval	Sampled Interval	Sample Number	Percent Recovery	HNU or OVM Reading	Time Blows Per 6"	Sampling Method	Water Content	USCS Code	Color	Graphic Log	Interval	Description
0													
			FW-A901509										
5	X	5-5'	DP47A SOIL		0ppm	9:56	DP	moist		7.5YR 3/2			Sandy Clay/Clayey Sand w/ organics plastic, dark brown.
10													
15													
			DP47BFD							7.5YR 5/6			Sand F-C, poorly graded
			FW-A901602										
20	X	19-20	DP47D		0ppm	10:25							
			FW-A901601										
													TD=20'
25													
30													

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HNU readings indicate 1ppm above 1/2 ppm background

Lithologic Borehole Log
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BTEX & PAH

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N

Site ID	NAS FT WORTH	Location ID	DP48
Northing	—	Easting	—
Elevation	—	T.D.	21
Date Started	3/18/95	Date Completed	3/18/95
Drilling Contr.	KEI	Driller	B Riggs
Drill Method	Soil Probe	Rig Type	Geoprobe Mole
Sample Type	Drive Pt.	Geo/Eng.	M Johnson
Hammer Wt.	—	Backfilled Date	3/18/95

Weather Conditions: Pty Cldy

Names of Persons Present:

Depth in Feet	Sampled Interval	Sample Number	Percent Recovery	HNU or OVM Reading	Time ~~Blows Per 6"~~	Sampling Method	Water Content	USCS Code	Color	Graphic Log	Interval	Description
0												
5	5-6'	FW-A D2489	901603 100%	0ppm	10:42	DP	moist		N5YR 3/2			Clayey Sand F-C w/ tr organics plastic, dark brown.
10												
15												
20	19.5-20	FW-A D2483	901604	0ppm	11:07	DP	Very moist		N5YR			Sandy Gravel - Fine Subrounded up to 1/2" dia
25												TD 21 ▽ 20.1' measured w/ slope
30												

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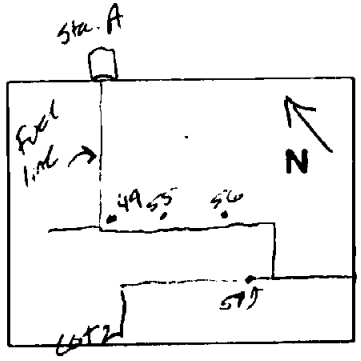

Site ID	NAS Ft Worth	Location ID	DP-57
Northing	—	Easting	—
Elevation	—	T.D.	22'
Date Started	3/20/95	Date Completed	3/20/95
Drilling Contr.	IET	Driller	B. Riggs
Drill Method	Soil Probe	Rig Type	Geoprobe
Sample Type	Drive Pt	Geo/Eng.	M Johnson
Hammer Wt.	—	Backfilled Date	3/20/95

Weather Conditions
High Clouds
Windy

Names of Persons Present
M Johnson
B. Riggs
J Brim.

Depth in Feet	Sampled Interval	Sample Number	Percent Recovery	HNU or OVM Reading	~~Blows Per 6"~~ Time	Sampling Method	Water Content	USCS Code	Color	Graphic Log	Interval	Description
0												
5	5-6'	FW-H-901804 DP57A	100%	0ppm	15:12	DP	moist					Clayey Sand / Sandy Clay, F-C, plastic, organics, Dk Brn-grey
10												
15												
20	21-22'	FW-H-901805 DP57B	75%	0ppm	15:53 ~~14:53~~	DP	wet					Sand F-m, poorly graded Lt Brn.
25												TD=22' H2O and caving @ 21.55'
30												

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N

Site ID	NAS Ft Worth	Location ID	DP-58
Northing	—	Easting	—
Elevation	—	T.D.	22
Date Started	3/20/95	Date Completed	3/20/95
Drilling Contr.	REI	Driller	D Riggs
Drill Method	Soil Probe	Rig Type	Geoprobe
Sample Type	1" Drive Pt.	Geo/Eng.	M Johnson
Hammer Wt.	—	Backfilled Date	3/20/95

Weather Conditions

Names of Persons Present: MRJ, BR, J Brim

Depth in Feet	Sampled Interval	Sample Number	Percent Recovery	HNU or OVM Reading	Blows Per 6"	Sampling Method	Water Content	USCS Code	Color	Graphic Log	Interval	Description
0												
5	X 5'-6'	FW-29019060 DP58A	100%	0ppm	10 20	DP	moist					Clayey Sand/Sandy Clay w/Tr of Fin gravel - Subrounded, Plastic Dark Brown-gray
10												
15												
20	X 21'-22'	FW-29017055 DP-58A Bmg	50%	0ppm	16 33	DP	wet					Sand, Fm. poorly graded Lt Brown
25												TD 22
30												

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N

Site ID	NAS FT WORTH	Location ID	DP-49
Northing	–	Easting	–
Elevation	–	T.D.	22
Date Started	3/18/95	Date Completed	3/18/95
Drilling Contr.	KEF	Driller	B Riggs
Drill Method	Soil Probe	Rig Type	Geoprobe mtr
Sample Type	Drive Pt.	Geo/Eng.	M Johnson
Hammer Wt.	–	Backfilled Date	3/18/95

Weather Conditions: Partly Cloudy

Names of Persons Present: M Johnson, B Riggs, B Johnson

Depth in Feet	Sampled Interval	Sample Number	Percent Recovery	HNU or OVM Reading	~~Blows~~ Time Per 6"	Sampling Method	Water Content	USCS Code	Color	Graphic Log	Interval	Description
0												
5	5-6	FW-A DP49A	9/6/05 100%	0ppm	11:36a	DP	moist	SC	7.5YR 3/2			Clayey Sand F-C w/tr organics plastic, dark brown
10												
15												
20	21-22	FW-A DP49B	9/01/2006	0ppm	12:08	DP	v. moist	GW SP M	7.5YR 5/6			Sandy Gravel, fine, up to 1/2" dia Subrounded.
25												TD:22
30												

Drive Interval

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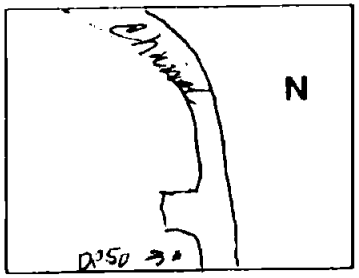

Site ID	NAS Ft. Worth	Location ID	DP-50
Northing	—	Easting	—
Elevation	—	T.D.	10'
Date Started	3/20/95	Date Completed	3/20/95
Drilling Contr.	KEE	Driller	B. Riggs
Drill Method	Soil Probe	Rig Type	Geoprobe
Sample Type	Drive PT.	Geo/Eng.	M Johnson
Hammer Wt.	—	Backfilled Date	3/20/95

Weather Conditions: Sunny Windy

Names of Persons Present: MRJ, BR, J Brin

Depth in Feet	Sampled Interval	Sample Number	Percent Recovery	HNU or OVM Reading	Time ~~Blows Per 6"~~	Sampling Method	Water Content	USCS Code	Color	Graphic Log	Interval	Description
0												Grass - Fuel odor in air - possibly from trap removal channel?
5	4.5-5'	FW-1790160 DP50A	100%	0ppm	8:30	DP	V moist		7.5YR			Clayey Sand F-c, Clay ~ 30% Drk Brn, Plastic
10	9-10	FW-A901608 DP50B	50%	0ppm	8:46	DP	wet		7.5YR			Clayey Sand F-c, clay ~15% Gray
15												TD = 10' Groundwater measured @ 8.6'
20												
25												
30												

Lithologic Borehole Log
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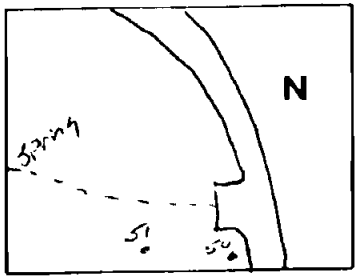

Site ID	NAS FT WORTH	Location ID	DP-51
Northing	—	Easting	—
Elevation	—	T.D.	9'
Date Started	3/20/95	Date Completed	3/20/95
Drilling Contr.	KBE	Driller	B. Riggs
Drill Method	Soil Probe	Rig Type	Geoprobe
Sample Type	Drive Pt.	Geo/Eng.	M Johnson
Hammer Wt.	—	Backfilled Date	3/20/95

Weather Conditions: Sunny Windy

Names of Persons Present: M Johnson, B Riggs, J Brim

Depth in Feet	Sampled Interval	Sample Number	Percent Recovery	HNU or OVM Reading	Blows Per 6"	Sampling Method	Water Content	USCS Code	Color	Graphic Log	Interval	Description
0												
5	4.5-5'	FW-A 901600 DP51A	100%	0ppm	4:05	DP	Sl. moist					Clayey Sand F-C, Clay ~15% Sl. plastic, Brn
8	8-9'	FW-A 901701 DP50A	100%	0ppm	4:18	DP	Sl moist					↓ Same
10		FW-A 901702 DP50B	70									
15												TD = 9' grnd H2O measured @ 8.8'
20												
25												
30												

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Hiny readings indicate ppm > 1/2 ppm background

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N

Site ID	NAS Ft Worth	Location ID	DP52
Northing	—	Easting	—
Elevation		T.D.	6'
Date Started	3/20/95	Date Completed	3/20/95
Drilling Contr.	HEE	Driller	C. Riggs
Drill Method	Soil Probe	Rig Type	Geoprobe
Sample Type	Drive Pt.	Geo/Eng.	M Johnson
Hammer Wt.	—	Backfilled Date	3/20/95

Weather Conditions: Sunny & windy

Names of Persons Present: M. Johnson, B. Riggs, J. Brim

Depth in Feet	Sampled Interval	Sample Number	Percent Recovery	HNU or OVM Reading	Blows Per 6"	Sampling Method	Water Content	USCS Code	Color	Graphic Log	Interval	Description
0												grass
5	X	FW-A901703										
	X 5.5-6'	DP52A	50%	~~10~~ 0ppm	4:41	DP	wet					Sandy Gravel, F-M, angular to subrounded, some grains very flat, cherts and limestone
10												
15												TD=6' Hole caved @ 3.8' H2O @ 2.6'
20												
25												
30												

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N

Site ID	NAS Ft Worth	Location ID	DP53
Northing	—	Easting	—
Elevation	—	T.D.	6'
Date Started	3/20/95	Date Completed	3/20/95
Drilling Contr.	KEI	Driller	B. Riggs
Drill Method	Soil Probe	Rig Type	Geoprobe
Sample Type	Drive Pt.	Geo/Eng.	M Johnson
Hammer Wt.	—	Backfilled Date	3/20/95

Weather Conditions

Names of Persons Present
M Johnson
B. Riggs
J Brim

Depth in Feet	Sampled Interval	Sample Number	Percent Recovery	HNU or OVM Reading	~~Blows Per 6"~~ Time	Sampling Method	Water Content	USCS Code	Color	Graphic Log	Interval	Description
0												
	3'-3.5'	FW-A901204 DP53A	100%	0ppm	10:03	DP	Sl moist					Silty Sandy Gravel F-M, angular to subrounded.
5	5'-6'	FW-A901205 DP53B	50%	0ppm	10:12	DP	wet					Clayey Sand F-C w F gravel, Subrounded, lt brown
10												TD=6' Cuttings to 1.5'
15												
20												
25												
30												

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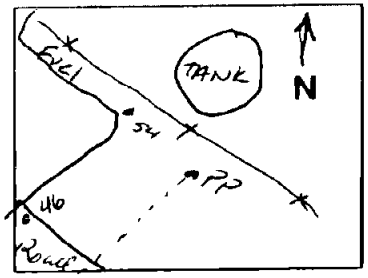

Site ID	NAS Ft Worth	Location ID	DP54
Northing	–	Easting	–
Elevation	–	T.D.	12"
Date Started	3/20/95	Date Completed	3/20/95
Drilling Contr.	KFF	Driller	B. Riggs
Drill Method	Soil Probe	Rig Type	Geoprobe
Sample Type	Drive Point	Geo/Eng.	MRJ
Hammer Wt.	–	Backfilled Date	3/20/95

Weather Conditions: Sunny Windy

Names of Persons Present: MRJ, BRiggs, J Bim

Depth in Feet	Sampled Interval	Sample Number	Percent Recovery	HNU or OVM Reading	Time Blows Per 6"	Sampling Method	Water Content	USCS Code	Color	Graphic Log	Interval	Description
0												
5	5"-6"	FW-A901706 DB3A	100%	0 ppm	10:27	DP	SI moist					Clayey Sand F-C w/gravel rounded to subrounded, sl. plastic Brn
10	11"-12"	FW-A901706		0ppm	10:43	DP	moist					Clayey Sand F-m w/Tr gravel slag ~30% Lt Gray
15												TD=12"
20												
25												
30												

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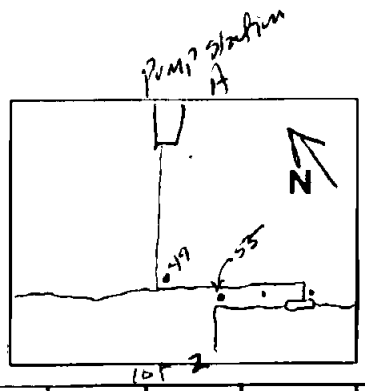

Site ID	NAS Ft Worth	Location ID	DP55
Northing	—	Easting	—
Elevation	—	T.D.	22
Date Started	3/20/95	Date Completed	3/20/95
Drilling Contr.	KEC	Driller	B Riggs
Drill Method	Soil Probe	Rig Type	Geoprobe
Sample Type	Drive Pt.	Geo/Eng.	MRJ
Hammer Wt.	—	Backfilled Date	3/20/95

Weather Conditions: Sunny, windy

Names of Persons Present: MRJ, BR, J Bam

Depth in Feet	Sampled Interval	Sample Number	Percent Recovery	HNU or OVM Reading	Blows Per 6"	Sampling Method	Water Content	USCS Code	Color	Graphic Log	Interval	Description
0												Grass - Drove to 4' - met refusal pull forward 2', try again - refusal at 4', move to SW try again
5	5-6	FW-A 901708 DP55A FW-A 100703-AB	100%	0ppm	13.10	DP	moist	SC				Clayey Sand / Sandy Clay w/ organics, roots etc. Brn
10												
15												
20	21-22	FW-A 901709 DP55B	50%	0ppm	14.00	DP	moist					Gravelly Sand f-c well graded subangular to subrounded, rare interbedded w/ Fine Sand lenses ~2"
25												TD=22 H2O and caving @ 21.2
30												

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Hnu reading indicates ppm > 1 ppm background

Lithologic Borehole Log
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N

Site ID	NAS FT WORTH	Location ID	DP56
Northing	–	Easting	–
Elevation	–	T.D.	22'
Date Started	3/20/95	Date Completed	3/20/95
Drilling Contr.	KFI	Driller	B Riggs
Drill Method	Soil Probe	Rig Type	Geoprobe
Sample Type	Soil Drive Pt.	Geo/Eng.	MRS
Hammer Wt.	–	Backfilled Date	3/20/95

Weather Conditions: High Clouds/windy

Names of Persons Present: MRS, BR, J Bom

Depth in Feet	Sampled Interval	Sample Number	Percent Recovery	HNU or OVM Reading	Blows Per 6"	Sampling Method	Water Content	USCS Code	Color	Graphic Log	Interval	Description
0												
5	5-6	FW-A9301801 DP56A DP56A-FD FW-A9301802	100%	0ppm	14.24	DP	moist	SC				Clayey Sand/Sandy Clay, plastic Brn, Tr F gravel
10												
15												
20	21.5-22	FW-A9301803 DP56B FW-A1601604 LAB DP56B	100%	0ppm	14.59	DP	moist	SP				Sand, poorly graded, F-M Lt Brn
25												TD=22 H2O and caving @ 21.8
30												

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Hrly readings indicate [illegible] > 1 ppm [illegible]

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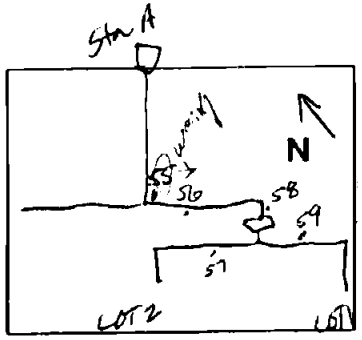

Site ID	NAS Fwsbt	Location ID	DP-59
Northing	—	Easting	—
Elevation	—	T.D.	22'
Date Started	3/20/95	Date Completed	3/20/95
Drilling Contr.	KFE	Driller	B. Eggs
Drill Method	Soil Probe	Rig Type	Geoprobe
Sample Type	1" Drive Pt.	Geo/Eng.	W. Johnson
Hammer Wt.	—	Backfilled Date	3/20/95

Weather Conditions: High Clouds, Windy

Names of Persons Present: MEW, BR, J Brim

Depth in Feet	Sampled Interval	Sample Number	Percent Recovery	HNU or OVM Reading	Blows Per 6"	Sampling Method	Water Content	USCS Code	Color	Graphic Log	Interval	Description
0												
5	5'-6'	FW-A9101808 DP59A	100%	0ppm	16-48	DP	moist					Sandy Clay / Clayey Sand w Tr of fine gravel, subrounded, plastic, Brn-grey.
10												Stop pin released at unknown depth, 0ppm
15												
20						DP	V. moist					Clayey Sand F-C, Sl. plastic Lt tan
	21'-22'	FW-A9101809 DP59B	75%	0ppm	17-43	DP	moist to wet					Sand F-M, poorly graded Lt brn
25												TD=22'
30												

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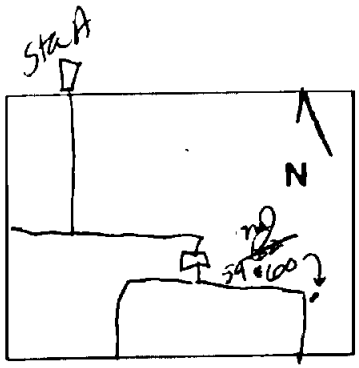

Site ID	NAS Ft Worth	Location ID	DP-46
Northing	–	Easting	–
Elevation	–	T.D.	22'
Date Started	3/21/95	Date Completed	3/21/95
Drilling Contr.	KEI	Driller	B Riggs
Drill Method	Soil Probe	Rig Type	Geoprobe
Sample Type	Drive Pt.	Geo/Eng.	MRJ
Hammer Wt.	–	Backfilled Date	3/21/95

Weather Conditions: Sunny Calm

Names of Persons Present: MRJ, BR, JBrin

Depth in Feet	Sampled Interval	Sample Number	Percent Recovery	HNU or OVM Reading	Blows Per 6"	Sampling Method	Water Content	USCS Code	Color	Graphic Log	Interval	Description
0												
5	5-6	FW-A9019101 DP60A DP60AFD FW-A9019102		0.0 ppm	8.16	DP	moist	SC	7.5YR 4/2			Clayey Sand/Sandy Clay, F-c, plastic, Dark Brn
10												
15												
20	21.5-22'	FW-A9019103 DP60B		0.0 ppm	8.11	DP	wet	SP				Sand F-m, poorly graded
						DP	wet	GW	7.5YR 6/6			Sandy gravel, F-m, subrounded brn well graded TD=22'
25												
30												

Lithologic Borehole Log
Project #10K70100

BTEX & PAH

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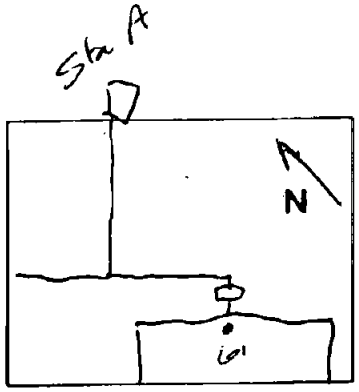

Site ID	NAS Ft Worth	Location ID	DP-~~66~~ 61
Northing	—	Easting	—
Elevation	—	T.D.	22'
Date Started	3/21/95	Date Completed	3/21/95
Drilling Contr.	KEF	Driller	B Riggs
Drill Method	Soil Probe	Rig Type	Geoprobe
Sample Type	1" Drive Pt.	Geo/Eng.	M Dyson
Hammer Wt.	—	Backfilled Date	3/21/95

Weather Conditions: Sunny Breezy

Names of Persons Present: MRJ, BR, J Brim

Depth in Feet	Sampled Interval	Sample Number	Percent Recovery	HNU or OVM Reading	~~Blows Per 6"~~ Time	Sampling Method	Water Content	USCS Code	Color	Graphic Log	Interval	Description
0												
5	4-6'	FW-A901903 DP61A DP61A DP61AF12	100%	0ppm FW-100703-Lab FW-100706-Lab	6:03	DP	moist	SC	7.5YR 4/2			Clayey Sand / Sandy Clay - F-c, Plastic Dark Brn. ? ? ?
10												
15												
20	21.5-22	FW-A901905 DP61B	60%	~~.6~~ 0ppm	9:20	DP	wet	SP	7.5YR 6/4			Sand F-M poorly graded
25								GW				Sandy Gravel F, subrounded - wet/gravel TD-22'
30												

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Lithologic Borehole Log BTEX
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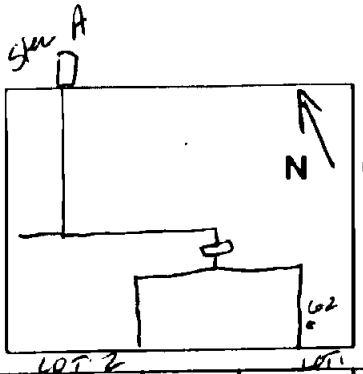

Site ID	NAS Ft. Worth	Location ID	DP62
Northing	—	Easting	—
Elevation	—	T.D.	22'
Date Started	3/21/95	Date Completed	3/21/95
Drilling Contr.	BEE	Driller	B Riggs
Drill Method	Soil Probe	Rig Type	Geoprobe
Sample Type	1" Drive Pt	Geo/Eng.	M Johnson
Hammer Wt.	—	Backfilled Date	3/21/95

Weather Conditions: Sunny Windy

Names of Persons Present: MRL, BC, J Brim

Depth in Feet	Sampled Interval	Sample Number	Percent Recovery	HNU or OVM Reading	Time Blows Per 6"	Sampling Method	Water Content	USCS Code	Color	Graphic Log	Interval	Description
0												Refusal at 4' move forward 3' try again
		FW-A9501906										
5	X 5-6	DP62A	100%	0ppm	10:17	DP	moist	—	7.5YR 4/3	—		Clayey Sand/Sandy Clay w/Tr fine gravel, F-C, plastic. DRK brn
10												
15												
20		FW-A9501907										
	X 21.5-22	DP62B	50%	0ppm	10:43	DP	wet		7.5YR 6/4			Sand F-M, poorly graded Lt brn
25												TD=22'
30												

Lithologic Borehole Log BTEX
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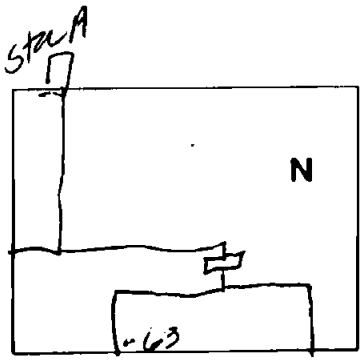

Site ID	NAS Ft Worth	Location ID	DP63
Northing	—	Easting	—
Elevation	—	T.D.	22'
Date Started	3/21/95	Date Completed	3/21/95
Drilling Contr.	MEI	Driller	B. Riggs
Drill Method	Soil Probe	Rig Type	Geoprobe
Sample Type	Drive Pt.	Geo/Eng.	M Johnson
Hammer Wt.	—	Backfilled Date	3/21/95

Weather Conditions

Names of Persons Present
MBJ
BR
JBrin

Depth in Feet	Sampled Interval	Sample Number	Percent Recovery	HNU or OVM Reading	Time / Blows Per 6"	Sampling Method	Water Content	USCS Code	Color	Graphic Log	Interval	Description
0												
5	5-6	FW-A90 FW-B DP63A		0ppm	11:12	DP	Moist		7.5YR 4/1			Clayey Sand / Sandy Clay Tr fine and gravel, plastic, F-C. Dark ~~gray~~ gray
10												
15												
20	21.5-22	FW-A90 FW-B DP63B		0ppm	1:34	DP	wet		7.5YR 6/4			Sand F-M, poorly graded Lt. Brn.
25												TD 22'
30												

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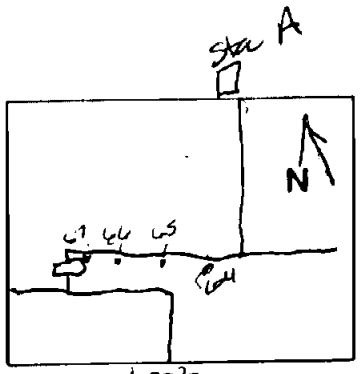

Site ID	NAS FT WORTH	Location ID	DP-64
Northing	—	Easting	—
Elevation	—	T.D.	22'
Date Started	3/21/95	Date Completed	3/21/95
Drilling Contr.	VEE	Driller	B. Riggs
Drill Method	Soil Probe	Rig Type	Cage probe
Sample Type	Dove Pt.	Geo/Eng.	MRS
Hammer Wt.	—	Backfilled Date	3/21/95

Weather Conditions

Names of Persons Present: MRS, BR, J Brim

Depth in Feet	Sampled Interval	Sample Number	Percent Recovery	HNU or OVM Reading	~~Blows Per 6"~~ TIME	Sampling Method	Water Content	USCS Code	Color	Graphic Log	Interval	Description
0												
5	5-6'	FW-AC-0001 DP64A	100%	0ppm	13:45	DP	moist	SC	7.5YR 4/2			Fill Clayey Sand/Sandy Clay w/ gravel (Fine), plastic, Brown
10												
15												
20	21.5-22	FW-AC-0002 DP64B	75%	0ppm	14:15	DP	wet	SP	7.5YR 6/4			Sand F-M, poorly graded Lt Brn.
25												TD=22'
30												

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N

Site ID	NAS FT WORTH	Location ID	DP65
Northing	–	Easting	–
Elevation	–	T.D.	22'
Date Started	3/21/95	Date Completed	3/21/95
Drilling Contr.	KPE	Driller	B Riggs
Drill Method	Soil Probe	Rig Type	Geoprobe
Sample Type	Drive Pt.	Geo/Eng.	MRJ
Hammer Wt.	–	Backfilled Date	3/21/95

Weather Conditions

Names of Persons Present
MRJ
BR
J Brim

Depth in Feet	Sampled Interval	Sample Number	Percent Recovery	HNU or OVM Reading	Blows Per 6"	Sampling Method	Water Content	USCS Code	Color	Graphic Log	Interval	Description
0												Soil in upper portion here seems to be saturated - recent rain?
5	5-5.6'	FW-A9102003 DP65A	50%	0ppm	14:32	DP	↓ moist	SC	7.5YR 4/2			Clayey Sand/Sandy Clay F-C w/ Fine gravel, subrounded, plastic. Dk Brn.
10												
15												
20	21-22'	FW-A9102004 DP65B	50%	0ppm	15:09	DP	wet	SW	7.5YR 6/4			Sand F-C, well graded lt. Brn
25												TD=22' Caving and H2O @ 21.4'
30												

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Hnu readings > 1 ppm > ½ ppm background

Lithologic Borehole Log BTEX
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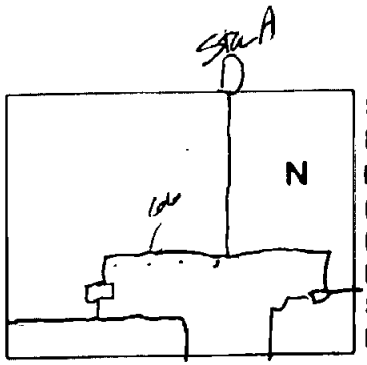

Site ID	NAD FT WORTH	Location ID	DP-66
Northing	–	Easting	–
Elevation	–	T.D.	22'
Date Started	3/21/95	Date Completed	3/21/95
Drilling Contr.	REL	Driller	J Riggs
Drill Method	Soil Probe	Rig Type	Geoprobe
Sample Type	Drive Pt.	Geo/Eng.	M Johnson
Hammer Wt.	–	Backfilled Date	3/21/95

Weather Conditions: Sunny Windy

Names of Persons Present: M Johnson, B Riggs, J Brim

Depth in Feet	Sampled Interval	Sample Number	Percent Recovery	HNU or OVM Reading	~~Blows Per 6"~~ TIME	Sampling Method	Water Content	USCS Code	Color	Graphic Log	Interval	Description
0							Probably from recent rains wet	SW	7.5YR 8/3	contact		Sand-F-C, well graded-wet
5	4-4.5	FW-A902005 DP6dA	25%	0ppm	15:20	DP	✓ moist	SC	7.5YR 4/2			Clayey Sand/Sandy Clay F-C, w/ Fn gravel, plastic, Pet Bed.
10												
15												
20	21.5-22	FW-A902006 DP6dB	50%	0ppm	16:06	DP	wet	SP	7.5YR 6/6			Sand F-m, poorly graded lt brn
25												TD=22
30												

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BTEX & PAH

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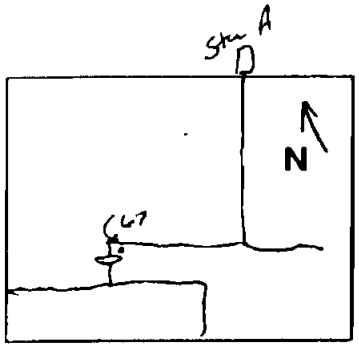

Site ID	ITAS Ft. Worth	Location ID	DP-67
Northing	–	Easting	–
Elevation	–	T.D.	22'
Date Started	3/21/95	Date Completed	3/21/95
Drilling Contr.	KEE	Driller	B. Riggs
Drill Method	Soil Probe	Rig Type	Geoprobe
Sample Type	Drive Pt.	Geo/Eng.	MRS
Hammer Wt.		Backfilled Date	3/21/95

Weather Conditions: Sunny, windy 80°

Names of Persons Present: MRS, BR, JBM

Depth in Feet	Sampled Interval	Sample Number	Percent Recovery	HNU or OVM Reading	Blows Per 6"	Sampling Method	Water Content	USCS Code	Color	Graphic Log	Interval	Description
0												
5	4.5-5	FW-A9902007 DP67A	50%	0ppm	16.24	DP	moist	SC	7.5YR 4/3			Clayey Sand (Sandy Clay w/ Fine gravel, plastic, DRK BRN.
10												
15												
20	21-22	FW-A9902008 DP67B FW-A9902009 DP67B FD	75%	0ppm	16.57	DP	wet	SP	7.5YR 5/4			Fine Sand w/ Silt ~5% Tr of fine subrounded gravel
25												TD=22' Caving & H2O @ 21.75'
30												

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Hnu readings ppm > background of 0ppm

Lithologic Borehole Log BTEX ~~½ PPM~~ mg/l
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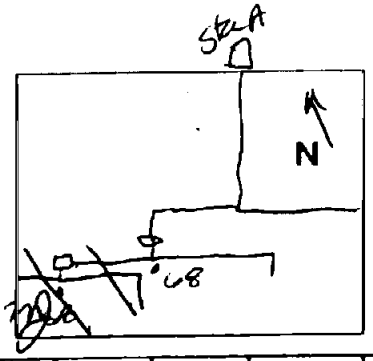

Site ID	NAS Ft Worth	Location ID	DP-68
Northing	—	Easting	—
Elevation	—	T.D.	23'
Date Started	3/22/95	Date Completed	3/22/95
Drilling Contr.	KEF	Driller	B. Riggs
Drill Method	Geoprobe	Rig Type	Geoprobe
Sample Type	Drive Pt.	Geo/Eng.	M Johnson
Hammer Wt.	—	Backfilled Date	3/22/95

Weather Conditions: Partly Cloudy - breezy ~70°

Names of Persons Present: M Johnson, B Riggs, J Brim

Depth in Feet	Sampled Interval	Sample Number	Percent Recovery	HNU or OVM Reading	Blows Per 6"	Sampling Method	Water Content	USCS Code	Color	Graphic Log	Interval	Description
0												
5	4.5-6'	FW-A 102101 DP68A	mg/l 160%	0ppm	8:19	DP		SC	7.5YR 4/2			Clayey Sand/Sandy Clay w/organics as roots, and fine sub rounded gravel. Dark Brn.
10												
15												
20								SM				Silty Sand w subangular fine gravel 7.5YR 6/6 moist
	21-22.5	FW-A 102102 DP68B	50%	0ppm	8:43	DP		SP	7.5YR 5/4	21'		Sand, F-M, poorly graded
25								SM			22.5 / 23	Silty Sand w Subangular Fine gravel 7.5YR/6/6 moist
30												TD=23 CAVING & HAD @ 22'

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Hinge cracking - PPM > Upper radiographic

Lithologic Borehole Log BTEX & PAH
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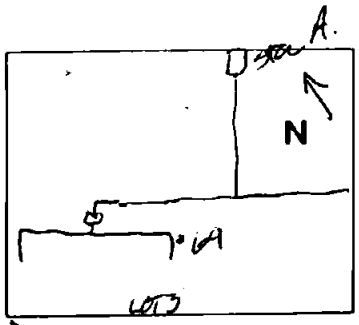

Site ID	NAS Ft Worth	Location ID	DP69
Northing	—	Easting	—
Elevation	—	T.D.	22'
Date Started	3/22/95	Date Completed	3/22/95
Drilling Contr.	KEL	Driller	B. Riggs
Drill Method	Soil Probe	Rig Type	Geoprobe Mule
Sample Type	Drive Pt. 1"	Geo/Eng.	M Johnson
Hammer Wt.	—	Backfilled Date	3/22/95

Weather Conditions: Partly Cloudy

Names of Persons Present: M Johnson, B Riggs, J Burn

Depth in Feet	Sampled Interval	Sample Number	Percent Recovery	HNU or OVM Reading	Blows Per 6"	Sampling Method	Water Content	USCS Code	Color	Graphic Log	Interval	Description
0												
5	4.5-6	FW-A902103 DP69A	100%	0ppm	9.04	DP	moist	SC	7.5YR 4/3			Clayey Sand/Sandy Clay w/ fine sub.rounded gravel, plastic, Dark brown.
10												
15												
20	21.5-22	FW-A902104 DP69B	50%	0ppm	9.37	DP	v. moist	SP	7.5YR 6/6			Sand F-M poorly graded w/a 1" lense of silty Sand w f. gravel at 21.3 to 21.4.
25												TD=22
30												

Drive Approved

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Hnu Readings ppm > 0.2 ppm background.

Lithologic Borehole Log
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BTEX & PAH

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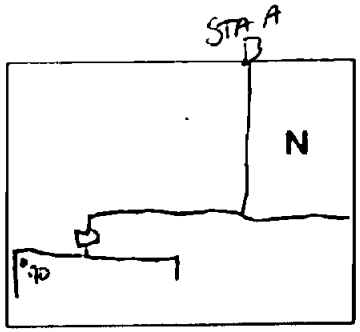

Site ID	NAS Ft Worth	Location ID	DP-70
Northing	–	Easting	
Elevation	–	T.D.	24'
Date Started	3/22/95	Date Completed	3/22/95
Drilling Contr.	KEI	Driller	B Riggs
Drill Method	Soil Probe	Rig Type	Geoprobe Mule
Sample Type	Drive Pt.	Geo/Eng.	M Johnson
Hammer Wt.	–	Backfilled Date	3/22/95

Weather Conditions: Partly Cloudy ~60°F Windy

Names of Persons Present: M Johnson, B Riggs, J Brim

Depth in Feet	Sampled Interval	Sample Number	Percent Recovery	HNU or OVM Reading	Blows Per 6"	Sampling Method	Water Content	USCS Code	Color	Graphic Log	Interval	Description
0												
5	5' 2.5-6' mg	FW-A 902105 DPDA	100%	0ppm	9:56	DP	moist	SC	7.5YR 4/2			Clayey Sand/Sandy Clay w/Fine surrounded gravel, plastic, organics
10												
15												
20												
25	23-24 ~~24-25~~ mg	DP103 DP70BFD	50%	0ppm	10:37	DP	wet	SW	7.5YR 6/6			Sand F-C well graded, Lt Brown
30												TD @ 24' H2O measured at 24' caving at 24'

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Lithologic Borehole Log
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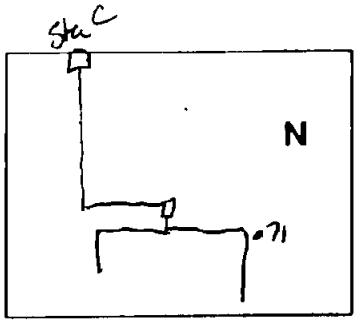

Site ID	NAS FT WORTH	Location ID	DP-71
Northing	–	Easting	–
Elevation	–	T.D.	26'
Date Started	3/22/95	Date Completed	3/22/95
Drilling Contr.	KEF	Driller	B Riggs
Drill Method	Soil Probe	Rig Type	Geoprobe Mule
Sample Type	Drive Pt.	Geo/Eng.	M Johnson
Hammer Wt.	–	Backfilled Date	3/22/95

Weather Conditions: Partly Cloudy/windy

Names of Persons Present: M Johnson; B Riggs; J Bilm

Depth in Feet	Sampled Interval	Sample Number	Percent Recovery	HNU or OVM Reading	Time ~~Blows Per 6"~~	Sampling Method	Water Content	USCS Code	Color	Graphic Log	Interval	Description
0	Drive Entrance											
5	6-6.5	DP71A	50%	0ppm	11:03	DP	moist		n.5yr 4/2			Clayey Sand/Sandy Clay w/ fine gravel surrounded, plastic, DRK BRN w/ roots
10												
15												
20												
25	25-26	DP71B	75%	0ppm	11:35	DP	wet		n.5yr 6/6			Silty Sand F-M, Lt Brn
30												TD: 26' HSA measures 21.5' cave @ 24' from information in other borings, may be confined in this area?

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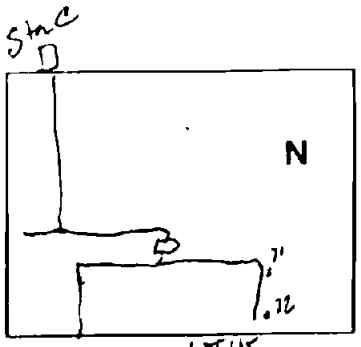

Site ID	NAS FT WORTH	Location ID	DP-72
Northing	–	Easting	–
Elevation	–	T.D.	23'
Date Started	3/22/95	Date Completed	3/22/95
Drilling Contr.	KEI	Driller	B Riggs
Drill Method	Soil Probe	Rig Type	Geoprobe
Sample Type	Drive Pt.	Geo/Eng.	M. Johnson
Hammer Wt.	–	Backfilled Date	3/22/95

Weather Conditions: Sunny Windy Hot

Names of Persons Present: M Johnson, B Riggs, J Bom

Depth in Feet	Sampled Interval	Sample Number	Percent Recovery	HNU or OVM Reading	Time / Blows Per 6"	Sampling Method	Water Content	USCS Code	Color	Graphic Log	Interval	Description
0												
5	5-6'	FW-A9202201 DP72A	100%	0ppm	13:47	DP	moist		7.5YR 4/2			Clayey Sand/Sandy Clay, F-C, plastic w/ Fine gravel - from 4' to 5' a lense of Sandy Clay w/ gravel; saturated plastic.
10												
15												
20												
25	22.5-23	FW-A9202202 DP72A	100%	0ppm	14:23	DP	wet		7.5YR 5/4			Silty Sand - F-M Lt Brn
30												TD: 23' Caved at 19'

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Higher Reading PPM > [illegible]

Lithologic Borehole Log BTEX PAH
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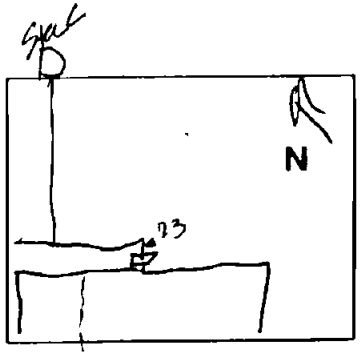

Site ID	NAS Ft Worth	Location ID	DP-73
Northing	–	Easting	–
Elevation	–	T.D.	23'
Date Started	3/22/95	Date Completed	3/22/95
Drilling Contr.	KEI	Driller	B. Riggs
Drill Method	Soil Probe	Rig Type	Geoprobe
Sample Type	Drive Pt	Geo/Eng.	MRJ
Hammer Wt.	–	Backfilled Date	3/22/95

Weather Conditions: Partly Cloudy, Hot, Windy

Names of Persons Present: MRJ, BR, J Brim

Depth in Feet	Sampled Interval	Sample Number	Percent Recovery	HNU or OVM Reading	Blows Per 6"	Sampling Method	Water Content	USCS Code	Color	Graphic Log	Interval	Description
0												
5		FW-A902206										Clayey Sand F-c w gravel ltgray
	5-6	DP73A	100%	2ppm	15:54	DP	moist	SC	7.5YR 2/1			Clayey Sand (Sandy Clay w organic matt & gravel - discolored, plastic @ 5'-6' - red brown thru rest
				in lower								
	6-8	DP73B	100%	3" only	16:10	DP	moist		7.5YR 2/1			
		FW-A902207		2ppm								
10		DP73B	Lab									
		FW-A100801										SAME without interbedded lenses
15												
20												
		FW-A902208										Sand F-M, poorly graded
	21-23	DP73C	100%	5ppm	16:43	DP	wet	SP	7.5YR 2/2			
		FW-A100802	LAB									
25												TD 23
30												

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Hnu Readings ppm > 0.2 ppm background

Lithologic Borehole Log BTEX
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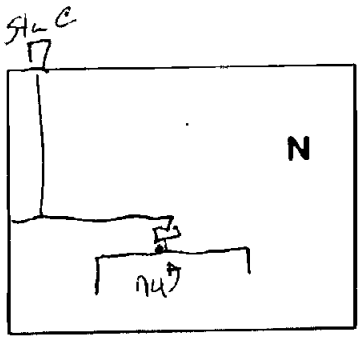

Site ID	NAS Ft Worth	Location ID	DP-74
Northing	–	Easting	–
Elevation	–	T.D.	23'
Date Started	3/23/95	Date Completed	3/23/95
Drilling Contr.	KEI	Driller	B Riggs
Drill Method	Soil Probe	Rig Type	Excavator Mule
Sample Type	Drive Pt.	Geo/Eng.	M Johnson
Hammer Wt.	–	Backfilled Date	3/23/95

Weather Conditions: Sunny N. Breeze

Names of Persons Present: M Johnson, B Riggs, J Brim

Depth in Feet	Sampled Interval	Sample Number	Percent Recovery	HNU or OVM Reading	Time Blows Per 6"	Sampling Method	Water Content	USCS Code	Color	Graphic Log	Interval	Description
0						DP	from boring to wet / wet	SW	7.5YR 6/2			Sand F-C well graded
5	4.5-6	FW-A902301 DP74A	100%	0ppm	8-21	DP	wet	SC	7.5YR 6/2			Clayey Sand / Sandy Clay w/fine subrounded gravel and organics. looks to be discolored.
10												
15												
20												
25	22.5-23	FW-A902302 DP74B	50%	5ppm	8-56	DP	wet	SP	7.5YR 5/2			Sand F-M, poorly graded TD=23'
30												

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Hnu Readings ppm > 0.2 ppm (back ground)

Lithologic Borehole Log BTEX & PAH
Project #10K70100

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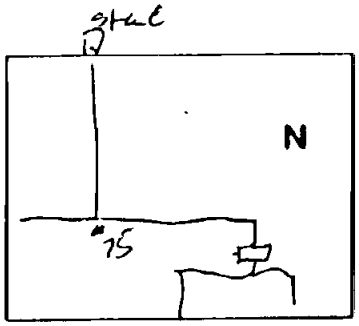

Site ID	NAS Ft Worth	Location ID	DP15
Northing	—	Easting	—
Elevation	—	T.D.	23
Date Started	3/22/95	Date Completed	3/22/95
Drilling Contr.	KSE	Driller	B. Riggs
Drill Method	Soil Probe	Rig Type	Geoprobe
Sample Type	Drive Pt.	Geo/Eng.	MRJ
Hammer Wt.	—	Backfilled Date	3/22/95

Weather Conditions

Names of Persons Present
MRJ
BR
J. Brim

Depth in Feet	Sampled Interval	Sample Number	Percent Recovery	HNU or OVM Reading	Time / Blows Per 6"	Sampling Method	Water Content	USCS Code	Color	Graphic Log	Interval	Description
0												
5	5-6'	FW-A902203 DP5A	100%	0ppm	14:51	DP	moist	SC	7.5YR 3/2 / 7.5YR 7/1			Clayey Sand / Sandy Clay - F-M, plastic w gravel - From 5.4'-5.6' Clayey Sand F-C w/ gravel slightly plastic - loose. lt. grey
10												
15												
20												
25	22-23	FW-A902204 DP5B DP5BFD FW-A902205		2ppm	15:27	DP	moist to wet	SP	10YR 5/3			Sand F-M, poorly graded discolored.
30												TD=23

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Hill readings ppm > 0.2 ppm background

Lithologic Borehole Log
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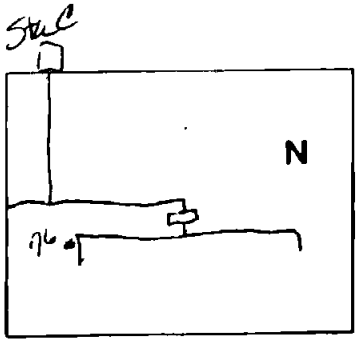

Site ID	NASFTWORTH	Location ID	DP-76
Northing	–	Easting	–
Elevation	–	T.D.	22'
Date Started	3/23/95	Date Completed	3/23/95
Drilling Contr.	KEI	Driller	B Riggs
Drill Method	Soil Probe	Rig Type	Geoprobe Mike
Sample Type	Drive Pt.	Geo/Eng.	M Johnson
Hammer Wt.	–	Backfilled Date	3/23/95

Weather Conditions
Sunny N. Breeze
Warm

Names of Persons Present
M Johnson
B Riggs
J Brown

Depth in Feet	Sampled Interval	Sample Number	Percent Recovery	HNU or OVM Reading	Time Blows Per 6"	Sampling Method	Water Content	USCS Code	Color	Graphic Log	Interval	Description
0									7.5YR 4/3			Clayey Sand / Sandy Clay with F subrounded gravel and organics.
5	5-5.5	FW-A902303 DP76A	100%	0ppm	9.28	DP DP	wet moist	CL	7.5YR 6/1 7.5YR 3/1			Clayey Sand F-C w/ gravel (F) subrounded wet, lt green. Clayey Sand / Sandy Clay with F subrounded gravel and organics
10												
15												
20	21.5-22	FW-A902304 DP76B	50%	0ppm	4.53	DP	wet	SM	7.5YR 5/6			Silty Sand F-M, poorly graded silt ~10%
25												TD=22'
30												

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Higher Reading PPM > 0.5 ppm Background

Lithologic Borehole Log BTEX
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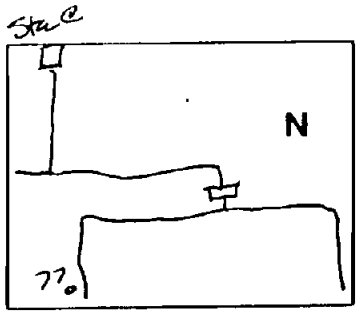

Site ID	NAS FT WORTH	Location ID	DP 77
Northing	—	Easting	—
Elevation	—	T.D.	23
Date Started	3/23/95	Date Completed	3/23/95
Drilling Contr.	KEE	Driller	B Riggs
Drill Method	Soil Probe	Rig Type	Geoprobe Mule
Sample Type	Drive Pt. 1"	Geo/Eng.	M Johnson
Hammer Wt.	—	Backfilled Date	3/23/95

Weather Conditions
Sunny N Breeze
Warm

Names of Persons Present
M Johnson
B. Riggs
J Brim

Depth in Feet	Sampled Interval	Sample Number	Percent Recovery	HNU or OVM Reading	Time Blows Per 6"	Sampling Method	Water Content	USCS Code	Color	Graphic Log	Interval	Description
0												Clayey Sand / Sandy Clay w/ Fine Sub-rounded gravel
									1.5YR 3/3			Clayey Sand w/ Tr Fine Sub-round gravel
							moist			4.8		
5		FW-A9702305					moist	CL	7/2	2.4		Clayey Sand / Sandy Clay w/ Tr F gravel and organics
	5.1-6.8'	DP77A	100%	0 ppm	10:13		moist		7.5YR 7/2 3/3	5.8		
												Clayey Sand w/ Tr Fine gravel and organics.
10												
15												
20												
		FW-A9702306					V		7.5YR			Silty Sand w/ Clay, somewhat plastic
	22.5-23	DP77B	50%	0 PPM	10:41		moist	ZM	4/4			
25												TD=23
30												

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High Reading ppm 1/2 ppm background

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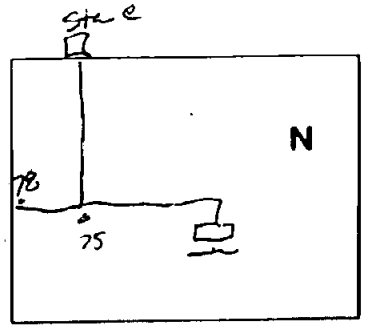

Site ID	NAS Ft WORTH	Location ID	DP-78
Northing	—	Easting	—
Elevation	—	T.D.	22'
Date Started	3/23/95	Date Completed	3/23/95
Drilling Contr.	MEF	Driller	B Riggs
Drill Method	Soil Probe	Rig Type	Geoprobe
Sample Type	Drive Pt 1"	Geo/Eng.	M Johnson
Hammer Wt.	—	Backfilled Date	3/23/95

Weather Conditions: Sunny N Breeze Warm

Names of Persons Present: M Johnson, B Riggs, J Brin.

Depth in Feet	Sampled Interval	Sample Number	Percent Recovery	HNU or OVM Reading	Time Blows Per 6"	Sampling Method	Water Content	USCS Code	Color	Graphic Log	Interval	Description
0												
5	5'-6'	FW-A902301 DP78A	50%	0ppm	11:06	DP	Sl. moist	SC	7.5YR 2.5/1	5.5 6'		Fine Clayey Sand w/Tr organics
10												
15												
20								SM		21.2		Silty Sand F-M, poorly graded
	21'-22'	FW-11 902308 DP78B	50%	0ppm	11:37			SP				Sand F-M poorly graded
		FW-A902309 DP78B-B										TD=22'
25												
30												

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Hmm standing ppd, odl, ppd Sal. grd. of

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BTEX & PAH

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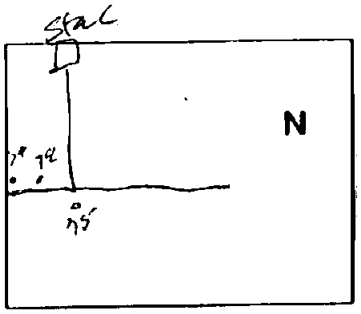

Site ID	NAS Ft Worth	Location ID	DP-79
Northing	—	Easting	—
Elevation	—	T.D.	20'
Date Started	3/23/95	Date Completed	3/23/95
Drilling Contr.	KEI	Driller	B Riggs
Drill Method	Soil Probe	Rig Type	Geoprobe mule
Sample Type	Drive Pt 1"	Geo/Eng.	M Johnson
Hammer Wt.	—	Backfilled Date	3/23/95

Weather Conditions: Sunny E. Wind Warm

Names of Persons Present: M Johnson, B Riggs, J Brim

Depth in Feet	Sampled Interval	Sample Number	Percent Recovery	HNU or OVM Reading	Time Blows Per 6"	Sampling Method	Water Content	USCS Code	Color	Graphic Log	Interval	Description
0												
5	5'-6'	FW-A DP94	902401 50%	0ppm	1:53	DP	Sl. moist	SC	7.5YR 3/1			Clayey Sand, F-M, Clay ~ 20% Sl. plastic.
10												
15												
20	21-22 m		10%	0ppm	12:28	DP	Sl moist	Bdrk ?	7.5YR 6/1			Clayey Sand / Sandy Clay — limestone cobble?
25												TD 20 refusal recovery not enough for analysis
30												

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Lithologic Borehole Log
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N

Site ID	NAS Ft. Worth	Location ID	DP-80
Northing	–	Easting	–
Elevation	–	T.D.	7'
Date Started	4/10/95	Date Completed	4/10/95
Drilling Contr.	KET	Driller	Briggs
Drill Method	Soil Probe	Rig Type	Geoprobe
Sample Type	Dove Pt.	Geo/Eng.	MRJ
Hammer Wt.	–	Backfilled Date	4/10/95

Weather Conditions
Overcast Slight drizzle

Names of Persons Present
M Johnson
B Riggs
J. Brim

Depth in Feet	Sampled Interval	Sample Number	Percent Recovery	HNU or OVM Reading	Time Blows Per 6"	Sampling Method	Water Content	USCS Code	Color	Graphic Log	Interval	Description
0												
5	5'-6'	FW-A402501 DP80A	100%	0ppm	9 16	DP	moist					4-6 Clayey Sand, f-m, TR organics subrounded, Brn
												Hit rock - refusal move 1 foot to north try again - same result
10												
15												TD 7' refusal
20												
25												
30												

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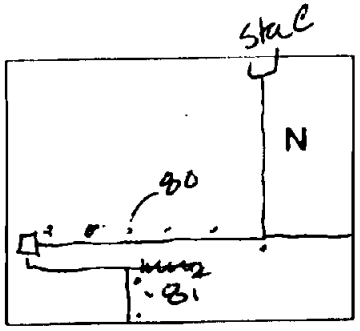

Site ID	NAS Ft Worth	Location ID	DP-81
Northing	—	Easting	—
Elevation	—	T.D.	6"
Date Started	4/10/95	Date Completed	4/10/95
Drilling Contr.	KEF	Driller	B. Rigg
Drill Method	Soil Probe	Rig Type	Geoprobe
Sample Type	Liner	Geo/Eng.	MRJ
Hammer Wt.	—	Backfilled Date	4/10/95

Weather Conditions

Names of Persons Present
MRJ
BR
J Bain

Depth in Feet	Sampled Interval	Sample Number	Percent Recovery	HNU or OVM Reading	Time Blows For 6"	Sampling Method	Water Content	USCS Code	Color	Graphic Log	Interval	Description
0												
5	5'-6'	FW-A9 02502 DP81A	75%	0ppm	10'01	DP	Moist		Red Brn 4mg 5YR 4/3			Clayey Sand, F-M, slightly plastic subrounded
10												Refusal at 6 feet move 3' to north (other side of pipe) try again. Same result
15												
20												TD = 6' refusal
25												
30												

Hnu readings = ppm above background of 0ppm

Lithologic Borehole Log BTEX

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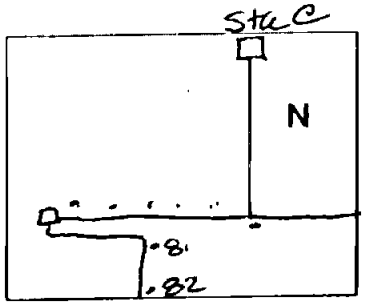

Site ID	NAS Pt Wash	Location ID	DP-82
Northing	—	Easting	
Elevation	—	T.D.	7'
Date Started	4/10/95	Date Completed	4/10/95
Drilling Contr.	KEI	Driller	B Riggs
Drill Method	Soil Probe	Rig Type	Geoprobe Mike
Sample Type	Direct Pt.	Geo/Eng.	M Johnson
Hammer Wt.	—	Backfilled Date	4/10/95

Weather Conditions

Names of Persons Present: MRd, DR, Brian

Depth in Feet	Sampled Interval	Sample Number	Percent Recovery	HNU or OVM Reading	TMG Blows Per 6"	Sampling Method	Water Content	USCS Code	Color	Graphic Log	Interval	Description
0												
5	5-6	FW-A902503				DP	moist		5YR 4/1			Clayey Sand, F-m, slightly plastic, subrounded, v. dark gray
	5-6	DP82A	90%									
	7m	DP82AFD		1ppm	12:33							
		FW-A902504										
10												@ 7 feet refusal, based on previous experience, move to next location -
15												refusal - 7 feet
20												
25												
30												

Lithologic Borehole Log BTEX
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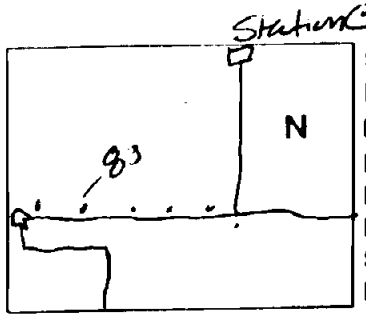

Site ID	NAS - FT worth	Location ID	DP-83
Northing	—	Easting	—
Elevation	—	T.D.	6.5
Date Started	4/10/95	Date Completed	4/10/95
Drilling Contr.	KEF	Driller	B. Riggs
Drill Method	Soil Probe	Rig Type	Geoprobe
Sample Type	Drive Pt.	Geo/Eng.	MRJ
Hammer Wt.	—	Backfilled Date	4/10/95

Weather Conditions

Names of Persons Present
MRJ
BR
J Brim

Depth in Feet	Sampled Interval	Sample Number	Percent Recovery	HNU or OVM Reading	Blows Per 6"	Sampling Method	Water Content	USCS Code	Color	Graphic Log	Interval	Description
0												
5	5-6'	Fw:21 DP83A	202.5-5 75%	0ppm	10:58	DP	moist		5YR 4/6			Clayey Sand F-C, w/Tr gravel plastic, some iron staining
												white clayey material at end of shoe - ~~clay~~ caliche?
10												6.5 refusal
												TD = 6.5'
15												
20												
25												
30												

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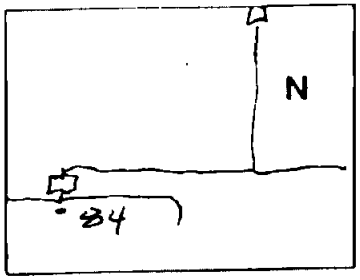

Site ID	NAS Ft. Worth	Location ID	DP 84
Northing	—	Easting	—
Elevation	—	T.D.	7'
Date Started	4/10/95	Date Completed	4/10/95
Drilling Contr.	KEE	Driller	B. Riggs
Drill Method	Soil Probe	Rig Type	Geoprobe
Sample Type	Drive Pt.	Geo/Eng.	MRJ
Hammer Wt.	—	Backfilled Date	4/10/95

Weather Conditions

Names of Persons Present
MRJ
BR
J Bam

Depth in Feet	Sampled Interval	Sample Number	Percent Recovery	HNU or OVM Reading	Blows Per 6"	Sampling Method	Water Content	USCS Code	Color	Graphic Log	Interval	Description
0												
									10YR 7/4			Clay w Tr Sand and Fine gravel
		FWA-902506										4.2'
5	4.5-5	DP84A	100%									weathered limestone, somewhat friable
									10YR 7.2		5'	
												NOTE - 1 foot drive
10												
15												
20												
25												
30												

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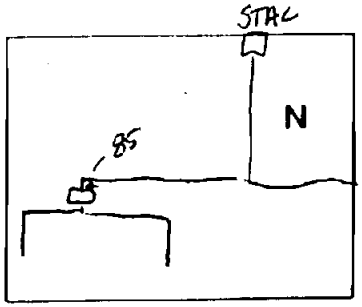

Site ID	NAS Ft Worth	Location ID	DP-85
Northing	—	Easting	—
Elevation	—	T.D.	7'
Date Started	4/11/95	Date Completed	4/11/95
Drilling Contr.	MEI	Driller	B. Riggs
Drill Method	Soil Probe	Rig Type	Geo Probe
Sample Type	1" Drive Pt.	Geo/Eng.	M Johnson
Hammer Wt.	—	Backfilled Date	4/11/95

Weather Conditions
COLD WIND DW
40° F

Names of Persons Present
M Johnson
B. Riggs
J. Brim

Depth in Feet	Sampled Interval	Sample Number	Percent Recovery	HNU or OVM Reading	Time ~~Blows Per 6"~~	Sampling Method	Water Content	USCS Code	Color	Graphic Log	Interval	Description
0												
5	5'-6'	FW-402-SO7 DP85A	75%	0ppm	8:35	DP	moist		10YR 8/4			highly weathered limestone - clay - plastic very stiff.
10												R
												Refusal @ 7'
15												
20												
25												
30												

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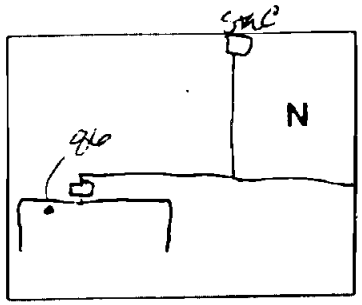

Site ID	NAS Ft. Worth	Location ID	DP-86
Northing	—	Easting	—
Elevation	—	T.D.	6'
Date Started	4/11/95	Date Completed	4/11/95
Drilling Contr.	KEE	Driller	B. R. 995
Drill Method	Soil Probe	Rig Type	Geoprobe
Sample Type	Drive Pt.	Geo/Eng.	MRJ
Hammer Wt.	—	Backfilled Date	4/11/95

Weather Conditions

Names of Persons Present
MRJ
BR
J. Brian

Depth in Feet	Sampled Interval	Sample Number	Percent Recovery	HNU or OVM Reading	Time Blows Per 6"	Sampling Method	Water Content	USCS Code	Color	Graphic Log	Interval	Description
0												
		FW-A-0250		0 ppm	8:59	DP	Slightly moist		10YR			weathered limestone, clay, plastic very stiff
5	4.5-5	D28LA	60%									Refusal @ 6'
												TD 6'
10												
15												
20												
25												
30												

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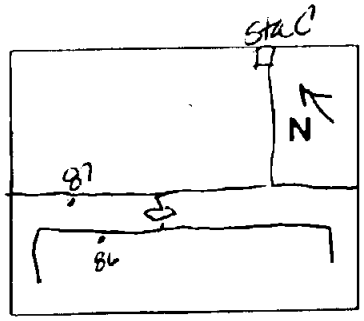

Site ID	NAS Ft. Worth	Location ID	DP-87
Northing	—	Easting	—
Elevation	—	T.D.	6.5'
Date Started	4/11/95	Date Completed	4/11/95
Drilling Contr.	KEE	Driller	B. Riggs
Drill Method	Soil Probe	Rig Type	Geoprobe
Sample Type	DRIVE PT.	Geo/Eng.	MRJ
Hammer Wt.	—	Backfilled Date	4/11/95

Weather Conditions
Windy Cold
Sunny

Names of Persons Present
MRJ
BR
J Brim

Depth in Feet	Sampled Interval	Sample Number	Percent Recovery	HNU or OVM Reading	Blows Per 6"	Sampling Method	Water Content	USCS Code	Color	Graphic Log	Interval	Description
0												
		FW-A 9507509										weathered limestone ↑ clay-stiff ↓ friable crumbly less weathered
5	4.5'	DP87A	100%	0ppm	4.22							
		DP87A	140									
		FW-A 9507561										
												6.5' Refusal
10												
												Checked pipe depth ≈ 3° b.invert. Change sample interval
15												
20												
25												
30												

Lithologic Borehole Log BTEX & PAH
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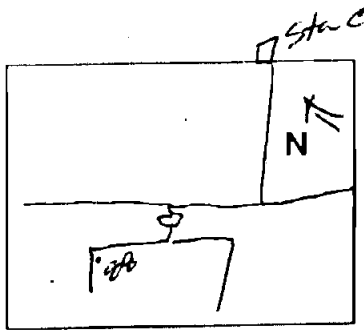

Site ID	NAS Ft Worth	Location ID	DP-88
Northing	—	Easting	—
Elevation	—	T.D.	6'
Date Started	4/11/95	Date Completed	4/11/95
Drilling Contr.	KEI	Driller	B Riggs
Drill Method	Soil Probe	Rig Type	Geoprobe
Sample Type	Drive Pt	Geo/Eng.	MRJ
Hammer Wt.	—	Backfilled Date	4/11/95

Weather Conditions
Sunny Cold, Windy fr N.

Names of Persons Present
MRJ
BR
J Brim

Depth in Feet	Sampled Interval	Sample Number	Percent Recovery	HNU or OVM Reading	Time Blows Per 6"	Sampling Method	Water Content	USCS Code	Color	Graphic Log	Interval	Description
0												
		902C01										
		FW-A~~902C01~~ M										
5	4.5'	DP88A	100%	0ppm	10:26	DP	Slightly moist		2.5Y 7/3			weathered limestone tr iron stain. light pale yellow, stiff clay consistency.
10												Refusal @ 6'
15												
20												
25												
30												

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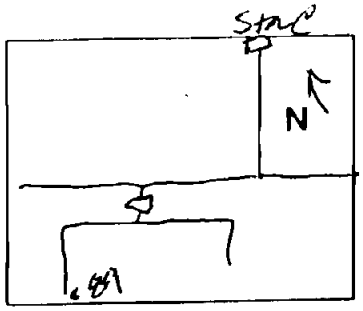

Site ID	NAS Ft. Worth	Location ID	DP-89
Northing	—	Easting	—
Elevation	—	T.D.	7.5
Date Started	4/11/95	Date Completed	4/11/95
Drilling Contr.	KEI	Driller	B. Riggs
Drill Method	Soil Probe	Rig Type	Geoprobe
Sample Type	Drive Pt.	Geo/Eng.	MRJ
Hammer Wt.	—	Backfilled Date	4/11/95

Weather Conditions

Names of Persons Present
MRJ
BR
JBrin

Depth in Feet	Sampled Interval	Sample Number	Percent Recovery	HNU or OVM Reading	Time Blows Per 6"	Sampling Method	Water Content	USCS Code	Color	Graphic Log	Interval	Description
0							moist			10YR 4/1		clayey Sand F-C, Subrounded, Tr F. Gravel, plastic, dark grey
		FW-A 902602									3.7'	
5	4.5-5.0	DP89A	100%	0ppm	10:47		Sl. mst			2.5Y 8/2		Weathered limestone, clay consistency pale grey yellow
10												Refusal 7.5'
15												
20												
25												
30												

Lithologic Borehole Log BTEX & PAH
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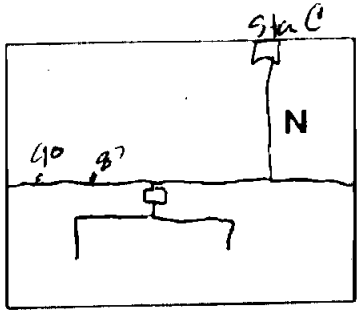

Site ID	NAS FA West	Location ID	DP-90
Northing	—	Easting	—
Elevation	—	T.D.	~~24 ft~~ 6'
Date Started	4/11/95	Date Completed	4/11/95
Drilling Contr.	KGI	Driller	B. Riggs
Drill Method	Soil Probe	Rig Type	Geoprobe
Sample Type	Drive Pt	Geo/Eng.	MRJ
Hammer Wt.	—	Backfilled Date	4/11/95

Weather Conditions
Sunny Cold
Windy

Names of Persons Present
MRJ
BR
J Brim

Depth in Feet	Sampled Interval	Sample Number	Percent Recovery	HNU or OVM Reading	Blows Per 6"	Sampling Method	Water Content	USCS Code	Color	Graphic Log	Interval	Description
0												
5	4.5-5'	FW-A 902603 DP90A	90%	0ppm	11:08	D	Sl moist	CH	10YR 8/3			Clay w/ Tr of subrounded limestone small grains mottled Dk grey pale yellow, crumbly
10												
15												Refusal ~~24 ft~~ 6'
20												
25												
30												

Lithologic Borehole Log
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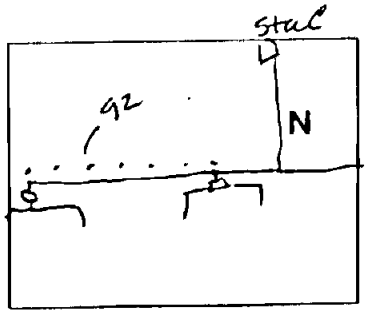

Site ID	NAS Ft. Worth	Location ID	DP-92
Northing	—	Easting	—
Elevation	—	T.D.	19"
Date Started	4/11/95	Date Completed	4/11/95
Drilling Contr.	KET	Driller	Blake Riggs
Drill Method	Soil Probe	Rig Type	Geoprobe
Sample Type	1" Drive Pt	Geo/Eng.	M Johnson
Hammer Wt.	—	Backfilled Date	4/11/95

Weather Conditions

Names of Persons Present: MRJ, B. Riggs, Jack Brim

Depth in Feet	Sampled Interval	Sample Number	Percent Recovery	HNU or OVM Reading	Blows Per 6"	Sampling Method	Water Content	USCS Code	Color	Graphic Log	Interval	Description
0												
5	4.5-5	FW-A9602606 DP92A		0ppm	11.57	DP	moist		7.5YR 5/8			Clayey Sand F-m ~20% clay scattered plastic red Brn, Tr F-m Lithics lime, organics
10												↓ ?
15												
20	19.5-19"	FW-A9602607 DP92B		0ppm	12.22	DP	moist		10YR 6/3			Clay from weathered limestone plastic and very stiff
									10YR 7/1			Limestone, brittle, crumbly
25												TD - 19"
30												

Lithologic Borehole Log
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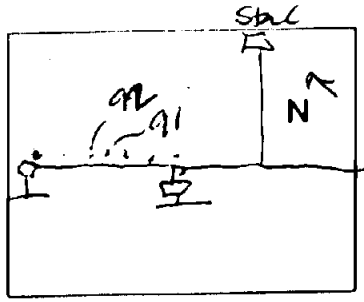

Site ID	NAS Ft Worth	Location ID	DP-91
Northing	—	Easting	—
Elevation	—	T.D.	5.5'
Date Started	4/11/95	Date Completed	4/11/95
Drilling Contr.	KEI	Driller	D Riggs
Drill Method	Soil Probe	Rig Type	Geoprobe
Sample Type	1" Drive Pt.	Geo/Eng.	M Johnson
Hammer Wt.	—	Backfilled Date	4/11/95

Weather Conditions

Names of Persons Present
MRJ
BR
J Brim

Depth in Feet	Sampled Interval	Sample Number	Percent Recovery	HNU or OVM Reading	Time Blows Per 6"	Sampling Method	Water Content	USCS Code	Color	Graphic Log	Interval	Description
0												
5	4-5	FW-A9102604 DP91A DP91AFD FW-A9102605		0ppm	11:38	DP	SI MST		OYR 8/2			weathered limestone, crumbly
10												5' Refusal
15												
20												
25												
30												

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Lithologic Borehole Log
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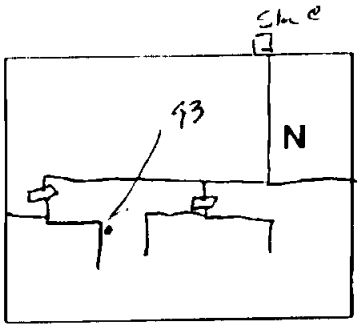

Site ID	NAS Ft Worth	Location ID	DP-93
Northing	—	Easting	—
Elevation	—	T.D.	~~142~~ 179
Date Started	4/11/95	Date Completed	4/11/95
Drilling Contr.	KEI	Driller	B. Riggs
Drill Method	Soil Probe	Rig Type	Geoprobe
Sample Type	1" Drive Pt	Geo/Eng.	M Johnson
Hammer Wt.	—	Backfilled Date	4/11/95

Weather Conditions
Cool Sunny
Windy

Names of Persons Present
M Johnson
B. Riggs
J Brim

Depth in Feet	Sampled Interval	Sample Number	Percent Recovery	HNU or OVM Reading	TIME ~~Blows Per 6"~~	Sampling Method	Water Content	USCS Code	Color	Graphic Log	Interval	Description
0												
5	6.5-17.4	FW-A902608 DP93A	100%	0ppm	13:47	DP	Moist		10YR 5/6			Silty Sand, F-M, Brown - appears to be same as 3-5 feet in DP-92 w/ less plasticity
10												
15												- Stop pin deployed early - move one foot drive to 17' - H2O noted @ this depth.
20	18-18.5	FW-A902609 DP93B		0ppm	14:32		Wet		~~10YR~~ 2.5YR 5/6			Sand F-C rounded to subr. ~~Hard~~ ~~18.5~~ ft. 18.0 wt
25												Limestone. mottled
30												TD 19'

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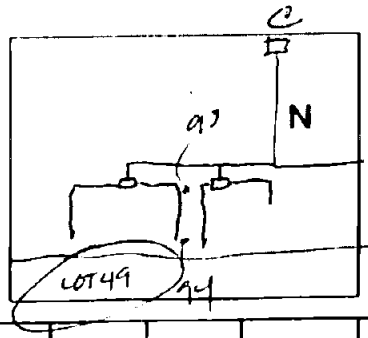

Site ID	NAS Ft Walton	Location ID	DP-94
Northing	—	Easting	—
Elevation	—	T.D.	17'
Date Started	4/11/95	Date Completed	4/11/95
Drilling Contr.	KEF	Driller	B. Riggs
Drill Method	Soil Probe	Rig Type	Geoprobe
Sample Type	1" Drive Pt	Geo/Eng.	M. Johnson
Hammer Wt.	—	Backfilled Date	4/11/95

Weather Conditions: Warm Sunny

Names of Persons Present: M. Johnson, B. Riggs, J. Brim

Depth in Feet	Sampled Interval	Sample Number	Percent Recovery	HNU or OVM Reading	Blows Per 6"	Sampling Method	Water Content	USCS Code	Color	Graphic Log	Interval	Description
0												
									1.5YR 2/5			Clayey Sand / Sandy Clay (F-C) Black w organics.
		FW-A902702										4.7'
5	4-4.5	DP94A	70%	0ppm	14:57							Silty Sand F-C yellowish red
									5YR 5/8			
10												
15												Sand F-M grained, well graded, ~~to~~ rounded to subangular
		FW-A902701										
	16.5-17'	DP94B	75%	0ppm	15:17							
												TD 17'
20												Water measured @ ~10' Caving @ ~10'
25												
30												

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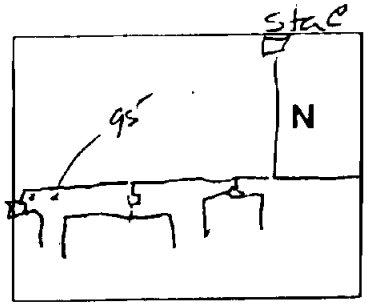

Site ID	NAS Ft. Worth	Location ID	DP-95
Northing	—	Easting	—
Elevation	—	T.D.	11'
Date Started	4/11/95	Date Completed	4/11/95
Drilling Contr.	KEI	Driller	B. Riggs
Drill Method	Soil Probe	Rig Type	Geoprobe
Sample Type	1" Drive Pt.	Geo/Eng.	M. Johnson
Hammer Wt.	—	Backfilled Date	4/11/95

Weather Conditions
Sunny Warm
Breezy

Names of Persons Present
M. Johnson
B. Riggs
J. Brim

Depth in Feet	Sampled Interval	Sample Number	Percent Recovery	HNU or OVM Reading	Time Blows Per 6"	Sampling Method	Water Content	USCS Code	Color	Graphic Log	Interval	Description
0												
	3-3.5	FW-A-902703 DP95A	100%	0ppm	15:42	DP	moist		7.5YR 5/6			Silty Sand F-m subrounded w/tr organics
5												
10	9.5-10	FW-A-902704 DP95B	70%	0ppm	16:00		wet		7.5YR 6/4			Sand F-C, subangular, well graded.
												TD=11'
15												
20												
25												
30												

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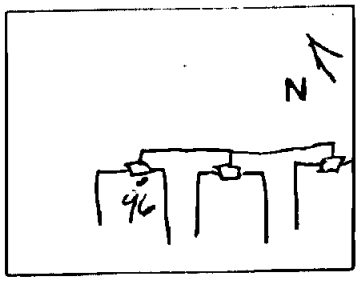

Site ID	NAS Ft Worth	Location ID	DP-96
Northing	—	Easting	—
Elevation	—	T.D.	10'
Date Started	4/11/95	Date Completed	4/11/95
Drilling Contr.	KEL	Driller	B Riggs
Drill Method	Soil Probe	Rig Type	Geoprobe
Sample Type	1" Drive Pt.	Geo/Eng.	M Johnson
Hammer Wt.	—	Backfilled Date	4/11/95

Weather Conditions

Names of Persons Present
M Johnson
B Riggs
J Tifim

Depth in Feet	Sampled Interval	Sample Number	Percent Recovery	HNU or OVM Reading	Blows Per 6"	Sampling Method	Water Content	USCS Code	Color	Graphic Log	Interval	Description
0												
	3.5-4.0 (48 in)	FW-A 1024	902705 50%	0ppm	16:17	DP	Slightly moist		7.5YR 7/1			Clayey Sandy Gravel Fine, poorly graded, subangular, w/ shells
5												3.8' - Silty Sand - F-m Tr organics
		FW-1	902706	0ppm	16:30	DP	U. moist to wet		7.5YR 5/6			Sand w Tr silt - F-m
10	9.5-10	DP163	50%									
15												TD - 10'
20												
25												
30												

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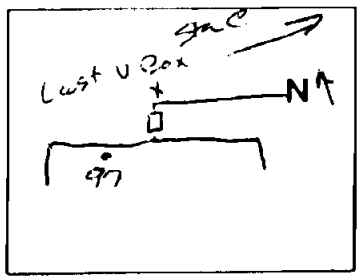

Site ID	NAS Ft Worth	Location ID	DP-97
Northing	—	Easting	—
Elevation	—	T.D.	10'
Date Started	4/11/95	Date Completed	4/11/95
Drilling Contr.	KEI	Driller	B. Riggs
Drill Method	Soil Probe	Rig Type	Geoprobe
Sample Type	1" Drive Pt.	Geo/Eng.	M Johnson
Hammer Wt.	—	Backfilled Date	4/11/95

Weather Conditions

Names of Persons Present
M Johnson
B. Riggs
J. Brim

Depth in Feet	Sampled Interval	Sample Number	Percent Recovery	HNU or OVM Reading	Time ~~Blows Per 6"~~	Sampling Method	Water Content	USCS Code	Color	Graphic Log	Interval	Description
0												Clayey Sandy Gravel, F, poorly graded Subangular fill
		FW A	902707									
	2.5-3'	DP97A		0ppm	16:59							
5												
							moist		6/6		Sand F-m	
		FW A	902708				very moist		7.5YR			
10	8.5-9.5	DP97B		0ppm	17:14	DP	wet		6/6		Silty Sand F-m	
		DP97B FD										
		FW A	902709									
												TD 10'
15												
20												
25												
30												

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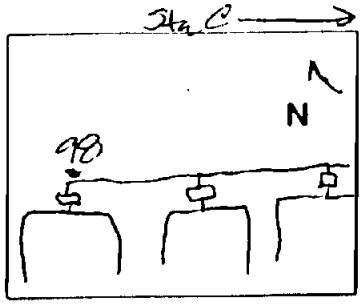

Site ID	NAS Ft Worth	Location ID	DP-98
Northing	—	Easting	
Elevation	—	T.D.	10'
Date Started	4/12/95	Date Completed	4/12/95
Drilling Contr.	KEI	Driller	B Riggs
Drill Method	Soil Probe	Rig Type	Geoprobe
Sample Type	1" Drive Pt.	Geo/Eng.	M Johnson
Hammer Wt.	—	Backfilled Date	4/12/95

Weather Conditions
Sunny Cool Calm

Names of Persons Present
M Johnson
B. Riggs
J. Brim

Depth in Feet	Sampled Interval	Sample Number	Percent Recovery	HNU or OVM Reading	Blows per 6"	Sampling Method	Water Content	USCS Code	Color	Graphic Log	Interval	Description
0												fill
												mixture of - clay, sand, gravel
		FW-A902804							7.5YR			
5	4.5-5'	DP98A	50%	90ppm	8-12	DP	Moist		3/3			
		FW-A902802							7.5YR			
10	9-10	DP98B		180ppm	8 33	DP	V Mst		5/4			Silty Sand F-M
		FW-A900103		Lab								
		DP98BFD										TD = 10'
15												
20												
25												
30												

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N

Site ID	NAS Ft. Worth	Location ID	DP-99
Northing	—	Easting	—
Elevation	—	T.D.	12'
Date Started	4/12/95	Date Completed	4/12/95
Drilling Contr.	KEL	Driller	B. Riggs
Drill Method	Soil Probe	Rig Type	Geoprobe
Sample Type	1" Drive Pt.	Geo/Eng.	M Johnson
Hammer Wt.	—	Backfilled Date	4/12/95

Weather Conditions

Names of Persons Present: M Johnson, B Riggs, J Brim

Depth in Feet	Sampled Interval	Sample Number	Percent Recovery	HNU or OVM Reading	TIME Blows Per 6"	Sampling Method	Water Content	USCS Code	Color	Graphic Log	Interval	Description
0												
5	4'-5'	FW-1 DP99A	100%	0ppm	8:54	DP	moist		7.5YR 4/3			Clayey Sandy Gravel - Fine, Subangular
10	11'-12'	FW-1 DP99B	100%	0ppm	9:04	DP	moist WET		7.5YR 7/6			Silty Sand F-m
												Sand F-m
												TD = 12'
15												
20												
25												
30												

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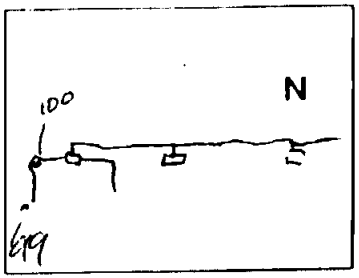

Site ID	NAS Ft. Worth	Location ID	DP-100
Northing	—	Easting	—
Elevation	—	T.D.	10'
Date Started	4/12/95	Date Completed	4/12/95
Drilling Contr.	KEL	Driller	B. Riggs
Drill Method	Soil Probe	Rig Type	Geoprobe
Sample Type	1" Drive Point	Geo/Eng.	M Johnson
Hammer Wt.	—	Backfilled Date	4/12/95

Weather Conditions
Sunny Warm Bzy

Names of Persons Present
M. Johnson
B. Riggs
J Brim

Depth in Feet	Sampled Interval	Sample Number	Percent Recovery	HNU or OVM Reading	Time ~~Blows Per 6"~~	Sampling Method	Water Content	USCS Code	Color	Graphic Log	Interval	Description
0												
		FW-A9102805							7.5YR 7/4			Fill Clayey Sandy Gravel, Fine, Subangular
	2'-3'	DP100A	80%	0ppm	9:15	DP	moist					
5												
		FW-A9102806							7.5YR 6/6			Silty Sand F-M
10	9'-10'	DP100B	90%	0ppm	9:32	DP	V. Moist					
												TD=10'
15												
20												
25												
30												

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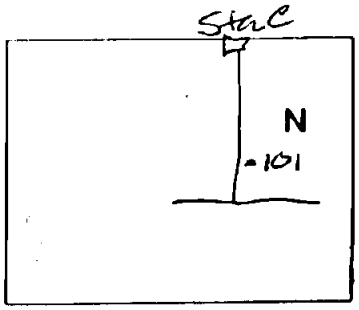

Site ID	NAS Ft. Worth	Location ID	DP-101
Northing	–	Easting	–
Elevation	–	T.D.	22'
Date Started	4/12/95	Date Completed	4/12/95
Drilling Contr.	KEI	Driller	B. Riggs
Drill Method	Soil Probe	Rig Type	Geoprobe
Sample Type	Drive Pt.	Geo/Eng.	MRJ
Hammer Wt.	–	Backfilled Date	4/12/95

Weather Conditions: Clr Breezy

Names of Persons Present: MRJ, BR, J. Brim

Depth in Feet	Sampled Interval	Sample Number	Percent Recovery	HNU or OVM Reading	Time Blows Per 6"	Sampling Method	Water Content	USCS Code	Color	Graphic Log	Interval	Description
0									2.5YR 4/6			
									7.5YR 4/4 mottled			Fill Clayey Sand w Fine Gravel, Subangular, plastic
5	5'-6'	FW-A902809 DP101A	100%	0 ppm	10:31	DP	moist					
10												
15												
20	21-22'	FW-A902868 DP101B FW-A902809 DP101BFD		5 ppm 150 ppm 180 ppm	10:54	DP 10 54	V moist		7.5YR 6/4			Sand F-M, poorly graded
25												TD = 22'
30												

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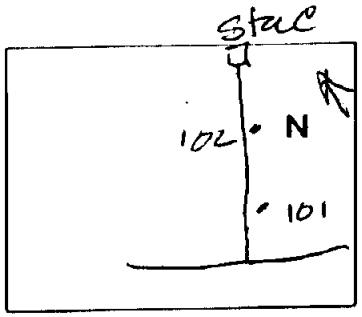

Site ID	NAS Ft Worth	Location ID	DP-102
Northing	—	Easting	—
Elevation	—	T.D.	22'
Date Started	4/12/95	Date Completed	4/12/95
Drilling Contr.	KEC	Driller	B. Kyles
Drill Method	Soil Probe	Rig Type	Geoprobe
Sample Type	Drive Pt.	Geo/Eng.	MRS
Hammer Wt.	—	Backfilled Date	4/12/95

Weather Conditions

Names of Persons Present
MRS
BR
J. Brim

Depth in Feet	Sampled Interval	Sample Number	Percent Recovery	HNU or OVM Reading	Time ~~Blows Per 6"~~	Sampling Method	Water Content	USCS Code	Color	Graphic Log	Interval	Description
0									2.5YR 4/6 + 7.5YR 4/4			Fill
5	5'-6'	FW-A DP102A	102901 90%	0ppm	11:14	DP	moist					Clumpy Sand w Fine gravel Semiquartz, plastic
10												
15												
20	21'-22'	FW-A DP102B	102902 50%	10-20ppm	11:39	DP	moist to wet		7.5YR 4/3			S. Hy Sand F-M
25												TD=22'
30												

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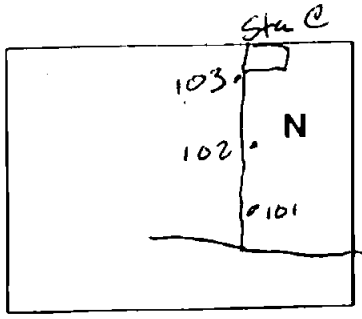

Site ID	NAS Ft. Worth	Location ID	DP-103
Northing	—	Easting	—
Elevation	—	T.D.	22'
Date Started	4/12/95	Date Completed	4/12/95
Drilling Contr.	KEI	Driller	B. Riggs.
Drill Method	Soil Probe	Rig Type	Geoprobe
Sample Type	Drive Pt.	Geo/Eng.	MRJ
Hammer Wt.	—	Backfilled Date	4/12/95

Weather Conditions

Names of Persons Present
MRJ
BR.
J. Brim

Depth in Feet	Sampled Interval	Sample Number	Percent Recovery	HNU or OVM Reading	Timing Blows Per 6"	Sampling Method	Water Content	USCS Code	Color	Graphic Log	Interval	Description
0												
5	5'-6'	FW-A9102903 DP1034	85%	0ppm	11:59	DP	moist		7.5YR 4/1			Clayey Sand w Tr. fine sub-rounded gravel and organics.
10												
15	14.5-15	FW-A9102904 DP1033	100%	0ppm	12:16	DP	moist		7.5YR 5/3			Clayey Sand / Sandy Clay w Tr Subrounded gravel.
20		FW-A9102905 DP1032	100%				wet		7.5YR 5/6			Sandy Clay, Plastic
	21-22	DP1032	150ppm 490ppm		11:29				7.5YR 5/6			Silty Sand F-m
		↳ FW-A9001004-Lab										
25												TD 22'
30												

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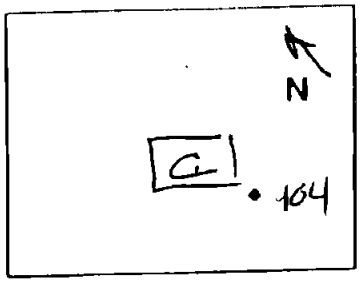

Site ID	NAS Ft Worth	Location ID	DP-104
Northing	—	Easting	—
Elevation	—	T.D.	22'
Date Started	4/12/95	Date Completed	4/12/95
Drilling Contr.	KEF	Driller	B Riggs
Drill Method	Soil Probe	Rig Type	Geoprobe
Sample Type	Drive Pt.	Geo/Eng.	MRJ
Hammer Wt.	—	Backfilled Date	4/12/95

Weather Conditions

Names of Persons Present
MRJ
BR.
J. Bean

Depth in Feet	Sampled Interval	Sample Number	Percent Recovery	HNU or OVM Reading	Blows Per 6"	Sampling Method	Water Content	USCS Code	Color	Graphic Log	Interval	Description
0												
5	5'-8'	FW-A DP104A	90290B 75%	nd 0ppm	14:41	DP	moist		7.5YR 6/3			Clayey Sand / Sandy Clay F-C Subrounded
10												Sand F-C, poorly graded.
15	15-15	FW-B DP104B	90290B 25%	0ppm	14:59	DP	wet		nd ~~5PB~~ 5PB 4/1			Silty Sand F-C, slightly plastic suspect H_2O is perched - could be bottom of tank etc?
20	20-22	FW-H DP104C	90290B 80%	0ppm	15:18	DP	wet		7.5YR 5/2			Sand F-m
25												TD 22'
30												

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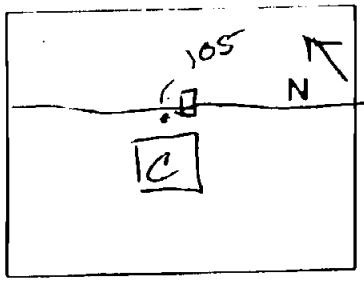

Site ID	NAS Fl Worth	Location ID	DP 105
Northing	—	Easting	—
Elevation	—	T.D.	22°
Date Started	4/12/95	Date Completed	4/12/95
Drilling Contr.	KEE	Driller	B. Riggs
Drill Method	Soil Probe	Rig Type	Geoprobe
Sample Type	1" Drive PT	Geo/Eng.	M Johnson
Hammer Wt.	—	Backfilled Date	4/12/95

Weather Conditions

Names of Persons Present
M Johnson
B. Riggs
J Brim

Depth in Feet	Sampled Interval	Sample Number	Percent Recovery	HNU or OVM Reading	Blows Per 6"	Sampling Method	Water Content	USCS Code	Color	Graphic Log	Interval	Description
0												
5	5'-6'	FW-A9103004 DP105A	70%	0ppm	15·37	DP	moist		10YR 4/1			Clayey Sand / Sandy Clay Tr of organics
10												
15	14-14.5	FW-A9102909 DP105B		0ppm	15·49	DP	moist		10YR 5/6			Clayey Sand Sand w/ Fine subrounded gravel
20	21.5-22'	FW-A9102300 DP105C	100%	0ppm	16·10	DP	wet		10YR 5/6			Sand interbedded w/ Clayey Sand Fine poorly graded.
25												TD 22°
30												

High readings ppm > 1/2 ppm background

Lithologic Borehole Log
Project #10K70100

BTEX

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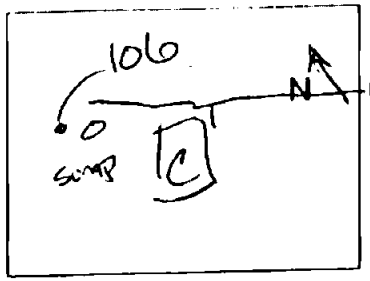

Site ID	NAS Fallon	Location ID	DP-106
Northing	—	Easting	—
Elevation	—	T.D.	22'
Date Started	4/12/95	Date Completed	4/12/95
Drilling Contr.	REI	Driller	B. Riggs
Drill Method	Soil Probe	Rig Type	Geoprobe Mule
Sample Type	Drive Pt.	Geo/Eng.	M. Johnson
Hammer Wt.	—	Backfilled Date	4/12/95

Weather Conditions
High Clouds
Warm ~70

Names of Persons Present
M Johnson
B Riggs
J Brim

Depth in Feet	Sampled Interval	Sample Number	Percent Recovery	HNU or OVM Reading	Time ~~Blows per 6"~~	Sampling Method	Water Content	USCS Code	Color	Graphic Log	Interval	Description
0												
5	5.5-6'	FW-A903005 DP106A	25%	10ppm	16:31	DP	moist		10YR 3/1			Sandy Clay w/Tr organics plastic.
10												
15	14-15	FW-A903002 DP106B	100%	4ppm	16:53	DP	moist		7.5YR 2/6			Clayey Sand F, plastic
		DP106B FW-A900605										
20	21-21.5	FW-A903003 DP106C	25%	10ppm	17:12	DP	wet		10YR 5/3			Sand, Fine poorly graded
25												TD=22'
30												

HNu readings ppm > 1/2 ppm background

Lithologic Borehole Log
Project #10K70100

BTEX & PAH

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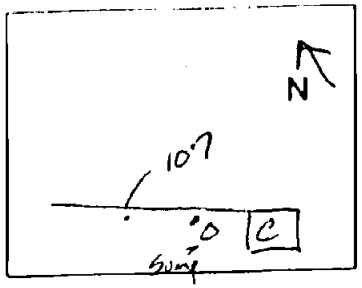

Site ID	NAS Ft Worth	Location ID	DP-107
Northing	—	Easting	—
Elevation	—	T.D.	22'
Date Started	4/13/95	Date Completed	4/13/95
Drilling Contr.	KEI	Driller	B Riggs
Drill Method	Soil Probe	Rig Type	Geoprobe Mike
Sample Type	Drive PT	Geo/Eng.	M Johnson
Hammer Wt.	—	Backfilled Date	4/13/95

Weather Conditions
Clr Sunny
~55°

Names of Persons Present
M Johnson
D Riggs
J Brim

Depth in Feet	Sampled Interval	Sample Number	Percent Recovery	HNU or OVM Reading	Time Blows Per 6"	Sampling Method	Water Content	USCS Code	Color	Graphic Log	Interval	Description
0												
5	1-5	FW-A9303006 DP107A DP107AFD FW-A9303007	100%	0ppm	8:11	DP	Very moist		7.5YR 3/1			Clayey Sand F-m w TR organics
10												
15												
20	20-22	FW-A9303007 DP107B	90%	0ppm	8:35	DP	moist		7.5YR 5/4			Sand F-m, poorly graded, alternating variable amounts of silt up to ~10%
25												TD=22'
30												

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Hnu ppm > 1/2 ppm below gwl

Lithologic Borehole Log
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BTEX

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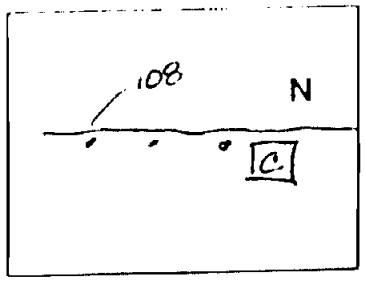

Site ID	NAS Ft Worth	Location ID	DP-108
Northing		Easting	
Elevation	—	T.D.	22'
Date Started	4/13/95	Date Completed	4/13/95
Drilling Contr.	KFE	Driller	B Riggs
Drill Method	Soil Probe	Rig Type	Geoprobe
Sample Type	1" Dual PT.	Geo/Eng.	M Johnson
Hammer Wt.	—	Backfilled Date	4/13/95

Weather Conditions

Names of Persons Present: MW, BR, J Brim

Depth in Feet	Sampled Interval	Sample Number	Percent Recovery	HNU or OVM Reading	Blows Per 6"	Sampling Method	Water Content	USCS Code	Color	Graphic Log	Interval	Description
0												
5		FW-A9003004										
	5-6	DP108A	90%	0ppm	8:51	DP	moist		7.5YR 4/1			Clayey Sand, F-M, very plastic
10												
15												
20		FW-A9003101										
	20-21	DP108B	100%	4ppm	9:11	DP	V moist		7.5YR 4/2			Silty Sand, Fine
		FW-A9003103										
		DP108A-Lab										
25												TD=22'
30												

Lithologic Borehole Log
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BTEX & PAH

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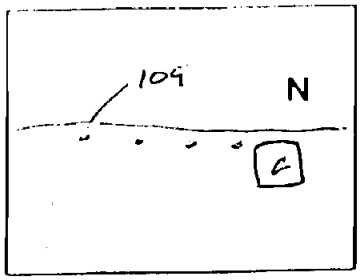

Site ID	NAS Ft. Worth	Location ID	DP-109
Northing	—	Easting	—
Elevation	—	T.D.	7'
Date Started	4/13/95	Date Completed	4/13/95
Drilling Contr.	KEI	Driller	D. Riggs
Drill Method	Soil Probe	Rig Type	Geoprobe
Sample Type	1" Drive Pt.	Geo/Eng.	M Johnson
Hammer Wt.	—	Backfilled Date	4/13/95

Weather Conditions

Names of Persons Present
MRJ
BR
J Brown

Depth in Feet	Sampled Interval	Sample Number	Percent Recovery	HNU or OVM Reading	Time ~~Blows Per 6"~~	Sampling Method	Water Content	USCS Code	Color	Graphic Log	Interval	Description
0												
5	4-6	FW-A903102 12P104A FW-A100904	100%	.155 ppm	9:30	DP	moist		7.5YR 3/1			Clayey Sand F-M, plastic
												Refusal 7'
10												
15												
20												
25												
30												

Hm for [illegible] ppm > ½ ppm Bckgrnd

Lithologic Borehole Log
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BTEX & PAH

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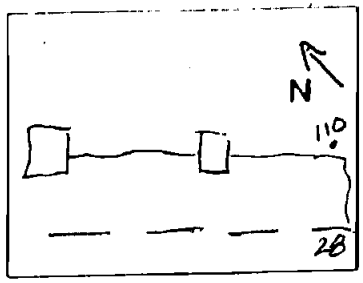

Site ID	NAS Ft Worth	Location ID	DP-110
Northing	—	Easting	—
Elevation	—	T.D.	22'
Date Started	4/13/95	Date Completed	4/13/95
Drilling Contr.	KEI	Driller	B Riggs
Drill Method	Soil Probe	Rig Type	Geoprobe Mike
Sample Type	Drive Pt.	Geo/Eng.	M Johnson
Hammer Wt.	—	Backfilled Date	4/13/95

Weather Conditions

Names of Persons Present
MBJ
BJR
J Brown

Depth in Feet	Sampled Interval	Sample Number	Percent Recovery	HNU or OVM Reading	Blows Per 6"	Sampling Method	Water Content	USCS Code	Color	Graphic Log	Interval	Description
0												Asphalt 3"
5	5'-6'	FW-A DP110A	903103 50%	55 ppm	10:04	DP	moist		7.5YR 4/1	SC		Clayey Sand / Sandy Clay F-M, w/ Tr. Organics.
10	11.5-12'	FW-A DP110B	903104 50%	20 ppm	10:16	DP	moist		7.5YR 4/1	SM		Silty Sand - Fine
										SP		Sand Fine
15												
20	21.5-22	FW-A DP110C	903107 10%	200 ppm	10:38	DP	wet		7.5YR 5/4	SW		Fine Gravelly ~~Fin~~ m/ Sand.
												TD 22'
25												
30												

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Lithologic Borehole Log BTEX
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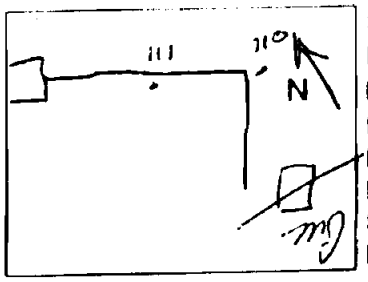

Site ID	NAS Ft Worth	Location ID	DP-111
Northing	—	Easting	—
Elevation	—	T.D.	19°
Date Started	4/13/95	Date Completed	4/13/95
Drilling Contr.	KEI	Driller	B Riggs
Drill Method	Soil Probe	Rig Type	Geoprobe
Sample Type	1" Drive Pt	Geo/Eng.	M Johnson
Hammer Wt.	—	Backfilled Date	4/13/95

Weather Conditions

Names of Persons Present
M Johnson
B Riggs
J Brim

Depth in Feet	Sampled Interval	Sample Number	Percent Recovery	HNU or OVM Reading	Blows Per 6"	Sampling Method	Water Content	USCS Code	Color	Graphic Log	Interval	Description
0												3" Asphalt
5	5-6	FW-A903105 DP111A	50%	0ppm	10:53	DP	moist	SC	7.5YR 5/2	MJ		Clayey Sand F-C, plastic
10												
15												
20	18.5-19	FW-A903106 DP111B	100%	0ppm	11:12	DP	wet	SW	7.5YP 5/6	MJ SW		Sand F-C well graded
25												TD 19°
30												

MJ

Lithologic Borehole Log
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BTEX / PAH

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Background 0.5 ppm

NAVY RAMP

N

112

Site ID	NAS Ft Worth	Location ID	DP-112
Northing	–	Easting	–
Elevation	–	T.D.	21'
Date Started	4/21/95	Date Completed	4/21/95
Drilling Contr.	KEI	Driller	Blake Riggs
Drill Method	Geo. Probe	Rig Type	Geoprobe
Sample Type	1" Drive Pt.	Geo/Eng.	M. Johnson
Hammer Wt.	–	Backfilled Date	4/21/95

Weather Conditions: Sunny Hot. Sath wind

Names of Persons Present: MRJ, BR, J. Brown

Depth in Feet	Sampled Interval	Sample Number	Percent Recovery	HNU or OVM Reading	Blows Per 6"	Sampling Method	Water Content	USCS Code	Color	Graphic Log	Interval	Description
0												3" Asphalt
5	5-6	FW-A904504 DP112A 50% FW-A904505 DP112AFD		5ppm	15:44	DP	V moist to wet	SC	7.5YR 4/1	SC		Clayey Sand F-m, plastic Tr Organics.
10	11-12	FW-A904506 DP112B 70% FW-A101306		26ppm	15:56	DP	moist	SP	7.5YR 4/2			Sand F-m poorly graded
15												
20	20-21	FW-A904507 DP112C 60% FW-A101307		5ppm	16:12	DP	wet	SC	7.5YR 6/3			Clayey Sand F-m w/ F gravel
						DP	wet		7.5YR 4/1			
25												TD 21'
30												

Lithologic Borehole Log BTEX
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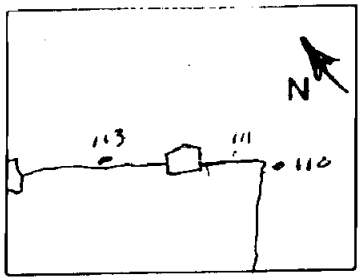

Site ID	NAS Ft. Worth	Location ID	DP-113
Northing	—	Easting	—
Elevation	—	T.D.	21'
Date Started	4/13/95	Date Completed	4/13/95
Drilling Contr.	KET	Driller	B. Riggs
Drill Method	Soil Probe	Rig Type	Geoprobe
Sample Type	1" Drive Pt.	Geo/Eng.	M Johnson
Hammer Wt.	—	Backfilled Date	4/13/95

Weather Conditions

Names of Persons Present
MRV
BR
J Brim

Depth in Feet	Sampled Interval	Sample Number	Percent Recovery	HNU or OVM Reading	Blows Per 6"	Sampling Method	Water Content	USCS Code	Color	Graphic Log	Interval	Description
0												Asphalt 3"
5	5-6	FW-A903108		0ppm	11:3[illegible]	DP	moist	SC	10YR 3/2			Clayey Sand F-m, Plastic Tr Organics
10												
15												
20	20-21	FW-A903109 DP113B	100%	0ppm	11:57	DP	moist to wet	SW	10YR 6/4			Sand F-C subangular, Tr of fine gravel.
25												21'
30												

Lithologic Borehole Log
Project #10K70100

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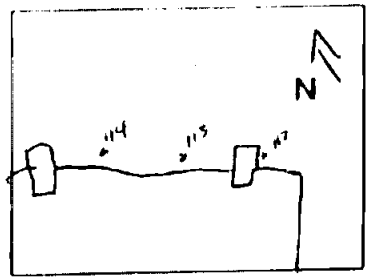

Site ID	NAS FT. WORTH	Location ID	DP114
Northing	—	Easting	—
Elevation	—	T.D.	20'
Date Started	4/13/95	Date Completed	4/13/95
Drilling Contr.	KEI	Driller	B RIGGS
Drill Method	SOIL PROBE	Rig Type	GEOPROBE
Sample Type	1" DRIVE PT.	Geo/Eng.	MRJ
Hammer Wt.	—	Backfilled Date	4/13/95

Weather Conditions

Names of Persons Present
M Johnson
B. Riggs
J. Brim

Depth in Feet	Sampled Interval	Sample Number	Percent Recovery	HNU or OVM Reading	Time Blows Per 6"	Sampling Method	Water Content	USCS Code	Color	Graphic Log	Interval	Description
0												
		FWA 903001										
5	5'-6'	DP114A	90%	0ppm	13:51	DP	moist	SC	10YR 4/2			Clayey Sand Fm, Tr Organics
10												
15												
20		FWA 903202		5ppm	14:16	DP	wet	SW	7.5YR 5/3			Sand F-C well graded w/ shells
	15-20	DP114B										
		FWA 101001 Lab										
25												TD=20'
30												

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Lithologic Borehole Log BTEX & PAH
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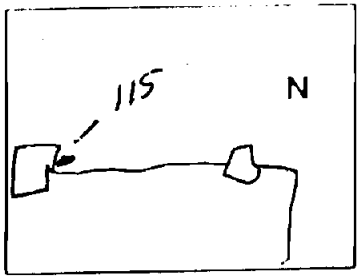

Site ID	NAS FT WORTH	Location ID	DP-115
Northing	—	Easting	—
Elevation	—	T.D.	20
Date Started	4/13/95	Date Completed	4/13/95
Drilling Contr.	KEI	Driller	B. Riggs
Drill Method	Soil Probe	Rig Type	Geoprobe
Sample Type	1" Drive Pt.	Geo/Eng.	M. Johnson
Hammer Wt.	—	Backfilled Date	4/13/95

Weather Conditions
CLR ~80°

Names of Persons Present
M Johnson
B. Riggs
J. Brim

Depth in Feet	Sampled Interval	Sample Number	Percent Recovery	HNU or OVM Reading	Time Blows Per 6"	Sampling Method	Water Content	USCS Code	Color	Graphic Log	Interval	Description
0												
5	5-6	FW-A DP115A	903203 50%	110ppm	14:36	DP	moist	CL	7.5YR 4/2			Clayey Sand F-m plastic
10	11-12	FW-A DP115B FW-A DP115BFB	903204 100% 101002	350ppm Lab	14:47	DP	moist	SC	7.5YR 4/2			Same w/ Tr med subangular gravel and silt ~10% less plastic
15												
20	19-20	FW-A DP115C FW-A DP115CFD	903205 50% 903206	350 ppm	15:05	DP	moist	SP	7.5YR 5/4			SAND F-m poorly graded
25												TD 20
30												

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Lithologic Borehole Log BTEX
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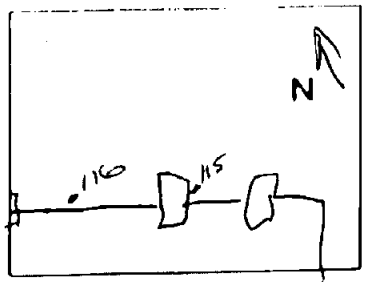

Site ID	NAS Ft Worth	Location ID	OP-116
Northing	—	Easting	—
Elevation	—	T.D.	20
Date Started	4/13/95	Date Completed	4/13/95
Drilling Contr.	KEE	Driller	B. Riggs
Drill Method	Soil Probe	Rig Type	Geoprobe
Sample Type	1" Drive Pt	Geo/Eng.	M. Johnson
Hammer Wt.	—	Backfilled Date	4/13/95

Weather Conditions
CIR ~80°
South wind ~20°

Names of Persons Present
M. Johnson
B. Riggs
J. Brimsek

Depth in Feet	Sampled Interval	Sample Number	Percent Recovery	HNU or OVM Reading	Time Blows Per 6"	Sampling Method	Water Content	USCS Code	Color	Graphic Log	Interval	Description
0												
5		FW-A903207										
	5-6	OP116A	100%	0ppm	15:34	DP	moist	SC	7.5YR 4/3			Clayey Sand/Sandy Clay w/Tr of organics.
10												
15												
20		FW-A903208										
	15-20	OP116B	100%	0ppm	15:40	DP	wet	SM	7.5YR 6/4			Silty Sand w/ Tr subangular fine gravel
												TD 20
25												
30												

Lithologic Borehole Log BTEX & PAH
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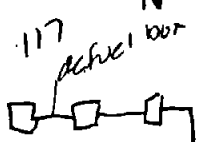

Site ID	NAS Ft Worth	Location ID	DP-117
Northing	—	Easting	—
Elevation	—	T.D.	20
Date Started	4/13/95	Date Completed	4/13/95
Drilling Contr.	KEF	Driller	B. Riggs
Drill Method	Soil Probe	Rig Type	Geoprobe
Sample Type	1" Drive PT.	Geo/Eng.	M Johnson
Hammer Wt.	—	Backfilled Date	4/13/95

Weather Conditions

Names of Persons Present
M Johnson
B. Riggs
J. Brim

Depth in Feet	Sampled Interval	Sample Number	Percent Recovery	HNU or OVM Reading	Time Begin Per 6"	Sampling Method	Water Content	USCS Code	Color	Graphic Log	Interval	Description
0												
5	5'-6'	FW-A DP117A	903204 60%	0ppm	16:02	DP	moist	SC	7.5YR 4/2			Clayey Sand/Sandy Clay w/Tr organics
10												
15												
20	19'-20'	FW-A DP117B	903302			DP	moist to wet	SP	7.5YR 5/2			Fine Sand
												TD 20
25												
30												

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Lithologic Borehole Log
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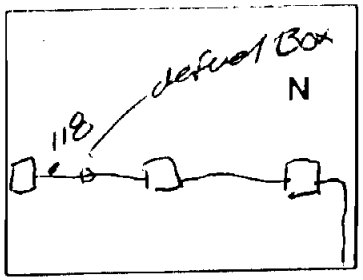

Site ID	NAS Ft Worth	Location ID	DP-118
Northing	—	Easting	—
Elevation	—	T.D.	19'
Date Started	4/13/95	Date Completed	4/13/95
Drilling Contr.	KEI	Driller	B Riggs
Drill Method	Soil Probe	Rig Type	Geoprobe
Sample Type	1" Drive Pt.	Geo/Eng.	M Johnson
Hammer Wt.	—	Backfilled Date	4/13/95

Weather Conditions
Clr ~80°

Names of Persons Present
M. Johnson
B. Riggs
J. Brim

Depth in Feet	Sampled Interval	Sample Number	Percent Recovery	HNU or OVM Reading	Time Blows Per 6"	Sampling Method	Water Content	USCS Code	Color	Graphic Log	Interval	Description
0												Asphalt 3"
5	5-6'	FW-A903302 DP118A	70%	0ppm	10:46	DP	moist	SC	7.5YR 4/2	7.5YR 4/2		Clayey Sand / Sandy Clay, stiff, plastic. Tr organics
10												
15												
20	18'-19'	FW-A903303 DP118B		0ppm	17:02	DP	v. moist	SP	7.5YR			Sand, Fine, poorly graded
25												TD - 19'
30												

Lithologic Borehole Log
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BTEX / PAH

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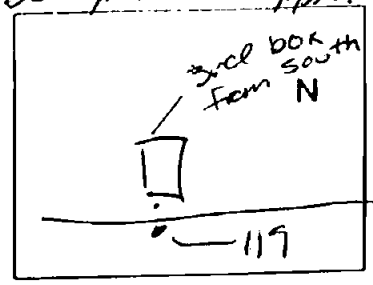
Bckgrd 0.5 ppm



Site ID	NAS Ft. Worth	Location ID	DP-119
Northing	—	Easting	—
Elevation	—	T.D.	21'
Date Started	4/21/95	Date Completed	4/21/95
Drilling Contr.	KEI	Driller	B. Riggs
Drill Method	Soil Probe	Rig Type	Geoprobe
Sample Type	1"	Geo/Eng.	M Johnson
Hammer Wt.	—	Backfilled Date	4/21/95

Weather Conditions: Sunny South Breeze

Names of Persons Present: M Johnson, B Riggs, J Brim

Depth in Feet	Sampled Interval	Sample Number	Percent Recovery	HNU or OVM Reading	Time ~~Blows Per 6"~~	Sampling Method	Water Content	USCS Code	Color	Graphic Log	Interval	Description
0												Asphalt 3"
5	5-6	FW A904501 DP119A FW A101303	75%	3 ppm LAB	14:44	DP	moist	SC	7.5YR 2.5/1			Clayey Sand F-M, plastic
10	11-12	FW-A904502 DP119B FW A101304	75%	4 ppm LAB	14:59			SC	7.5YR 4/3			Same
15												
20	20-21	FW-A904503 DP119C FW-A101305	50%	170 ppm	15:20	DP	wet	SP	7.5YR 4/1			Sand F-M poorly graded
25												
30												

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Lithologic Borehole Log BTEX
Project # 10K70100

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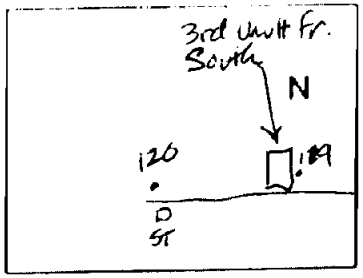

Site ID	NAS Ft Worth	Location ID	DP-120
Northing	—	Easting	—
Elevation	—	T.D.	19'
Date Started	4/14/95	Date Completed	4/14/95
Drilling Contr.	KEE	Driller	B Riggs
Drill Method	Soil Probe	Rig Type	Geoprobe
Sample Type	1" Drive Pt.	Geo/Eng.	M Johnson
Hammer Wt.	—	Backfilled Date	4/14/95

Weather Conditions
CLR South Wind

Names of Persons Present
M Johnson
B Riggs
J Brian

Depth in Feet	Sampled Interval	Sample Number	Percent Recovery	HNU or OVM Reading	Blows Per 6"	Sampling Method	Water Content	USCS Code	Color	Graphic Log	Interval	Description
0												
5		FW-A 903304										
	5'-6	DP120A	90%	0ppm	8:53	DP	moist	SC	10YR 4/2	IX		Clayey Sand / Sandy Clay
10												
15												Silty Sand
		FW-A 903305										
	18-19	DP120B	90%	15 ppm	9:13	DP	moist to wet	~~ML~~ ~~SM~~ SP	10YR 5/4			Sand, Fine poorly graded
20		FWA 901005 LAB										H_2O @ ~~18.7~~ 19.7
												TD = 19'
25												
30												

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Lithologic Borehole Log BTEX & PAH
Project #10K70100

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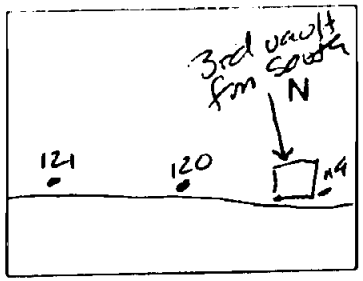

Site ID	NAS Ft. Worth	Location ID	DP-121
Northing	—	Easting	
Elevation	—	T.D.	19'
Date Started	4/14/95	Date Completed	4/14/95
Drilling Contr.	KET	Driller	B Riggs
Drill Method	Soil Probe	Rig Type	Geoprobe
Sample Type	1" Drive Pt.	Geo/Eng.	M Johnson
Hammer Wt.	—	Backfilled Date	4/14/95

Weather Conditions
Clr, South Wind
~65°

Names of Persons Present
M Johnson
B Riggs
J Brim

Depth in Feet	Sampled Interval	Sample Number	Percent Recovery	HNU or OVM Reading	~~Time Blows Per 6"~~	Sampling Method	Water Content	USCS Code	Color	Graphic Log	Interval	Description
0												
5	5-6	FW-A9033306 DP121A	80%	0ppm	9:27	DP	moist	SC	10YR 4/1			Clayey Sand / Sandy Clay w/Tr Fine Subrounded gravel
10												
15												
20	19.5-20	FW-A9033307 DP121B	100%	2ppm	9:51	DP	v. moist	SM	10YR 4/6			Silty Sand TD 19'
25												
30												

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Lithologic Borehole Log
Project #10K70100

BTEX & PAH

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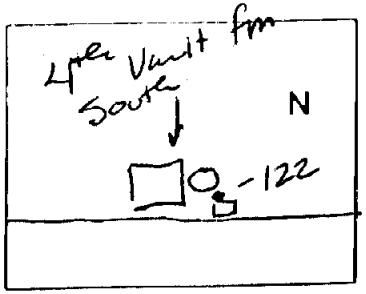

Site ID	NAS Ft. Worth	Location ID	DP-122
Northing	—	Easting	—
Elevation	~~4/14/95~~ mj	T.D.	20
Date Started	4/14/95	Date Completed	4/14/95
Drilling Contr.	KEF	Driller	B. Riggs
Drill Method	Soil Probe	Rig Type	Geoprobe
Sample Type	1" Drive Pt.	Geo/Eng.	M. Johnson
Hammer Wt.	—	Backfilled Date	4/14/95

Weather Conditions
CLR South Wind ~65°

Names of Persons Present
M. Johnson
B. Riggs
J. Brim

Depth in Feet	Sampled Interval	Sample Number	Percent Recovery	HNU or OVM Reading	Blows Per 6"	Sampling Method	Water Content	USCS Code	Color	Graphic Log	Interval	Description
0												
5	5-6	FW-A903308 DP122A	100%	2ppm	10:07	DP	moist	SC	10YR 4/1			Clayey Sand/Sandy Clay w/TR subrounded fine gravel.
10	11-12	FW-A903309 DP122B DP122BFD FW-A903401		170ppm	10:22	DP	moist	SC	7.5YR 6/2			Clayey Sand/Sandy Clay w/ ~5% fine subrounded gravel
15												
20	18-20	FW-A903802 DP122C FW-A101006 DP122C Lab	100%	160ppm	10:45	DP	moist to V moist	SM	7.5YR 4/4			Silty Sand - discolored from 19.2' to 20' - V moist here also - assumed to be capillary fringe
25												TD = 20'
30												

Lithologic Borehole Log
Project #10K70100

BTEX

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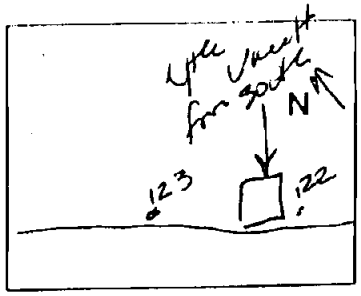

Site ID	1/AS Ft. Worth	Location ID	DP-123
Northing	—	Easting	—
Elevation	—	T.D.	20
Date Started	4/14/95	Date Completed	4/14/95
Drilling Contr.	KFE	Driller	B. Riggs
Drill Method	Soil Probe	Rig Type	Geoprobe
Sample Type	1" Drive Pt.	Geo/Eng.	M Johnson
Hammer Wt.	—	Backfilled Date	4/14/95

Weather Conditions
Clr South wind ~70°

Names of Persons Present
M Johnson
B Riggs
J Brim

Depth in Feet	Sampled Interval	Sample Number	Percent Recovery	HNU or OVM Reading	Time Blows Per 6"	Sampling Method	Water Content	USCS Code	Color	Graphic Log	Interval	Description
0												
5	X 5-6	FW-A 9034 03 DP123A	60%	0ppm	11:04	DP	moist	SC	10YR 3/1			clayey Sand F-m
10												
15												
20	X 19.5-20	FW-A 9034 04 DP123B		1ppm	11:24	DP	V. Moist	SM	10YR 4/4			Silty Sand F-m
												TD = 20
25												
30												

Lithologic Borehole Log BTEX & PAH
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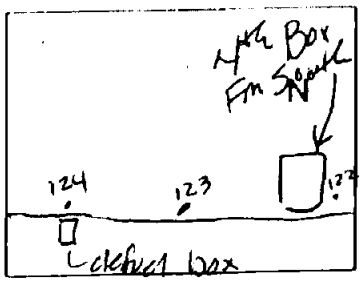

Site ID	NAS Ft Worth	Location ID	DP-124
Northing	—	Easting	—
Elevation	—	T.D.	21'
Date Started	4/14/95	Date Completed	4/14/95
Drilling Contr.	KEL	Driller	B Riggs
Drill Method	Soil Probe	Rig Type	Geoprobe
Sample Type	1" Drive Pt.	Geo/Eng.	M Johnson
Hammer Wt.	—	Backfilled Date	4/14/95

Weather Conditions
Clr Windy fm South
~70°

Names of Persons Present
M Johnson
B. Riggs
J. Brim

Depth in Feet	Sampled Interval	Sample Number	Percent Recovery	HNU or OVM Reading	~~Blows Per 6"~~ Time	Sampling Method	Water Content	USCS Code	Color	Graphic Log	Interval	Description
0												
5	5-6'	FW-A903406 DP124B	90%	0ppm	11:41	DP	moist	SC	A mod 10YR 3/1			Clayey Sand F-M
10												
15												
20	20-22	FW-A903406 DP124B FW-A101007	100%	50 ppm lab	12:06	DP	J. moist	SM	7.5YR 4/4			Silty Sand, F-M
25												TD 21'
30												

Lithologic Borehole Log
Project #10K70100

BTEX & PAH

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South Apron
5th Yard from South
N
125

Site ID	NAS Ft. Worth	Location ID	DP-125
Northing	–	Easting	–
Elevation	–	T.D.	14'
Date Started	4/14/95	Date Completed	4/14/95
Drilling Contr.	GEL	Driller	B. Riggs
Drill Method	Soil Probe	Rig Type	Geoprobe
Sample Type	1' Drive Pt.	Geo/Eng.	M Johnson
Hammer Wt.	–	Backfilled Date	4/14/95

Weather Conditions

Names of Persons Present
M Johnson
B. Riggs
J Brim.

Depth in Feet	Sampled Interval	Sample Number	Percent Recovery	HNU or OVM Reading	~~Blows Per 6"~~ Time	Sampling Method	Water Content	USCS Code	Color	Graphic Log	Interval	Description
0												
5	5-5.5	FW-A903407 DP125A	50%	40 ppm	14:35	DP	moist	SC	10YR 3/2			Clayey Sand F-C; 7.5 cobble – Limestone
10	11.5-12	FW-A903408 DP125B	100%	0 ppm	14:58	DP	moist		10YR 6/3			weathered limestone (clay consistency (COUPLAND Fm.))
15												14' Refusal
20												
25												
30												

Lithologic Borehole Log
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BTEX

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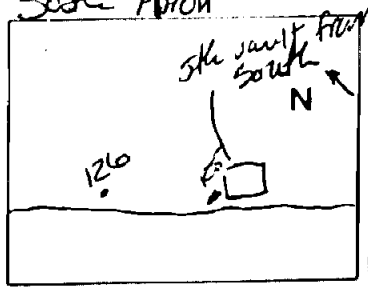
Soil Apron



Site ID	NAS Ft Worth	Location ID	DP-126
Northing	–	Easting	–
Elevation	–	T.D.	14
Date Started	4/14/95	Date Completed	4/14/95
Drilling Contr.	KEI	Driller	B. Riggs
Drill Method	Soil Probe	Rig Type	Geoprobe
Sample Type	1" Drive Pt.	Geo/Eng.	M. Johnson
Hammer Wt.	–	Backfilled Date	4/14/95

Weather Conditions

Names of Persons Present
M. Johnson
B. Riggs
J. Brim

Depth in Feet	Sampled Interval	Sample Number	Percent Recovery	HNU or OVM Reading	Blows Per 6"	Sampling Method	Water Content	USCS Code	Color	Graphic Log	Interval	Description
0												
5	☒ 5'-6'	FW-1K03409. DP126A	75%	0ppm	15:30	DP	moist	SC	10YR 4/3			Clayey Sand w Fine Subangular gravel. (Insta)
10												
15												TD=14' Refusal
20												
25												
30												

HNU Reading = 1 ppm ~ 1/2 from bright.

Lithologic Borehole Log
Project #10K70100 BTEX

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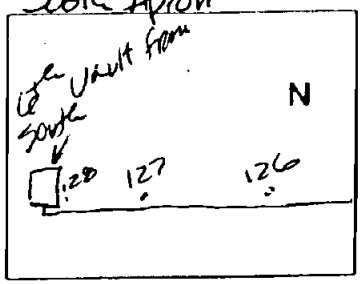
South Apron



Site ID	NAS Ft Worth	Location ID	DP-127
Northing	—	Easting	—
Elevation	—	T.D.	21'
Date Started	4/14/95	Date Completed	4/14/95
Drilling Contr.	KEI	Driller	B Riggs
Drill Method	Soil Probe	Rig Type	Geoprobe Mobile
Sample Type	Drive Pt.	Geo/Eng.	M. Johnson
Hammer Wt.	—	Backfilled Date	4/14/95

Weather Conditions
High Clouds
Windy/Sunny

Names of Persons Present
M Johnson
B Riggs
J. Brim

Depth in Feet	Sampled Interval	Sample Number	Percent Recovery	HNU or OVM Reading	~~Blows Per 6"~~ Time	Sampling Method	Water Content	USCS Code	Color	Graphic Log	Interval	Description
0												
5	X 5-6	FW-A 903501 DP127A FW-A 903502 DP127AFD	50%	0ppm	16:08	DP	wet	SM	5YR 5/6			Silty Sand Silt ~10% Tr subround Fine gravel.
10												
15												
20	X 20-21	FW-A 903503 DP127B		0ppm	16:47	DP	wet	SP	7.5YR 6/4			Sand Fine poorly graded
25												TD 21' water measured at 5.8' Caving @ 6'
30												

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Hnu background ½ ppm (Readings ppm > background)

Lithologic Borehole Log

BTEX & PAH

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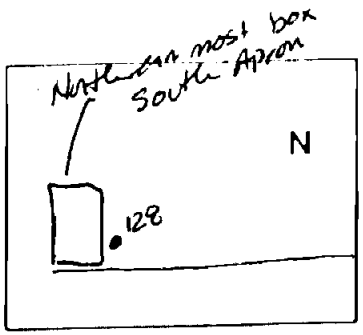

Site ID	NAS Ft Worth	Location ID	DP 128
Northing	—	Easting	—
Elevation	—	T.D.	21'
Date Started	4/17/95	Date Completed	4/17/95
Drilling Contr.	K&I	Driller	B Riggs
Drill Method	Soil Probe	Rig Type	Geoprobe MUE
Sample Type	Drive Pt.	Geo/Eng.	M. Johnson
Hammer Wt.	—	Backfilled Date	4/17/95

Weather Conditions: Overcast, windy drizzle

Names of Persons Present: MJ, DR, JB

Depth in Feet	Sampled Interval	Sample Number	Percent Recovery	HNU or OVM Reading	TIME Blows Per 6"	Sampling Method	Water Content	USCS Code	Color	Graphic Log	Interval	Description
0	Drive Interval											3" Asphalt refusal at 3.5', move 1' to Northeast, start again
5	5-6	FW-A903504 D128A D128AFD FW-A903505	50%	0ppm	8:32	DP	moist		7.5YR 6/6			Sand F-M poorly graded
10												
15												
20	20-21	FW-A903506 D133	90%	0ppm	8:55	DP	wet		7.5YR 6/6			Sand F-C poorly graded
25												TD 21' grnd H2O and Caving 5.5'
30												

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Lithologic Borehole Log BTEX
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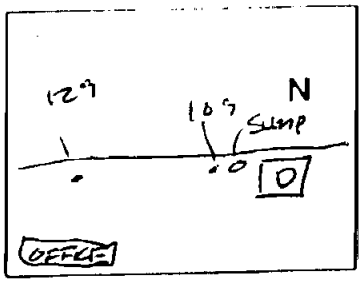

Site ID	NAS Ft Worth	Location ID	DP-129
Northing	—	Easting	—
Elevation	—	T.D.	6'
Date Started	4/17/95	Date Completed	4/17/95
Drilling Contr.	KEL	Driller	B. Briggs
Drill Method	Soil Probe	Rig Type	Geoprobe
Sample Type	1" Drive Pt.	Geo/Eng.	M Johnson
Hammer Wt.	—	Backfilled Date	4/17/95

Weather Conditions: Cloudy Windy drizzle

Names of Persons Present: MJ, BR, JB

Depth in Feet	Sampled Interval	Sample Number	Percent Recovery	HNU or OVM Reading	Time Blows Per 6"	Sampling Method	Water Content	USCS Code	Color	Graphic Log	Interval	Description
0	1" Drive Pt.											
5	5-5'	FW-A 910360? DP129A		0ppm	5:24	DP	Sl. moist		10YR 7/4			weathered limestone, clay like consistency
10												Refusal @ 6'
15												
20												
25												
30												

Hnu reading ppm? 0 background.

Lithologic Borehole Log BTEX / PAH
Project #10K70100

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N
13x 129 109
0 Sat D

Site ID	NAS Pt Mugu	Location ID	OP-130
Northing	—	Easting	—
Elevation	—	T.D.	4.5'
Date Started	4/17/95	Date Completed	4/17/95
Drilling Contr.	KEA	Driller	B Riggs
Drill Method	Soil Probe	Rig Type	Geoprobe Mike
Sample Type	Drive Pt.	Geo/Eng.	M Johnson
Hammer Wt.	—	Backfilled Date	4/17/95

Weather Conditions: Cloudy Windy

Names of Persons Present: MJ, BR, JB

Depth in Feet	Sampled Interval	Sample Number	Percent Recovery	HNU or OVM Reading	Time / Blows Per 6"	Sampling Method	Water Content	USCS Code	Color	Graphic Log	Interval	Description
0	Drive Pt											
5	4-4.5' (5mg)	FW-A903508 OP130A 50% FW-A903509 OP130AFD		0ppm	9:44	DP	Sl. moist		10YR 7/2			weathered limestone clay like consistency, fresh @ 5'
												Refusal @ 4.5'
10												
15												
20												
25												
30												

Hnu readings ppm > 0.2 ppm benzene.

Lithologic Borehole Log BTEX / PAH
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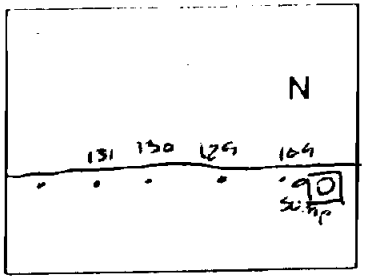

Site ID	NAS Ft Worth	Location ID	DP-131
Northing	–	Easting	–
Elevation	–	T.D.	55
Date Started	4/17/95	Date Completed	4/17/95
Drilling Contr.	KEI	Driller	B. Riggs
Drill Method	Soil Probe	Rig Type	Geoprobe Mobe
Sample Type	Drive Pt.	Geo/Eng.	M Johnson
Hammer Wt.	–	Backfilled Date	4/17/95

Weather Conditions
Cloudy Windy

Names of Persons Present
MJ
BR
JB.

Depth in Feet	Sampled Interval	Sample Number	Percent Recovery	HNU or OVM Reading	Time ~~Blows Per 6"~~	Sampling Method	Water Content	USCS Code	Color	Graphic Log	Interval	Description
0												
	45-	FW14	903601									
5	45-5'	DP131A		0ppm	10:05	DP	Sl. Moist		10YR 8/2			weathered Chalklike limestone
10												Refusal 55
15												
20												
25												
30												

Hnu reading ppm > 0.5 ppm belgad

Lithologic Borehole Log
Project # 10K70100

BTEX

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N

Site ID	NAS Ft Worth	Location ID	DP-132
Northing	–	Easting	–
Elevation	–	T.D.	12'
Date Started	4/17/95	Date Completed	4/17/95
Drilling Contr.	KEL	Driller	B. Riggs
Drill Method	Soil Probe	Rig Type	Geoprobe
Sample Type	1" Drive Pt.	Geo/Eng.	M. Johnson
Hammer Wt.	—	Backfilled Date	4/17/95

Weather Conditions

Names of Persons Present: M Johnson, B. Riggs, J. Brim

Depth in Feet	Sampled Interval	Sample Number	Percent Recovery	HNU or OVM Reading	Time / Blows Per 6"	Sampling Method	Water Content	USCS Code	Color	Graphic Log	Interval	Description
0												Fill Clayey Sand
5	4.5-5	FWA 903602 DP132A	25%	0ppm	10:28	DP	moist		10YR 5/4		4.8'	
							moist		10YR 5/8			Sand F-M, poorly graded
10	11.5-12'	FW-A 903603 DP132B	50%	0ppm	10:41	DP	wet		10YR 5/8			FC Sand, well graded
15												TD 12'
20												
25												
30												

Lithologic Borehole Log
Project # 10K70100

BTEX / PAH

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N

Site ID	NAS Ft. Worth	Location ID	DP-133
Northing	–	Easting	–
Elevation	–	T.D.	6.5'
Date Started	4/17/95	Date Completed	4/17/95
Drilling Contr.	KEI	Driller	B. Riggs
Drill Method	Soil Probe	Rig Type	Geoprobe
Sample Type	1" Drive Pt.	Geo/Eng.	M. Johnson
Hammer Wt.	–	Backfilled Date	4/17/95

Weather Conditions

Names of Persons Present
M. Johnson
B. Riggs
J. Brim

Depth in Feet	Sampled Interval	Sample Number	Percent Recovery	HNU or OVM Reading	Blows Per 6"	Sampling Method	Water Content	USCS Code	Color	Graphic Log	Interval	Description
0												
5	X 5.5-6.5	FWA903604 DP133A DP133AFD FWA903605	60%	0PPM	10:56	DP	V. moist wet		10YR 6/6			SAND F-M poorly graded
10												TD: 6.5'
15												
20												
25												
30												

Lithologic Borehole Log
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BTEX

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N

Site ID	NAS Ft Worth	Location ID	DP-134
Northing	—	Easting	—
Elevation	—	T.D.	12'
Date Started	4/17/95	Date Completed	4/17/95
Drilling Contr.	KEI	Driller	B Riggs
Drill Method	Soil Probe	Rig Type	Geoprobe Mule
Sample Type	Drive Pt.	Geo/Eng.	M Johnson
Hammer Wt.	—	Backfilled Date	4/17/95

Weather Conditions: Cloudy / Windy

Names of Persons Present: MJ, BR, JB

Depth in Feet	Sampled Interval	Sample Number	Percent Recovery	HNU or OVM Reading	Blows Per 6"	Sampling Method	Water Content	USCS Code	Color	Graphic Log	Interval	Description
0												
5	6-6.5	FW-A903606 DP134A	60%	0ppm	11:13	DP	U moist to wet		10YR 6/6			SAND F-m poorly graded "Drill" to 12' to verify H2O elevation.
10	11.5-12	FW-A903607 DP134B	50%	0ppm	11:26	DP	wet		10YR 6/6			Sand F-m, poorly graded, interbedded w/ silty Sand F-c well graded 2" lenses
15												
20												TD = 12' H2O @ 7.9 Caving @ 7.4
25												
30												

Lithologic Borehole Log
Project # 10K70100

BTEX / PAH

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N

Site ID	NAS Ft. Wade	Location ID	DP-135
Northing	–	Easting	–
Elevation	–	T.D.	9'
Date Started	4/17/95	Date Completed	4/17/95
Drilling Contr.	KFE	Driller	B. Riggs
Drill Method	Soil Probe	Rig Type	Geoprobe
Sample Type	1" Drive Pt.	Geo/Eng.	M Johnson
Hammer Wt.	–	Backfilled Date	4/17/95

Weather Conditions: Cloudy Windy

Names of Persons Present: M Johnson, B Riggs, J Brim

Depth in Feet	Sampled Interval	Sample Number	Percent Recovery	HNU or OVM Reading	Time / Blows Per 6"	Sampling Method	Water Content	USCS Code	Color	Graphic Log	Interval	Description
0												
5		FW-A903608										
	6-6.5	DP135A	25%	0ppm	11:47	DP	moist to wet		7.5YR 5/6			Clayey Sand F-C
		FW-A903609										
	8.5-9'	DP135B	70%	0ppm	11:58	DP	moist wet	8.8'				Sand F-m poorly graded
10												TD - 9'
15												
20												
25												
30												

Lithologic Borehole Log BTEX & PAH
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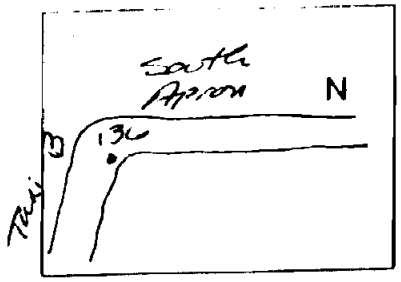


Site ID	NAS Ft. Worth	Location ID	DP-136
Northing		Easting	
Elevation	—	T.D.	10'
Date Started	4/17/95	Date Completed	4/17/95
Drilling Contr.	KEE	Driller	B Riggs
Drill Method	Soil Probe	Rig Type	Geoprobe
Sample Type	1" Drive Pt.	Geo/Eng.	M Johnson
Hammer Wt.	—	Backfilled Date	4/17/95

Weather Conditions
Partly Cloudy
Windy

Names of Persons Present
M Johnson
B. Riggs
J. Brim

Depth in Feet	Sampled Interval	Sample Number	Percent Recovery	HNU or OVM Reading	Blows Per 6"	Sampling Method	Water Content	USCS Code	Color	Graphic Log	Interval	Description
0												
5	5-6	FW AC03701 DP136A	60%	0ppm	14:21	DP	moist		7.5YR 5/8			Sand F-M poorly graded
10	9.5-10	FWAC03702 DP136A	50%	0ppm	14:32	DP	wet		7.5YR 5/8			Sand F-C well graded interbedded w/ sand F-M poorly graded
15												TD=10'
20												H2O measured @ 9' Caving @ 9.2'
25												
30												

Lithologic Borehole Log
Project #10K70100

BTEX

Sheet 1 of 1

N

Site ID	NAS Ft. Worth	Location ID	DP-137
Northing	–	Easting	–
Elevation	–	T.D.	10'
Date Started	4/17/95	Date Completed	4/17/95
Drilling Contr.	KEI	Driller	B. Riggs
Drill Method	Soil Probe	Rig Type	Geoprobe
Sample Type	1" Drive Pt.	Geo/Eng.	M Johnson
Hammer Wt.	–	Backfilled Date	4/17/95

Weather Conditions

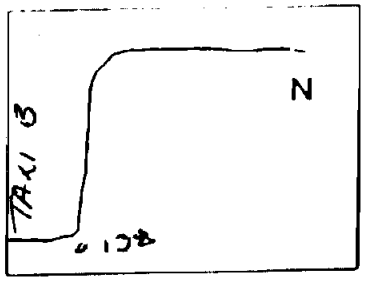
Names of Persons Present
M Johnson
B Riggs
J Brim

Depth in Feet	Sampled Interval	Sample Number	Percent Recovery	HNU or OVM Reading	Time Blows Per 6"	Sampling Method	Water Content	USCS Code	Color	Graphic Log	Interval	Description
0												
5	4-5	FWA903703 DP137A 100% FWA903704 DP137AFD		0ppm	14:50	DP	SI moist		7.5YR 5/6			Clayey Sand w/ Fine Subrounded gravel
10	9.5-10	FWA903705 DP137B					moist wet					Sand F-C poorly graded
15												TD 10'
20												
25												
30												

Lithologic Borehole Log
Project #10K70100

BTEX / PAH

Sheet 1 of 1



Site ID	NAS Ft. Worth	Location ID	DP-138
Northing	–	Easting	–
Elevation	–	T.D.	10'
Date Started	4/17/95	Date Completed	4/17/95
Drilling Contr.	KEI	Driller	B Riggs
Drill Method	Soil Probe	Rig Type	Geoprobe
Sample Type	1" Drive Pt.	Geo/Eng.	M Johnson
Hammer Wt.	–	Backfilled Date	4/17/95

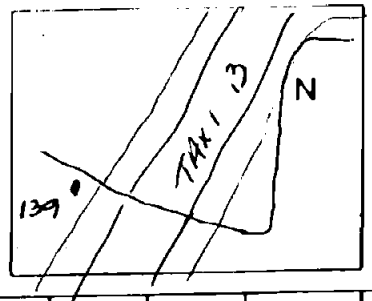
Weather Conditions
Partly Cldy
windy

Names of Persons Present
M Johnson
B Riggs
J Bain

Depth in Feet	Sampled Interval	Sample Number	Percent Recovery	HNU or OVM Reading	Blows Per 6"	Sampling Method	Water Content	USCS Code	Color	Graphic Log	Interval	Description
0												
5	X 4.5-5	FWA 903706 DP138A		75% OPAC	5:23	DP	Dry		1.5YR 4/6			Sandy Clay w/ subrounded medium gravel
10	X 9.5-10	FWA 903707 DP138B	60%	6ppm	15:29	DP	V. Moist		1.5YR 7/6			Sand F-M poorly graded
15												TD 10'
20												
25												
30												

Lithologic Borehole Log BTEX
Project #10K70100

Sheet 1 of 7



Site ID	NAS Ft. Worth	Location ID	DP-139
Northing	–	Easting	–
Elevation	–	T.D.	11'
Date Started	4/17/95	Date Completed	4/17/95
Drilling Contr.	KET	Driller	B Riggs
Drill Method	Soil Probe	Rig Type	Geoprobe
Sample Type	1" Drive Pt.	Geo/Eng.	M Johnson
Hammer Wt.	–	Backfilled Date	4/17/95

Weather Conditions
Clear and Very windy

Names of Persons Present
M Johnson
B. Riggs
J Bam.

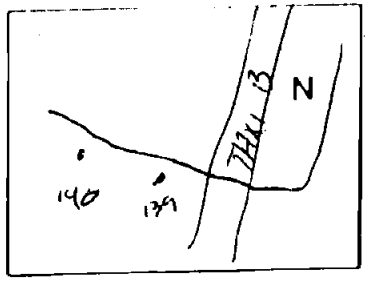
Depth in Feet	Sampled Interval	Sample Number	Percent Recovery	HNU or OVM Reading	Blows Per 6"	Sampling Method	Water Content	USCS Code	Color	Graphic Log	Interval	Description
0												3" Asphalt
5	5-6	FWA203708 DP394	100%	0 ppm	16:14	DP	SI moist		7.5YR 4/6			Clayey Sand F-C w/ Fine Subrounded gravel
10	~~9.5-10~~ mg 10.5-11	FWA203709 DP393	75%	0 ppm	16:30	DP	moist / wet		7.5YR 7/6			Sand F-M, poorly graded
15												TD ~~10'~~ mg 11'
20												H_2O @ 10.7 Caving @ 10.7
25												
30												

Hnu readings ppm > 1/2 ppm bolded

Lithologic Borehole Log
Project #10K70100

BTEX & PAH

Sheet 1 of 1



Site ID	NAS Ft Worth	Location ID	DP-140
Northing	—	Easting	—
Elevation	—	T.D.	15'
Date Started	4/18/95	Date Completed	4/18/95
Drilling Contr.	KES	Driller	B Riggs
Drill Method	Soil Probe	Rig Type	Geoprobe
Sample Type	1" Drive Pt	Geo/Eng.	M Johnson
Hammer Wt.	—	Backfilled Date	4/18/95

Weather Conditions: Sunny Breeze from W.

Names of Persons Present: M Johnson, B Riggs, J Brim

Depth in Feet	Sampled Interval	Sample Number	Percent Recovery	HNU or OVM Reading	~~Blows Per 6"~~ Time	Sampling Method	Water Content	USCS Code	Color	Graphic Log	Interval	Description
0												
5	X 4-5	FW-1 DP140A	903801	0ppm	8:30	DP	SI moist		7.5YR 4/4			Clayey Sand F-M, w/ F. Subrounded gravel.
		FW-2 DP140AFD	903802									
10	X 10.5-11'	FW-1 DP140B	903803	0ppm	8:43	DP	V. moist		7.5YR 7/6			Sand F-M, poorly graded.
15	X 14.5-15	FW-1 DP140C	903804		9:13	DP	wet		7.5YR 6/6			Sand F-C, well graded
20												15' TD
25												H_2O @ 11.7' Caving @ 11.7'
30												

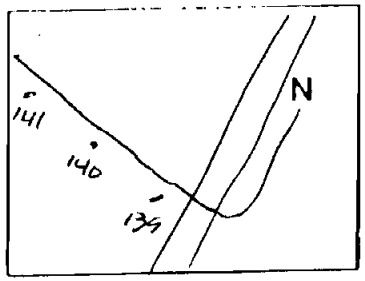
Hnu readings > 1/2 ppm below grade

Lithologic Borehole Log

BTEX

Project #10K70100

Sheet 1 of 1



Site ID	NAS Ft. Worth	Location ID	DP-141
Northing	–	Easting	–
Elevation	–	T.D.	12'
Date Started	4/18/95	Date Completed	4/18/95
Drilling Contr.	KEI	Driller	B. Riggs
Drill Method	Soil Probe	Rig Type	Geoprobe
Sample Type	1" Drive Pt.	Geo/Eng.	M Johnson
Hammer Wt.	–	Backfilled Date	4/18/95

Weather Conditions
Sunny Windy

Names of Persons Present
M Johnson
B. Riggs
J. Brim.

Depth in Feet	Sampled Interval	Sample Number	Percent Recovery	HNU or OVM Reading	Time ~~Blows per 6"~~	Sampling Method	Water Content	USCS Code	Color	Graphic Log	Interval	Description
0												
5	X 5'-6'	FW-A DP141A	9038005 90%	0ppm	9:13	DP	moist / v. moist			7.5YR 4/4		Clayey Sand w/ F. Subrounded gravel
							moist					F. Sand. poorly graded
10	X 11'-12'	FW-A DP141B	9038006 60%	0ppm	9:26	DP	wet			7.5YR 4/6		Sand F-M. poorly graded
15												12'.
20												
25												
30												

mp\wfc\ewell\lithlog rym3 02-Nov-94

Hnu readings ppm > 1 ppm backgrd

Lithologic Borehole Log

Project #10K70100

BTEX / PAH

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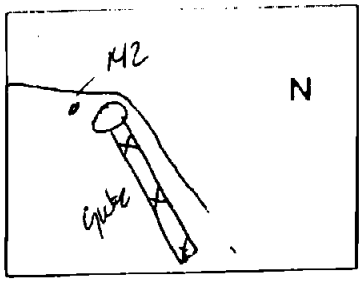


Site ID	NAS Ft. Worth	Location ID	DP-142
Northing	–	Easting	–
Elevation	–	T.D.	12"
Date Started	4/18/95	Date Completed	4/18/95
Drilling Contr.	KEI	Driller	B. Riggs
Drill Method	Soil Probe	Rig Type	Geoprobe
Sample Type	1" Drive Pt.	Geo/Eng.	M Johnson
Hammer Wt.	–	Backfilled Date	4/18/95

Weather Conditions: Sunny Windy

Names of Persons Present: MRJ, BR, J Brim

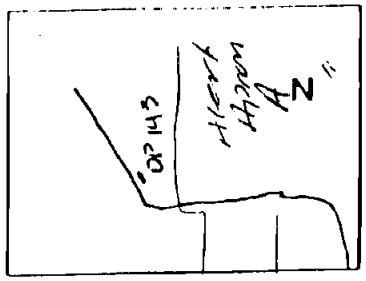
Depth in Feet	Sampled Interval	Sample Number	Percent Recovery	HNU or OVM Reading	Time ~~Blows Per 6"~~	Sampling Method	Water Content	USCS Code	Color	Graphic Log	Interval	Description
0												Asphalt
5	5'-6'	FW-A903807 DP142A	80%	0ppm	9:59	DP	SI moist		7.5YR 5/6			Clayey Sand F-C w/ F subrounded gravel
10	11.5-12	FW-A903808 DP142B	30%	0ppm	10:12	DP	wet		7.5YR 6/6			Sand F-M, poorly graded.
15												TD=12"
20												
25												
30												

Lithologic Borehole Log

Project # 10K70100

BTEX / PAH

Sheet 1 of 1



Site ID	NAS Ft. Worth	Location ID	DP-143
Northing	—	Easting	—
Elevation	—	T.D.	12'
Date Started	4/18/95	Date Completed	4/18/95
Drilling Contr.	KET	Driller	B. Riggs
Drill Method	Soil Probe	Rig Type	Geoprobe
Sample Type	1" Drive Pt.	Geo/Eng.	M. Johnson
Hammer Wt.	—	Backfilled Date	4/18/95

Weather Conditions: Sunny Windy

Names of Persons Present: M. Johnson, B. Riggs, J. Brion

Depth in Feet	Sampled Interval	Sample Number	Percent Recovery	HNU or OVM Reading	Time ~~Blows Per 6"~~	Sampling Method	Water Content	USCS Code	Color	Graphic Log	Interval	Description
0												
5	5'-6'	FW-A 903900 DP143A	90%	0ppm	10:41	DP	moist		~~10YR 4/2~~ 10YR 4/6			Clayey Sand F-C w/ F. Subrounded Gravel, slightly plastic
10	11'-12'	FWA 903901 DP143B	60%	0ppm	10:54	DP	wet		10YR 6/6			Sand F-M, poorly Sorted
15												TD 12'
20												
25												
30												

Hnu readings ppm > 0ppm Discharge.

Lithologic Borehole Log
Project # 10K70100

BH

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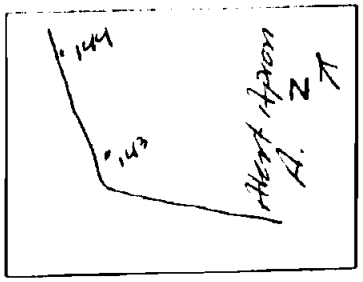


Site ID	NAS Ft. Worth	Location ID	DP-144
Northing	–	Easting	–
Elevation	–	T.D.	12'
Date Started	4/18/95	Date Completed	4/18/95
Drilling Contr.	KEE	Driller	B. Riggs
Drill Method	Soil Probe	Rig Type	Geoprobe
Sample Type	1" Drive Pt.	Geo/Eng.	M Johnson
Hammer Wt.	–	Backfilled Date	4/18/95

Weather Conditions: Sunny Windy

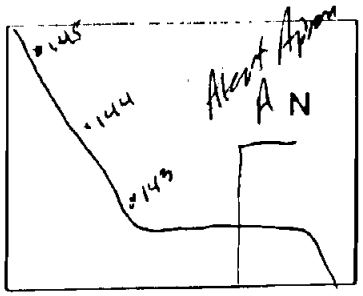
Names of Persons Present: MRJ, BR, JBrom

Depth in Feet	Sampled Interval	Sample Number	Percent Recovery	HNU or OVM Reading	Time Blows Per 6"	Sampling Method	Water Content	USCS Code	Color	Graphic Log	Interval	Description
0												8" Asphalt
5	5-6'	FW-A DP144A	903902 60%	0ppm	11:14	DP	moist		5YR 4/6			Clayey Sand F-c, w/ F. sub r gravel, slightly plastic
10	10-10'	FW-A DP144B	903903 20%	0ppm	1125	DP	wet		10YR 6/6			Sand F-m poorly graded
15												12' TD
20												
25												
30												

Lithologic Borehole Log
Project #10K70100

BTEX & PAH

Sheet 1 of 1



Site ID	NAS Ft. Worth	Location ID	DP-145
Northing	—	Easting	—
Elevation	—	T.D.	12'
Date Started	4/18/95	Date Completed	4/18/95
Drilling Contr.	KEI	Driller	B. Riggs
Drill Method	Soil Probe	Rig Type	Geoprobe
Sample Type	1" Drive Pt.	Geo/Eng.	M Johnson
Hammer Wt.	—	Backfilled Date	4/18/95

Weather Conditions
Sunny Windy

Names of Persons Present
M Johnson
B. Riggs
~~Amy~~ J. Brim

Depth in Feet	Sampled Interval	Sample Number	Percent Recovery	HNU or OVM Reading	~~Blows Per 6"~~ Time	Sampling Method	Water Content	USCS Code	Color	Graphic Log	Interval	Description
0												Asphalt
5	5'-6'	FW-A 903904 DP145A	50%	0ppm	11:52	DP	moist		10yr 4/2			Clayey Sand F-m, plastic w/ white stringers.
10	11-12	FW-A 903905 DP145B DP145B FD FW-A 903906	50% FD	0ppm	12:02	DP	wet		10yr 6/6			Sand F-m poorly graded.
15												TD 12'.
20												
25												
30												

Lithologic Borehole Log
Project #10K70100

BTEX & PAH

Sheet 1 of 1

Alert Hangar A west vault

Site ID	NAS Ft. Worth	Location ID	DP-146
Northing	—	Easting	—
Elevation	—	T.D.	11'
Date Started	4/18/95	Date Completed	4/18/95
Drilling Contr.	KEI	Driller	B Riggs
Drill Method	Soil Probe	Rig Type	Geoprobe
Sample Type	1" Drive Pt	Geo/Eng.	M Johnson
Hammer Wt.	-	Backfilled Date	4/18/95

Weather Conditions

Names of Persons Present: M Johnson, B Riggs, J Brim

Depth in Feet	Sampled Interval	Sample Number	Percent Recovery	HNU or OVM Reading	Time Blows Per 6"	Sampling Method	Water Content	USCS Code	Color	Graphic Log	Interval	Description
0												
5	5-6	FW-A 903407 DP146A FW-A 101201	60%	100ppm	14:14	DP	moist		10YR 4/3 staining			Clayey Sand, Plastic, F-C
10	10-11	FW-A 903408 DP146B	60%	210ppm	14:22	DP	moist to wet		10YR 5/3			Sand F-m poorly graded
15												TD 11'
20												
25												
30												

High reading ppm > 0.5 ppm background

Lithologic Borehole Log

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BTEX & PAH

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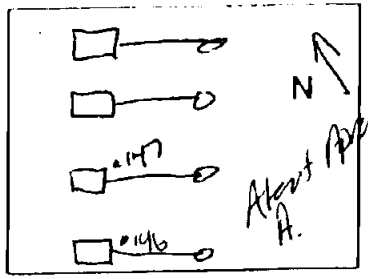

Site ID	NAS Ft. Worth	Location ID	DP-147
Northing	–	Easting	–
Elevation	–	T.D.	11'
Date Started	4/18/95	Date Completed	4/18/95
Drilling Contr.	KEF	Driller	B. Riggs
Drill Method	Soil Probe	Rig Type	Geoprobe
Sample Type	1" Drive Pt.	Geo/Eng.	M. Johnson
Hammer Wt.	–	Backfilled Date	4/18/95

Weather Conditions

Names of Persons Present: M. Johnson, B. Riggs, J. Brim

Depth in Feet	Sampled Interval	Sample Number	Percent Recovery	HNU or OVM Reading	Time Began Per or	Sampling Method	Water Content	USCS Code	Color	Graphic Log	Interval	Description
0												Asphalt
5	X 5'-6'	FW-A-903-MD DP147A	903/004 50%	0ppm	14:45	DP	V moist		N 5YR 4/6			Clayey Sand F-C, clay ~15%
10	X 10'-11'	FW-A-904-MD DP147B	904/001 90%	0ppm	14:50	DP	wet		7.5YR 5/6			Sand F-M, poorly graded
15												TD 11'
20												
25												
30												

Hnu readings ppm > 1/2 ppm bckgrd.

Lithologic Borehole Log BTEX & PAH
Project # 10K70100

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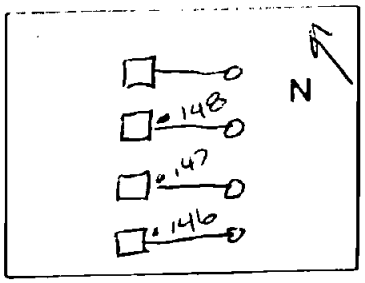

Site ID	NAS Fallon	Location ID	DP-148
Northing	–	Easting	–
Elevation	–	T.D.	11'
Date Started	4/18/95	Date Completed	4/18/95
Drilling Contr.	KET	Driller	B. Riggs
Drill Method	Soil Probe	Rig Type	Geoprobe
Sample Type	1" Drive Pt.	Geo/Eng.	M Johnson
Hammer Wt.	–	Backfilled Date	4/18/95

Weather Conditions

Names of Persons Present: M Johnson, B. Riggs, J Brim

Depth in Feet	Sampled Interval	Sample Number	Percent Recovery	HNU or OVM Reading	Time Blows Per 6"	Sampling Method	Water Content	USCS Code	Color	Graphic Log	Interval	Description
0												Asphalt
5	5-6	FW-A904002 DP148A	50%	190ppm	15.24	DP	✓ Moist		7.5YR 5/2			Sand F-C well graded.
10	10-11	FW-A904003 DP148B	50%	300ppm	15.39	DP	wet		7.5YR 5/2			Sand F-m poorly graded
		FW-A901202 - LAB										11'
15												
20												
25												
30												

Hgh Reading PPMS 1/2 PPM

Lithologic Borehole Log
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BTEX & PAH

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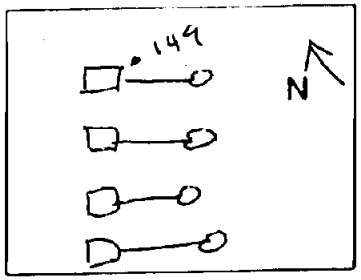

Site ID	NAS Ft Worth	Location ID	DP-149
Northing	–	Easting	–
Elevation	–	T.D.	11'
Date Started	4/18/95	Date Completed	4/18/95
Drilling Contr.	KEF	Driller	B. Riggs
Drill Method	Soil Probe	Rig Type	Geoprobe
Sample Type	1" Drive Pt.	Geo/Eng.	M Johnson
Hammer Wt.	–	Backfilled Date	4/18/95

Weather Conditions: Sunny. Breezy.

Names of Persons Present: M Johnson, B Riggs, J Brim.

Depth in Feet	Sampled Interval	Sample Number	Percent Recovery	HNU or OVM Reading	~~Blows Per 6"~~ Time	Sampling Method	Water Content	USCS Code	Color	Graphic Log	Interval	Description
0												Asphalt
5	5-6	FW-A904004 DP149A	60%	250 ppm	16:03	DP	V. moist		7.5YR 4/1			Sand F-C well graded
10	10-11	FW-A904005 DP149B FW-A101203	65%	50 ppm LAB	16:16	DP	wet		7.5YR 4/1			Sand F-C well graded
15												TD 11'
20												
25												
30												

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Hnu readings ppm > 0ppm background.

Lithologic Borehole Log
Project #10K70100

BTEX & PAH

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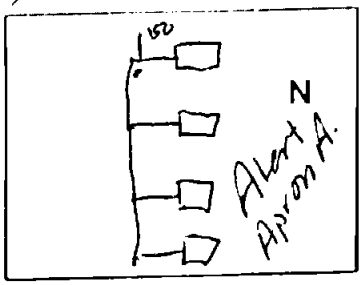

Site ID	NAS Ft. Worth	Location ID	DP-150
Northing	—	Easting	—
Elevation	—	T.D.	11'
Date Started	4/19/95	Date Completed	4/19/95
Drilling Contr.	KEE	Driller	B Riggs
Drill Method	Soil Probe	Rig Type	Geoprobe
Sample Type	1" Drive Pt.	Geo/Eng.	M Johnson
Hammer Wt.	—	Backfilled Date	4/19/95

Weather Conditions

Names of Persons Present
M Johnson
B. Riggs
J. Brim

Depth in Feet	Sampled Interval	Sample Number	Percent Recovery	HNU or OVM Reading	Time Blows Per 6"	Sampling Method	Water Content	USCS Code	Color	Graphic Log	Interval	Description
0												
5	5-6	FW-A704006 DP150A	50%	310 ppm	8:18	DP	wet		7.5YR 5/2			Sand F-C, well graded
10	10.5-11	FW-A704007 DP150B	90%	200ppm	8:35	DP	wet		7.5YR 5/2			Sand F-C well graded interbedded w/ clay
15												11'
20												
25												
30												

Lithologic Borehole Log
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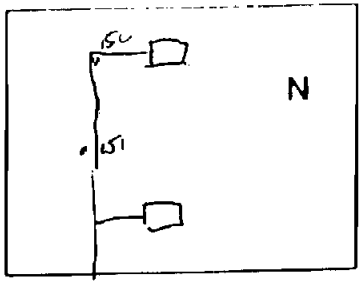
BTEX

Sheet 1 of 1



Site ID	NAS Ft. Worth	Location ID	DP-151
Northing	—	Easting	—
Elevation	—	T.D.	10'
Date Started	4/19/95	Date Completed	4/19/95
Drilling Contr.	KGS	Driller	B. Riggs
Drill Method	Soil Probe	Rig Type	GeoProbe
Sample Type	Drive Pt.	Geo/Eng.	MRJ
Hammer Wt.	—	Backfilled Date	4/19/95

Weather Conditions: Cloudy

Names of Persons Present: MRJ, BR, J Brim

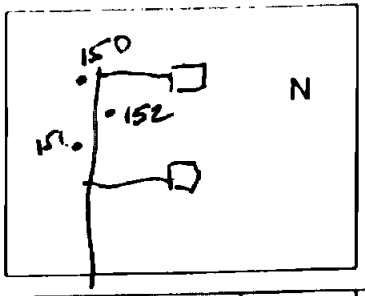
Depth in Feet	Sampled Interval	Sample Number	Percent Recovery	HNU or OVM Reading	Time Blows Per 6"	Sampling Method	Water Content	USCS Code	Color	Graphic Log	Interval	Description
0												
5	5'-6'	FW-A9904008 DP151A	~~Sand~~ 100%	MJ 220 ppm	8:43	DP	moist		7.5YR 4/2			Sandy clay F-C plastic
10	9'-10'	FW-A9904009 DP151B	25%	150 ppm	8:51	DP	wet		7.5YR 2.5/1			Sand F-C well graded
15												TD = 10'
20												
25												
30												

Hnu 1/2 ppm background

Lithologic Borehole Log
Project #10K70100

BTEX

Sheet 1 of 1



Site ID	NAS Ft Worth	Location ID	DP-152
Northing	–	Easting	–
Elevation	–	T.D.	10'
Date Started	4/20/95	Date Completed	4/20/95
Drilling Cont.	IKEI	Driller	B Riggs
Drill Method	Soil Probe	Rig Type	Geoprobe
Sample Type	1" Drive Pt.	Geo/Eng.	M Johnson
Hammer Wt.	–	Backfilled Date	4/20/95

Weather Conditions

Names of Persons Present: M Johnson, B Riggs, J Brim

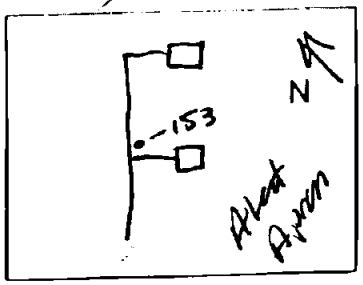
Depth in Feet	Sampled Interval	Sample Number	Percent Recovery	HNU or OVM Reading	Time Blows Per 6"	Sampling Method	Water Content	USCS Code	Color	Graphic Log	Interval	Description
0												
5	5-6	FW-2904101 DP152A	100%	0ppm	8:37	DP	moist		10YR 6/4			Sand F-m poorly graded
10	9-10	FW-2904102 DP152B	50%	30ppm	8:44	DP	moist		10YR 5/3			Clayey Sand F-m
												9.9' - Sand F-m wet
15												TD=10'
20												
25												
30												

Hnu background a 5 ppm

Lithologic Borehole Log
Project #10K70100

BTEX / PAH

Sheet 1 of 1



Site ID	NAS Ft Worth	Location ID	DP-153
Northing	—	Easting	—
Elevation	—	T.D.	11'
Date Started	4/20/95	Date Completed	4/20/95
Drilling Contr.	KEE	Driller	B. Riggs
Drill Method	Soil Probe	Rig Type	Geoprobe
Sample Type	1" Drive Pt.	Geo/Eng.	M Johnson
Hammer Wt.	—	Backfilled Date	4/20/95

Weather Conditions: Cldy

Names of Persons Present: M Johnson, B Riggs, J Brim

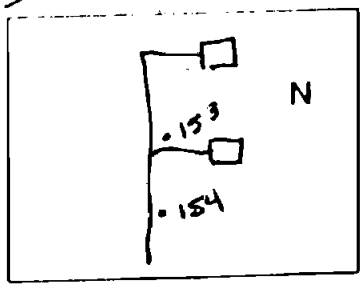
Depth in Feet	Sampled Interval	Sample Number	Percent Recovery	HNU or OVM Reading	Time ~~Blows Per 6"~~	Sampling Method	Water Content	USCS Code	Color	Graphic Log	Interval	Description
0												
5	5-6	FW-A 904103 DP153A 60% FW-A 904104		3ppm	9:09	OP	moist		7.5YR 4/1			Sand F-C, well graded
10	10-11	FW-A 904105 DP153B 50%		150ppm	9:21				7.5YR 2.5/1			SAND c. poorly graded 10-10.5 free product
									7.5YR 5/4			SAND F-M " "
15												TD 11'
20												
25												
30												

Lithologic Borehole Log
Project #10K70100

BTEX

Hnu reading ppm? 1/2ppm bckgrd.

Sheet 1 of 1



Site ID	NAS Ft. Worth	Location ID	DP-154
Northing	—	Easting	—
Elevation	—	T.D.	11'
Date Started	4/20/95	Date Completed	4/20/95
Drilling Contr.	KEF	Driller	B. Riggs
Drill Method	Soil Probe	Rig Type	Geoprobe
Sample Type	1" Drive Pt.	Geo/Eng.	M. Johnson
Hammer Wt.	—	Backfilled Date	4/20/95

Weather Conditions: Prty Cloudy, Cool

Names of Persons Present: M. Johnson, B. Riggs, J. Brim

Depth in Feet	Sampled Interval	Sample Number	Percent Recovery	HNU or OVM Reading	Blows Per 6"	Sampling Method	Water Content	USCS Code	Color	Graphic Log	Interval	Description
0												
5	5-6	FW-A904106 DP154A	50%	0ppm	9:34	DP	moist		7.5YR 5/4			Sand F-C, well graded
10	9.5-10 10-11	FW-A904107		150ppm	9:47	DP	wet		7.5YR 5/4		9.5-10.5	black - product
												Sand F-M, poorly graded
15												TD 11'
20												
25												
30												

Lithologic Borehole Log
Project #10K70100

BTEX

Sheet 1 of 1

Site ID	NAS Ft. Worth	Location ID	DP-155
Northing	–	Easting	–
Elevation	–	T.D.	11'
Date Started	4/20/95	Date Completed	4/20/95
Drilling Contr.	KEI	Driller	B. Riggs
Drill Method	Soil Probe	Rig Type	Geoprobe
Sample Type	1" Drive Pt.	Geo/Eng.	M. Johnson
Hammer Wt.	–	Backfilled Date	4/20/95

Weather Conditions

Names of Persons Present: M Johnson, B. Riggs, J. Brm.

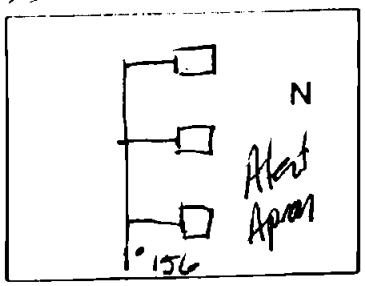
Depth in Feet	Sampled Interval	Sample Number	Percent Recovery	HNU or OVM Reading	Time ~~Blows Per 6"~~	Sampling Method	Water Content	USCS Code	Color	Graphic Log	Interval	Description
0												
5	5-6	FW-A904108. DP155A FW-A904109 DP155AFD	70%	0ppm	10:05	DP	moist		7.5YR 5/6			Sand F-C well graded
10	10-11	FW-A904201 DP155B	75%	0ppm	10:20	DP	wet		7.5YR 6/8			Sand F-C well graded.
15												TD=11'
20												
25												
30												

Lithologic Borehole Log
Project #10K70100

BTEX

Sheet 1 of 1

HNU background 0.2 ppm



Site ID	NAS Ft Worth	Location ID	DP-156
Northing	—	Easting	—
Elevation	~~4/20/95~~	T.D.	10'
Date Started	4/20/95	Date Completed	4/20/95
Drilling Contr.	KEI	Driller	B. Riggs.
Drill Method	Soil Probe	Rig Type	Geoprobe
Sample Type	1" Drive Pt.	Geo/Eng.	M Johnson
Hammer Wt.	—	Backfilled Date	4/20/95

Weather Conditions

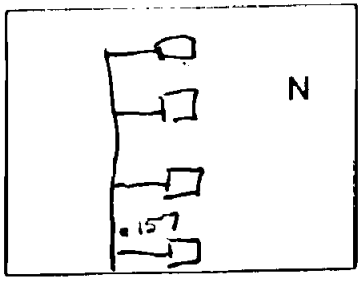
Names of Persons Present
M Johnson
B. Riggs
J. Brim

Depth in Feet	Sampled Interval	Sample Number	Percent Recovery	HNU or OVM Reading	Blows Per 6"	Sampling Method	Water Content	USCS Code	Color	Graphic Log	Interval	Description
0												
5	5-6	FW-A904202. DPS6A	100%	0ppm	10:40	DP	moist		7.5YR 5/4			Clayey Sand F-C, w/ F subrounded gravel.
10	9.5-10	FW-A904203 DPS6B	50%	0ppm	10:50	DP	wet		7.5YR 5/6			Sand F-C, well gr.
												TD = 10'
15												
20												
25												
30												

Hnu background 0ppm

Lithologic Borehole Log BTEX
Project #10K70100

Sheet 1 of 1



Site ID	NAS Ft. Worth	Location ID	DP-157
Northing	–	Easting	–
Elevation	–	T.D.	10'
Date Started	4/20/95	Date Completed	4/20/95
Drilling Contr.	KET	Driller	B. Riggs
Drill Method	Soil Probe	Rig Type	Geoprobe
Sample Type	1" Drive Pt.	Geo/Eng.	M. Johnson
Hammer Wt.	–	Backfilled Date	4/20/95

Weather Conditions: Partly Cldy, Breezy

Names of Persons Present: MRJ, BB, J. Brim

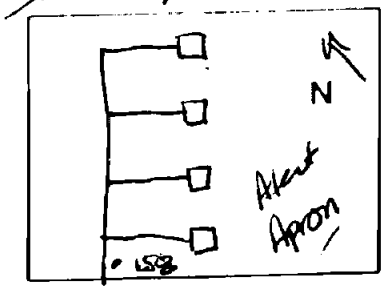
Depth in Feet	Sampled Interval	Sample Number	Percent Recovery	HNU or OVM Reading	Time ~~Blows Per 6"~~	Sampling Method	Water Content	USCS Code	Color	Graphic Log	Interval	Description
0												
5	5-6	FW-A904204 DP157A		0ppm	11:11	DP	moist		7.5YR 4/2			Clayey Sand w F. sub gravel
10	9-10	FW-A904205 DP157B		0ppm	11:20	DP	moist		7.5YR 4/2			SAME
15												TD 10'
20												
25												
30												

Lithologic Borehole Log
Project #10K70100

BTEX

Sheet 1 of 1

Hnu background 0.2 ppm



Site ID	NAS Ft Worth	Location ID	DP-158
Northing	—	Easting	—
Elevation	—	T.D.	11'
Date Started	4/20/95	Date Completed	4/20/95
Drilling Contr.	KEI	Driller	B Riggs
Drill Method	Soil Probe	Rig Type	Geoprobe
Sample Type	1" Drive Point	Geo/Eng.	M. Johnson
Hammer Wt.	—	Backfilled Date	4/20/95

Weather Conditions: Partly Cloudy, Warm

Names of Persons Present: MRJ, BR, J. Brim

Depth in Feet	Sampled Interval	Sample Number	Percent Recovery	HNU or OVM Reading	Time ~~Blows Per 6"~~	Sampling Method	Water Content	USCS Code	Color	Graphic Log	Interval	Description
0												
5	5-6	FW-A904206. DP158A	100%	0ppm	11:43	DP	moist			7.5YR 3/1		Clayey Sand / Sandy Clay Plastic.
10	10-11	FW-A904207 DP158B FW-A904208 DP158BFD	90%	1ppm	11:53	DP	wet		7.5YR 5/3			Fine Sand, poorly graded
												11'
15												
20												
25												
30												

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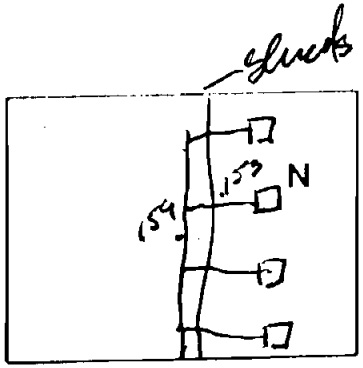
Lithologic Borehole Log
Project #10K70100

BTEX

Sheet 1 of 1



Site ID	NAS Ft. Worth	Location ID	DP-159
Northing	–	Easting	–
Elevation	–	T.D.	11'
Date Started	4/20/95	Date Completed	4/20/95
Drilling Contr.	KEI	Driller	B. Riggs
Drill Method	Soil Probe	Rig Type	Geoprobe
Sample Type	1" Drive Pt.	Geo/Eng.	M. Johnson
Hammer Wt.	–	Backfilled Date	4/20/95

Weather Conditions

Names of Persons Present
M Johnson
B. Riggs
J. Brim

Depth in Feet	Sampled Interval	Sample Number	Percent Recovery	HNU or OVM Reading	Time Blows Per 6"	Sampling Method	Water Content	USCS Code	Color	Graphic Log	Interval	Description
0												
			904209									Clayey Sand, slightly plastic
			~~904302~~									
5		FW-A~~904204~~					V. moist		7.5YR 4/3			
	5-6	DP159A	70%	0.2ppm	14:34	DP					5.8'	
												Sand F.C well graded
		FW-A904302										
11	10-11	DP159B	60%	110ppm	14:45	DP	wet		SAME			SAME.
												TD=11'
15												
20												
25												
30												

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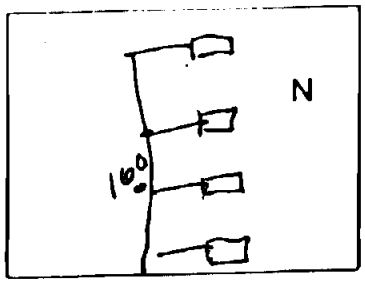
Lithologic Borehole Log
Project #10K70100

BTEX/PAH

Sheet 1 of 1

Hose belched 0.2 ppm



Site ID	NAS Ft Worth	Location ID	DP-160
Northing	—	Easting	—
Elevation	—	T.D.	11'
Date Started	4/20/95	Date Completed	4/20/95
Drilling Contr.	KEI	Driller	B. Riggs
Drill Method	Soil Probe	Rig Type	Geoprobe
Sample Type	1" Drive Pt.	Geo/Eng.	M. Johnson
Hammer Wt.	—	Backfilled Date	4/20/95

Weather Conditions: Clr

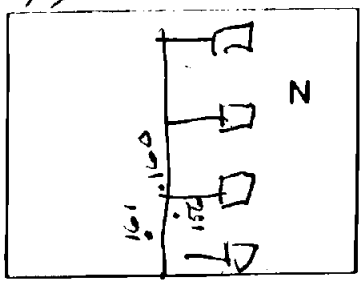
Names of Persons Present: M. Johnson, B. Riggs, J. Brim

Depth in Feet	Sampled Interval	Sample Number	Percent Recovery	HNU or OVM Reading	Time Blows Per 6"	Sampling Method	Water Content	USCS Code	Color	Graphic Log	Interval	Description
0												
5												No Recovery on 4-6' Sample
10	X 10'-11'	FW-A904302 DP160A	50%	0ppm	15:24	DP	wet		10YR 6/8			Sand F-C well graded
15												
20												
25												
30												

Lithologic Borehole Log BTEX & PAH
Project #10K70100

Hyd bckgrd 0.2ppm

Sheet 1 of 1



Site ID	NAS Ft. Worth	Location ID	DP-161
Northing	—	Easting	—
Elevation	—	T.D.	11'
Date Started	4/20/95	Date Completed	4/20/95
Drilling Contr.	KEI	Driller	B. Riggs
Drill Method	Soil Probe	Rig Type	Geoprobe
Sample Type	1" Drive Pt	Geo/Eng.	M. Johnson
Hammer Wt.	—	Backfilled Date	4/20/95

Weather Conditions: CLR warm

Names of Persons Present: MRJ, BR, J. Brim

Depth in Feet	Sampled Interval	Sample Number	Percent Recovery	HNU or OVM Reading	Time ~~Blows Per 6"~~	Sampling Method	Water Content	USCS Code	Color	Graphic Log	Interval	Description
0												
5	5-6'	FW-A904303 DP161A	80%	0ppm	15:42	DP	moist		7.5YR 5/4			Clayey Sand, plastic
											5.7'	Sand F-m, poorly sorted
10	10-11'	FW-A904304 DP161B		0ppm	16:56	DP	moist		7.5YR 5/4			Clayey Sand Slightly plastic
15												TD=11'
20												
25												
30												

Hrs bckgrd 0ppm

Lithologic Borehole Log
Project #10K70100

BTEX/PAH

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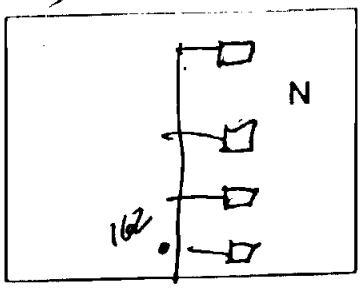

Site ID	NAS Ft Worth	Location ID	DP-162
Northing	—	Easting	
Elevation	—	T.D.	11'
Date Started	4/20/95	Date Completed	4/20/95
Drilling Contr.	KEI	Driller	B. Riggs
Drill Method	Soil Probe	Rig Type	Geoprobe
Sample Type	1" Drive Pt.	Geo/Eng.	M. Johnson
Hammer Wt.	—	Backfilled Date	4/20/95

Weather Conditions: Sunny warm

Names of Persons Present: MRJ, BR, J. Brim

Depth in Feet	Sampled Interval	Sample Number	Percent Recovery	HNU or OVM Reading	Time Begin/For 6"	Sampling Method	Water Content	USCS Code	Color	Graphic Log	Interval	Description
0												
5	5-6	FW-A904305 DP162A	10%	0ppm	1621	DP	moist		n.5YR 6/4			Sand F-C poorly graded
												Clayey Sand F-m SI Plastic, 9.3'
10	10-11	FW-A904306 DP162B 90% FW-A904307 DP162BFD		0ppm	1637	DP	wet		n.5YR 6/6			Sand F poorly graded
15												TD 11'
20												
25												
30												

Lithologic Borehole Log BTEX/PAH
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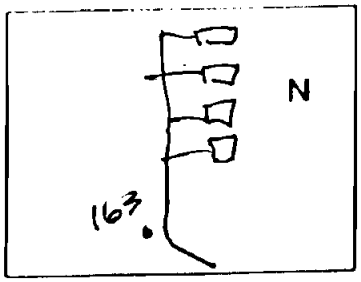
Sheet 1 of 1



Site ID	NAS Ft. Worth	Location ID	DP-163
Northing	—	Easting	
Elevation	—	T.D.	11"
Date Started	4/20/95	Date Completed	4/20/95
Drilling Contr.	KEI	Driller	B. Riggs
Drill Method	Soil Probe	Rig Type	Geoprobe
Sample Type	Drive Pt.	Geo/Eng.	M. Johnson
Hammer Wt.	—	Backfilled Date	4/20/95

Weather Conditions: Sunny Warm

Names of Persons Present: M Johnson, B. Riggs, J. Bam.

Depth in Feet	Sampled Interval	Sample Number	Percent Recovery	HNU or OVM Reading	Time Blows Per 6"	Sampling Method	Water Content	USCS Code	Color	Graphic Log	Interval	Description
0												
5	5-6	FW-A904308 DP163A	80%	0ppm	17:00	DP	moist		7.5YR 3/1			Clayey Sand F-m, Plastic
10	10-11	FW-A904309 DP163B	50%	4ppm	17:13	DP	moist		7.5YR 5/1			Silty Sand F.
15												TD 11"
20												
25												
30												

Hnu backgrd = 0.5 ppm

Lithologic Borehole Log
Project #10K70100 BTEX/PAH

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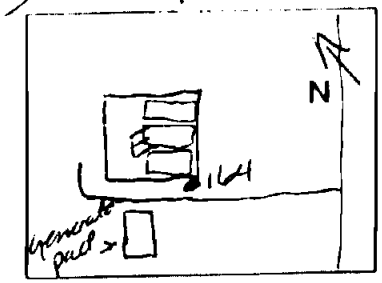

Site ID	NAS Ft Worth	Location ID	DP-164
Northing	–	Easting	–
Elevation	–	T.D.	11'
Date Started	4/21/95	Date Completed	4/21/95
Drilling Contr.	KEI	Driller	B. Ragsdale
Drill Method	Soil Probe	Rig Type	Geoprobe
Sample Type	1" Drive Pt.	Geo/Eng.	M. Johnson
Hammer Wt.	–	Backfilled Date	4/21/95

Weather Conditions: Sunny W. Breeze

Names of Persons Present: MRJ, BR, Rog, J. Brim

Depth in Feet	Sampled Interval	Sample Number	Percent Recovery	HNU or OVM Reading	Time Blows Per 6"	Sampling Method	Water Content	USCS Code	Color	Graphic Log	Interval	Description
0												
5	5-6'	FW-A904401 DP164A	50%	0ppm	8:42	DP	V. moist		7.5YR 6/6			Sand M-C poorly graded
10	10-11	FW-A904402 DP164B DP164B FD FW-A904403	75%	0ppm	8:55	DP	wet		7.5YR 6/4			Sand F-M poorly graded
15												TD=11'
20												
25												
30												

Lithologic Borehole Log
Project #10K70100

BTEX

Hnu background 0.5 ppm

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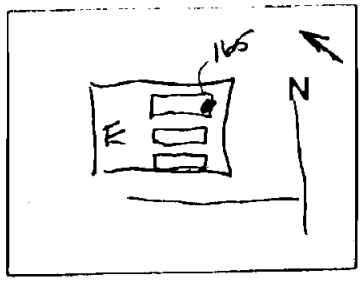

Site ID	NAS Ft. Worth	Location ID	DP-165
Northing	—	Easting	—
Elevation	—	T.D.	11'
Date Started	4/21/95	Date Completed	4/21/95
Drilling Contr.	KEI	Driller	B. Riggs
Drill Method	Soil Probe	Rig Type	Geoprobe
Sample Type	1" Drive Pt.	Geo/Eng.	M. Johnson
Hammer Wt.	—	Backfilled Date	4/21/95

Weather Conditions
Sunny W. Breeze

Names of Persons Present
MRJ
BR
J. Brim

Depth in Feet	Sampled Interval	Sample Number	Percent Recovery	HNU or OVM Reading	Time Blows Per 0"	Sampling Method	Water Content	USCS Code	Color	Graphic Log	Interval	Description
0												
5	5'-6'	FW-A904404. DP165A	50%	0ppm	9:18	DP	moist		10YR 7/2			Clayey Sand F-M, Slightly plastic - Fill very soft.
10	10'-11'	FW-A904405 DP165B	75%	15ppm	9:22	DP	wet					Fill Sand F-M poorly graded mixed w/clay
											10.7'	Sand F-C well graded Natural
15												Discolored from 10.6' - 10.8'
												Above 10.6' Hnu reading ~~to~~ mg = 0ppm
20												TD = 11'
25												
30												

Hole backgrd 0.5 ppm

Lithologic Borehole Log
Project #10K70100

BTEX/PAH

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Site ID	NAS Ft. Worth	Location ID	DP-166
Northing	—	Easting	—
Elevation	—	T.D.	11'
Date Started	4/21/95	Date Completed	4/21/95
Drilling Contr.	KFE	Driller	B Riggs
Drill Method	Soil Probe	Rig Type	Geoprobe
Sample Type	1" Drive Pt.	Geo/Eng.	M. Johnson
Hammer Wt.	—	Backfilled Date	4/21/95

Weather Conditions: Sunny W. Breeze

Names of Persons Present: MRJ, BR, J. Brim

Depth in Feet	Sampled Interval	Sample Number	Percent Recovery	HNU or OVM Reading	~~Time Blows Per 6"~~	Sampling Method	Water Content	USCS Code	Color	Graphic Log	Interval	Description
0												
5	5-6'	FW-A904402 DP166A	25%	0ppm	9.41	DP	✓ moist		10YR 7/2			Clayey Sand F-m slightly plastic, v. soft - fill
10	10-11	FW-A904407 DP166B FW-A901302 DP166B	90%	0ppm	9.53		wet					Same
15												TD=11'
20												
25												
30												

Hnu background 0.5 ppm

Lithologic Borehole Log
Project #10K70100

BTEX

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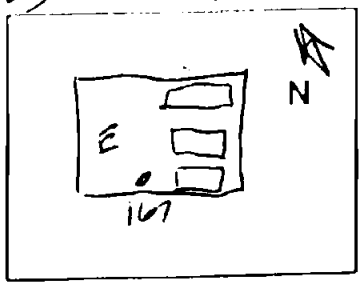


Site ID	NAS Ft. Worth	Location ID	DP-167
Northing	—	Easting	—
Elevation	—	T.D.	11'
Date Started	4/21/95	Date Completed	4/21/95
Drilling Contr.	KEC	Driller	B. Riggs
Drill Method	Soil Probe	Rig Type	Geoprobe
Sample Type	1" Drive Pt.	Geo/Eng.	M. Johnson
Hammer Wt.	—	Backfilled Date	4/21/95

Weather Conditions
Sunny W. Breeze

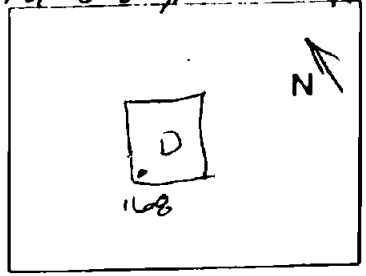
Names of Persons Present
M. Johnson
B. Riggs
J. Brim

Depth in Feet	Sampled Interval	Sample Number	Percent Recovery	HNU or OVM Reading	Time / Blows Per 6"	Sampling Method	Water Content	USCS Code	Color	Graphic Log	Interval	Description
0												
5	X 5-6	FW-AC904408 DP167A	50%	0ppm	10:06	DP	V moist		10YR 7/2			Clumpy Sand F-m, slightly plastic, v. soft - fill.
10	X 10-11	FW-AC904409 DP167B	50%	0ppm	10:15							SAME
												TD=11'
15												
20												
25												
30												

Lithologic Borehole Log BTEX/PAH
Project #10K70100

Sheet 1 of 1

HNU Background 0.5ppm



Site ID	NAS Ft Worth	Location ID	DP-168
Northing	–	Easting	–
Elevation	–	T.D.	19.5
Date Started	4/24/95	Date Completed	4/24/95
Drilling Contr.	KEE	Driller	B. Riggs
Drill Method	Soil Probe	Rig Type	Geoprobe
Sample Type	1" Drive Pt.	Geo/Eng.	M. Johnson
Hammer Wt.	–	Backfilled Date	4/24/95

Weather Conditions
Clear Calm
Cool

Names of Persons Present
M Johnson
B Riggs
J. Brim

Depth in Feet	Sampled Interval	Sample Number	Percent Recovery	HNU or OVM Reading	Time Blows Per 6"	Sampling Method	Water Content	USCS Code	Color	Graphic Log	Interval	Description
0												
5	5'-6'	FW-A904508 DP168A	50%	0ppm	8.43	DP	moist		7.5YR 6/6			Fill Clayey Sand w Subrounded Fine gravel
10	11-11.5'	FW-A904508 DP168B	60%	4ppm	8.58	DP	moist		7.5YR 7/3			Clayey Sand w F gravel
						DP	moist		10YR 6/4			Clay weathered Limestone
15												
20	19-19.5	FW-A904601 DP168C	25%	0ppm	9.23	DP	moist		7.5YR 6/2			Limestone
												TD 19.5
25												
30												

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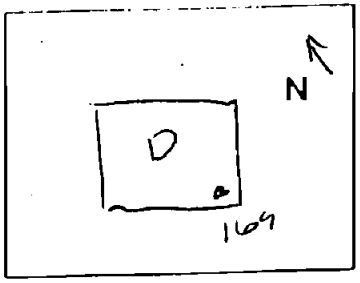
Lithologic Borehole Log BTEX
Project #10K70100

Sheet 1 of 1



Site ID	NAS Ft Worth	Location ID	DP-169
Northing	—	Easting	—
Elevation	—	T.D.	12'
Date Started	4/24/95	Date Completed	4/24/95
Drilling Contr.	KEF	Driller	B. Riggs
Drill Method	Soil Probe	Rig Type	Geoprobe
Sample Type	1" Drive Pt.	Geo/Eng.	M. Johnson
Hammer Wt.	—	Backfilled Date	4/24/95

Weather Conditions: Clear Calm Warm

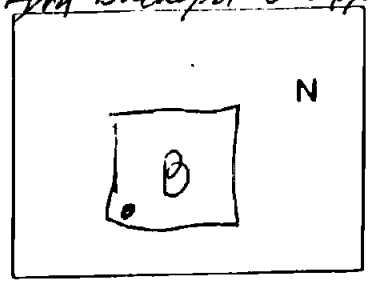
Names of Persons Present: MRV, BR, J. Bam

Depth in Feet	Sampled Interval	Sample Number	Percent Recovery	HNU or OVM Reading	Time ~~Blows Per 6"~~	Sampling Method	Water Content	USCS Code	Color	Graphic Log	Interval	Description
0												
5	5-6	FW-A904602 DP169A	25%	0ppm	9:38	DP	moist		7.5YR 4/2			Clayey Sand F-m
10	11-12	FW-A904603 DP169B	60%	5ppm	9:50	DP	moist / wet		7.5YR 5/1		11.6	Sand F-C angular to subangular
15												TD=12'
20												
25												
30												

Lithologic Borehole Log BTEX & PAH
Project #10K70100

Sheet 1 of 1

Hrg background 0.5ppm



Site ID	NAS Ft Worth	Location ID	DP-170
Northing	—	Easting	—
Elevation	—	T.D.	22'
Date Started	4/24/95	Date Completed	4/24/95
Drilling Contr.	[illegible]	Driller	B. Riggs
Drill Method	Soil Probe	Rig Type	Geoprobe
Sample Type	1" Drive Pt.	Geo/Eng.	M. Johnson
Hammer Wt.	—	Backfilled Date	4/24/95

Weather Conditions: Clear Calm

Names of Persons Present: M Johnson, B Riggs, J Brim

Depth in Feet	Sampled Interval	Sample Number	Percent Recovery	HNU or OVM Reading	Blows Per 6"	Sampling Method	Water Content	USCS Code	Color	Graphic Log	Interval	Description
0												
5	4-6	FW-A904604 DP170A1	100%	0ppm	10:31	DP	moist		7.5YR 3/1			Clayey Sand F-M
		FW-A101501 VOA										
		FW-A101502 VOA										
10	11-12	FW-A904605 DP170B	100%	0ppm	10:44	DP	moist		7.5YR 4/3			Same w/ subrounded F. gravel
		FW-A904606 DP170BFD										
15												
20	20-21.5	FW-A904607 DP170C	90%	0ppm	11:02	DP	moist		10YR 5/4			Sand F.
												TD 22'
25												
30												

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Lithologic Borehole Log BTEX
Project #10K70100

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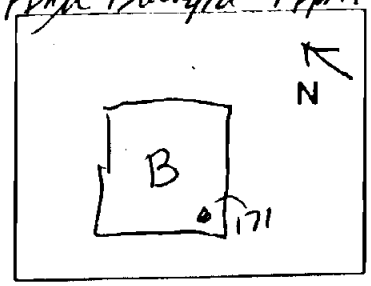
High Background 1ppm



Site ID	NAS Ft. Worth	Location ID	DP-171
Northing	–	Easting	–
Elevation	–	T.D.	22'
Date Started	4/24/95	Date Completed	4/24/95
Drilling Contr.	KEI	Driller	B Riggs
Drill Method	Soil Probe	Rig Type	Geoprobe
Sample Type	1" Drive Pt.	Geo/Eng.	M. Johnson
Hammer Wt.	–	Backfilled Date	4/24/95

Weather Conditions: Clear Calm

Names of Persons Present: MRJ, BR, J. Brm.

Depth in Feet	Sampled Interval	Sample Number	Percent Recovery	HNU or OVM Reading	Time / Blows per 6"	Sampling Method	Water Content	USCS Code	Color	Graphic Log	Interval	Description
0												
5	5-6	FW-A904608 DP171A DP171AFD FW-A904609	100%	0ppm	11:21	DP	moist		7.5YR 3/1			Clayey Sand F-M
10	11.5-12	FW-A904601 DP171B	7mi 100%	0ppm	11:33	DP	moist		7.5YR 4/3			Same w/ Subrounded F gravel
15												
20	21.5-22	FW-A904702 DP171C	90%	0ppm	11:49	DP	moist to wet		10YR 5/4			Sand F
25												TD = 22'
30												

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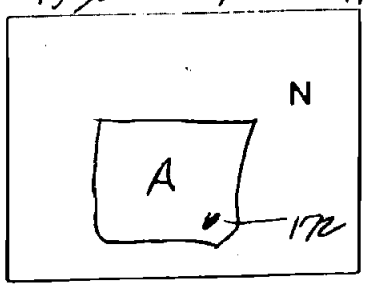
Lithologic Borehole Log BTEX & PAH
Project #10K70100

Sheet 1 of 1

Hnu background 0.5ppm



Site ID	NAS Ft. Worth	Location ID	DP-172
Northing	—	Easting	—
Elevation	—	T.D.	21'
Date Started	4/24/95	Date Completed	4/24/95
Drilling Contr.	KEL	Driller	B Riggs
Drill Method	Soil Probe	Rig Type	Geoprobe
Sample Type	1" Drive Pt.	Geo/Eng.	M. Johnson
Hammer Wt.	—	Backfilled Date	4/24/95

Weather Conditions: Clear warm

Names of Persons Present: M Johnson, B Riggs, J. Barn

Depth in Feet	Sampled Interval	Sample Number	Percent Recovery	HNU or OVM Reading	Blows Per 6"	Sampling Method	Water Content	USCS Code	Color	Graphic Log	Interval	Description
0												
5	5-6	FW-A904703 DP172A FW-A904704 DP172AFD	80%	150ppm	14:07	DP	moist		~~7.5YR~~ 10YR 4/2			Fill Clayey Sand F-m, w/ Fine subrounded gravel
10	10-12	FW-A904705 DP172B FW-A101503 FW-A101504	90%	300ppm LAB LAB DUP	14:22	DP	wet w/ fuel		10YR 6/2			Sand F-m
15												
20	20-21	FW-A904706 DP172C	110%	100ppm	14:37	DP	wet		10YR 6/2			Sandy Gravel Fine, subangular and angular
25												TD = 21'
30												

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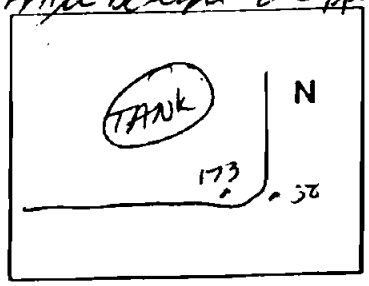
Lithologic Borehole Log
Project #10K70100

BTEX

Sheet 1 of 1

Hnu backgrd 0.5 ppm



Site ID	NAS Ft Worth	Location ID	DP-173
Northing	—	Easting	—
Elevation	—	T.D.	10'
Date Started	4/25/95	Date Completed	4/25/95
Drilling Contr.	REI	Driller	B. Riggs
Drill Method	Soil Probe	Rig Type	Geoprobe Mule
Sample Type	Drive Pt.	Geo/Eng.	MRW
Hammer Wt.	—	Backfilled Date	4/25/95

Weather Conditions: Clear S. Breeze

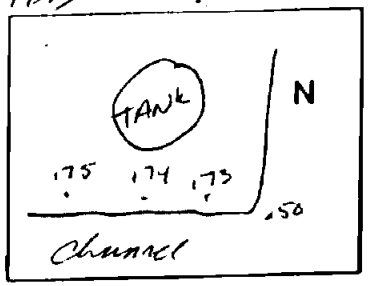
Names of Persons Present: MRW, BR, J. Brim

Depth in Feet	Sampled Interval	Sample Number	Percent Recovery	HNU or OVM Reading	Time, Blows Per 6"	Sampling Method	Water Content	USCS Code	Color	Graphic Log	Interval	Description
0												
5	4-5	FW-A904806 DP173A FW-A904807	100%	0ppm	8:57	DP	moist		10YR 2/1			Clayey Sand F-M. Tr of Organics.
10	9-10	FW-A904808 DP173B		0ppm	9:11	DP	wet		10YR 7/2			Silty Sand F-C w Tr clay
15												TD = 10'
20												
25												
30												

Lithologic Borehole Log
Project #10K70100 BTEX / PAH

Hnu bckgrd 0.5ppm

Sheet 1 of 1



Site ID	NAS Ft Worth	Location ID	DP-174
Northing	—	Easting	—
Elevation	—	T.D.	10'
Date Started	4/25/95	Date Completed	4/25/95
Drilling Contr.	KEF	Driller	B R. 975
Drill Method	Soil Probe	Rig Type	Geoprobe
Sample Type	1" Drive Pt.	Geo/Eng.	M. Johnson
Hammer Wt.	—	Backfilled Date	4/25/95

Weather Conditions: Clear Calm

Names of Persons Present: MRJ, BR, J. Brm

Depth in Feet	Sampled Interval	Sample Number	Percent Recovery	HNU or OVM Reading	Time ~~Blows Per 6"~~	Sampling Method	Water Content	USCS Code	Color	Graphic Log	Interval	Description
0												
		FW-A	904803									
5		DP04A	50%									
	5-6	FW-A	904804	0ppm	8:25	DP	moist		7.5YR 4/1			Clayey Sand F-m, Tr organics
		FW-A	904805									
10	9.5-10	DP04B	40%	0ppm	8:38	DP	wet		10YR 7/2			Silty Sand F-C w/ Tr of clay
15												TD=10'
20												
25												
30												

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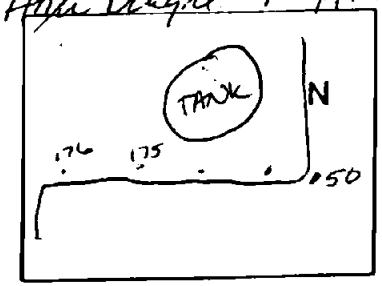
Lithologic Borehole Log
Project #10K70100

BTEX

Sheet ___ of ___

Hgu Background 1.0 ppm



Site ID	NAS Ft. Worth	Location ID	DP-175
Northing	—	Easting	
Elevation	—	T.D.	9'
Date Started	4/24/95	Date Completed	4/24/95
Drilling Contr.	KEI	Driller	B.R. Gss
Drill Method	Soil Probe	Rig Type	Geoprobe
Sample Type	1" Drive Pt.	Geo/Eng.	M. Johnson
Hammer Wt.	—	Backfilled Date	4/24/95

Weather Conditions: Partly Cloudy

Names of Persons Present: MRJ, BR, J. Brim

Depth in Feet	Sampled Interval	Sample Number	Percent Recovery	HNU or OVM Reading	~~Blows Per 6"~~ Time	Sampling Method	Water Content	USCS Code	Color	Graphic Log	Interval	Description
0												
5	X	FW-A904801										
	5'-6'	DP175A	70%	0 ppm	16 02	DP	moist		7.5YR 4/2			Clayey Sand F-C; slightly plastic
	X 7.5-8	FW-A904802										
		DP175B	80%	0 ppm	16'15							
10						DP	wet		7.5YR 7/2			Clayey Sand F-C
15												TD = 9'
20												
25												
30												

Lithologic Borehole Log
Project #10K70100

BTEx & PAH

Sheet 1 of 1

Hanger Delayed 1PPM

N

Site ID	NAS FA Wall	Location ID	DP-176
Northing	—	Easting	—
Elevation	—	T.D.	10°
Date Started	4/24/95	Date Completed	4/24/95
Drilling Contr.	KEI	Driller	B. Riggs
Drill Method	Soil Probe	Rig Type	Geoprobe
Sample Type	1" Drive Pt.	Geo/Eng.	M Johnson
Hammer Wt.	—	Backfilled Date	4/24/95

Weather Conditions

Names of Persons Present: M Johnson, B Riggs, B. J. Bom

Depth in Feet	Sampled Interval	Sample Number	Percent Recovery	HNU or OVM Reading	Blows Per 6"	Sampling Method	Water Content	USCS Code	Color	Graphic Log	Interval	Description
0												
5	X 45-5	FW-1-904707 DP176A	25%	0PPM	15.31	DP	V. moist		7.5YR 4/1			Clayey Sand / Sandy Clay F-M Plastic.
10	X 9-10	FW-1-904708 DP176A DP176B FW-1-904709	60%	0PPM	15.43	DP	wet		7.5YR 7/2			Clayey Sand F-C
15												TD=10°
20												
25												
30												

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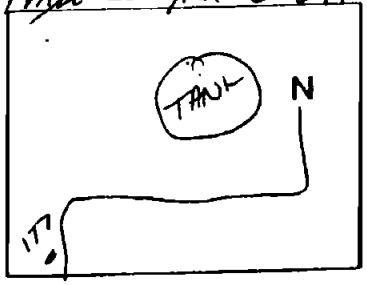
Lithologic Borehole Log
Project #10K70100

Sheet 1 of 1

Hnu bckgrd 0.5PPM



Site ID	NAS Ft Worth	Location ID	DP-177
Northing	—	Easting	—
Elevation	—	T.D.	6'
Date Started	4/25/95	Date Completed	4/25/95
Drilling Contr.	KEI	Driller	B. Riggs
Drill Method	Soil Probe	Rig Type	Geoprobe
Sample Type	1" Drive Pt.	Geo/Eng.	M. Johnson
Hammer Wt.	—	Backfilled Date	4/25/95

Weather Conditions: Clear S Breeze

Names of Persons Present: M. Johnson, B. Riggs, J. Brim

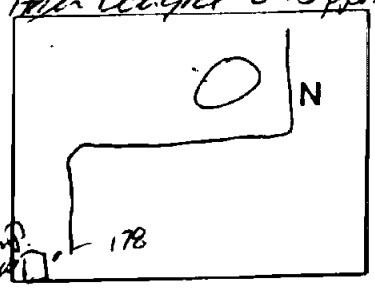
Depth in Feet	Sampled Interval	Sample Number	Percent Recovery	HNU or OVM Reading	Time Blows Per 6"	Sampling Method	Water Content	USCS Code	Color	Graphic Log	Interval	Description
0												
5	5-6'	FW-A DP177A	904809 60%	0PPM	9:31	DP	wet		10YR 7/2			Silty Sand F-C w Tr clay
												TD 6'
10												
15												
20												
25												
30												

Lithologic Borehole Log
Project #10K70100

BTEX & PAH

Sheet 1 of 1

Hac Belgrad 0.5ppm



Site ID	UAS FA Work	Location ID	DP-178
Northing	—	Easting	—
Elevation	—	T.D.	5'
Date Started	4/25/95	Date Completed	4/25/95
Drilling Contr.	KEE	Driller	B. Riggs
Drill Method	Soil Probe	Rig Type	Geoprobe
Sample Type	1" Drive Pt.	Geo/Eng.	M. Johnson
Hammer Wt.	—	Backfilled Date	4/25/95

Weather Conditions

Names of Persons Present: M. Johnson, B. Riggs, J. Bath

Depth in Feet	Sampled Interval	Sample Number	Percent Recovery	HNU or OVM Reading	Time Blows Per 6"	Sampling Method	Water Content	USCS Code	Color	Graphic Log	Interval	Description
0												
									10YR 4/1	~~10YR~~ 7.5YR ~~3/2~~ 4/1		4" Clumpy Sand F-M Tr. org plastic
	X	FW-A-00-K-01				DP	moist					
5	4-5'	DP-178A	60%	0ppm	4:51	DP	wet		10YR 7/2			Silty Sand F-C w/Tr Clay
10												TD = 5'
15												
20												
25												
30												

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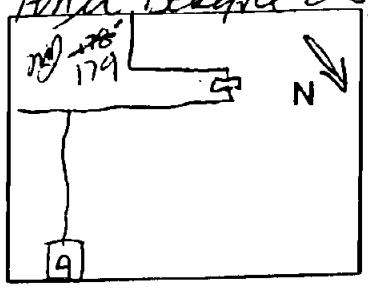
Lithologic Borehole Log
Project #10K70100

Sheet 1 of 1

Hnu Background 0.5ppm



Site ID	NAS Ft Worth	Location ID	DP-179
Northing	—	Easting	—
Elevation	—	T.D.	22'
Date Started	4/25/95	Date Completed	4/25/95
Drilling Contr.	KEF	Driller	B. Riggs
Drill Method	Soil Probe	Rig Type	Geoprobe
Sample Type	1" Drive Pt.	Geo/Eng.	M Johnson
Hammer Wt.	—	Backfilled Date	4/25/95

Weather Conditions: Clear S Breeze

Names of Persons Present: M Johnson, B. Riggs, J Bain

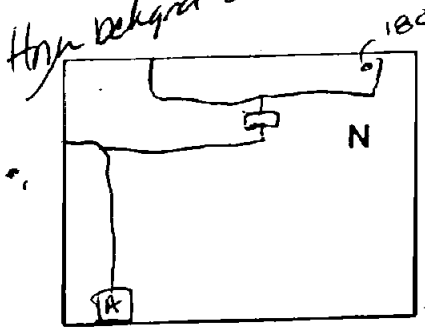
Depth in Feet	Sampled Interval	Sample Number	Percent Recovery	HNU or OVM Reading	Time ~~Blows Per 6"~~	Sampling Method	Water Content	USCS Code	Color	Graphic Log	Interval	Description
0												
5	5-6	FW-AG04902 DP179A FW-AG04903 DP179A-50	50%	0ppm	10:29	DP	moist		7.5YR 3/1			Clayey Sand Fine w Tr organics plastic
10												
15												
20	15-22	FW-AG04904 DP179B		0ppm	10:47	DP	v. moist		7.5YR 6/4			Sand, Fine. poorly graded
25												TD = 22'
30												

Hnu background 0.5 ppm

Lithologic Borehole Log
Project #10K70100

BTEX

Sheet 1 of 1



Site ID	NAS Ft Worth	Location ID	DP-180
Northing	—	Easting	—
Elevation	—	T.D.	22'
Date Started	4/25/95	Date Completed	4/25/95
Drilling Contr.	KEI	Driller	B. Riggs.
Drill Method	Soil Probe	Rig Type	Geoprobe
Sample Type	1" Drive Pt.	Geo/Eng.	M. Johnson
Hammer Wt.	—	Backfilled Date	4/25/95

Weather Conditions

Names of Persons Present: M Johnson, B. Riggs, J. Brim

Depth in Feet	Sampled Interval	Sample Number	Percent Recovery	HNU or OVM Reading	Time Blows Per 6"	Sampling Method	Water Content	USCS Code	Color	Graphic Log	Interval	Description
0												
5	5-6'	FW-A104905 DP180A	90%	0ppm	11:28	DP	moist		7.5YR 3/1			Clayey Sand F-M, Tr Organics Plastic
10	~~9.5-10.5~~											
15												
20	21-22	FW-A104906 DP18B										
		FW-A 904 DP180B FD	90%	0ppm	11:36	DP	wet		7.5YR 6/4			Sand F- poorly graded
25												TD=22'
30												

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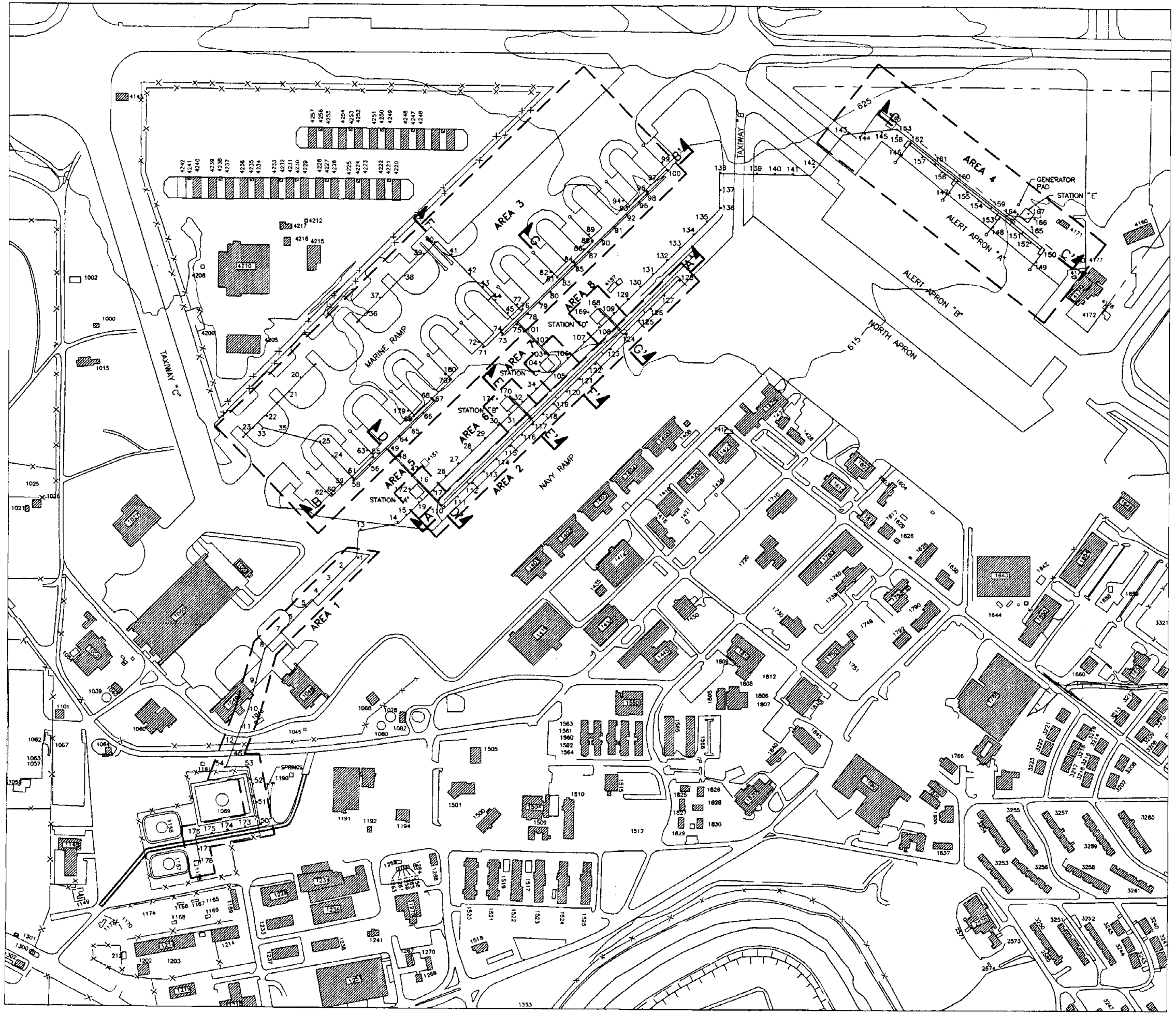


LEGEND

- SOIL PROBE LOCATION
- FUEL DISTRIBUTION SYSTEM PIPELINE
- FUEL DISTRIBUTION SYSTEM HYDRANT
- BUILDING
- TOPOGRAPHIC CONTOUR
- INTERMITTENT STREAM
- CROSS SECTION AREA
- AREA BOUNDARIES

N

0 500 1000

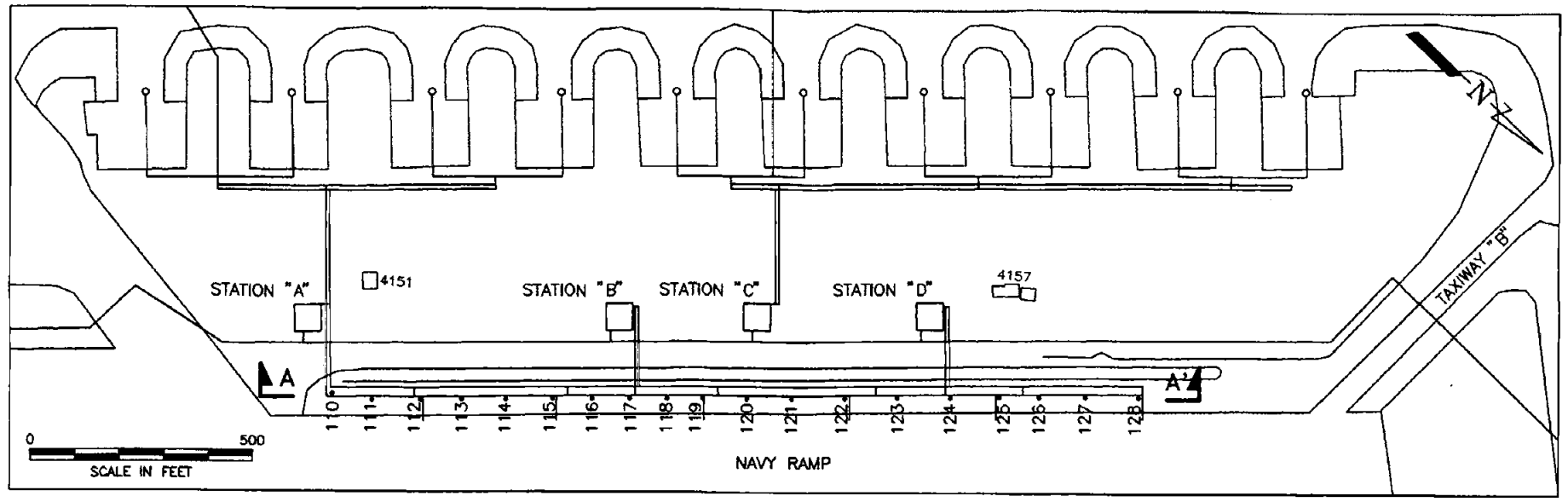
SCALE IN FEET

CONTOUR INTERVAL = 10 FEET

NAS FORT WORTH JRB
CARSWELL FIELD

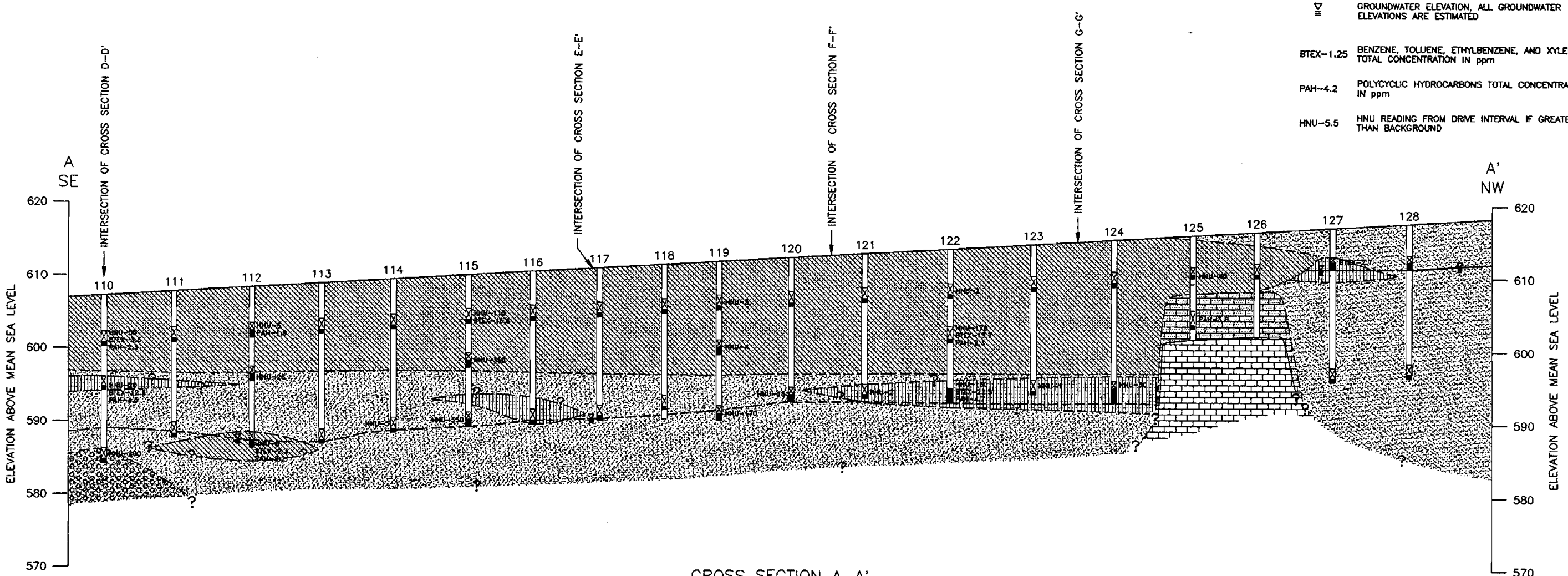
DRIVE POINT SAMPLE LOCATIONS
ALONG FUEL HYDRANT SYSTEM

PROJ. MGR.	ACAD FILE NO.	FIGURE NO.
L. SCHUETTER	PLATE1	PLATE 1
DRAWN BY	PROJ. NO.	DATE
J. HUNTER	10-K-70100	6/26/95

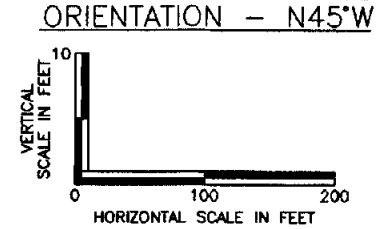


LEGEND

- SANDY CLAY WITH VARYING AMOUNTS OF CLAY AND FINE SUBROUNDED AND SUBANGULAR GRAVEL. TRACES OF ORGANICS NOTED TO 6' DEEP
- SILTY SAND. VARYING AMOUNTS OF SILT AND PLASTICITY
- FINE TO COARSE POORLY GRADED SAND INTERBEDDED WITH FINE TO COARSE, WELL GRADED SAND
- WELL-GRADED GRAVELS, GRAVEL SAND MIXTURES, LITTLE OR NO FINES
- WEATHERED LIMESTONE BEDROCK
- LIMESTONE BEDROCK
- DRIVE INTERVAL SHOWING SAMPLED INTERVAL
- GROUNDWATER ELEVATION, ALL GROUNDWATER ELEVATIONS ARE ESTIMATED
- BTEX-1.25 — BENZENE, TOLUENE, ETHYLBENZENE, AND XYLENE TOTAL CONCENTRATION IN ppm
- PAH-4.2 — POLYCYCLIC HYDROCARBONS TOTAL CONCENTRATION IN ppm
- HNU-5.5 — HNU READING FROM DRIVE INTERVAL IF GREATER THAN BACKGROUND



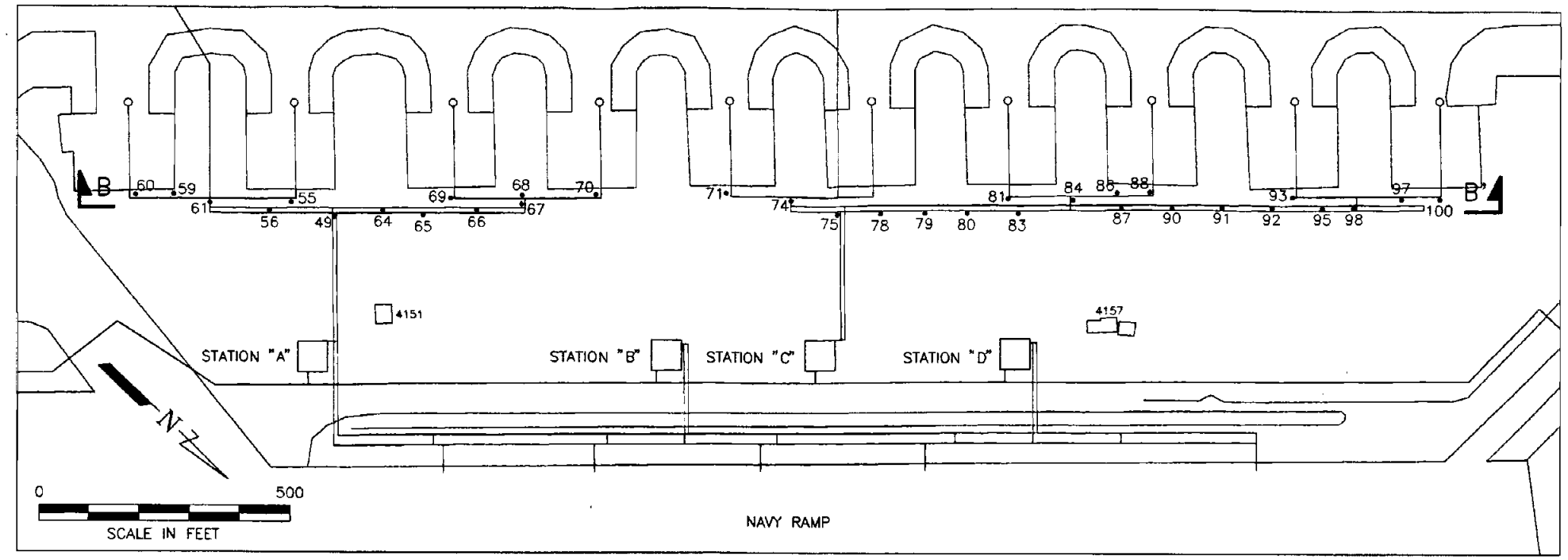
CROSS SECTION A-A'
ORIENTATION - N45°W



NAS FORT WORTH JRB
CARSWELL FIELD

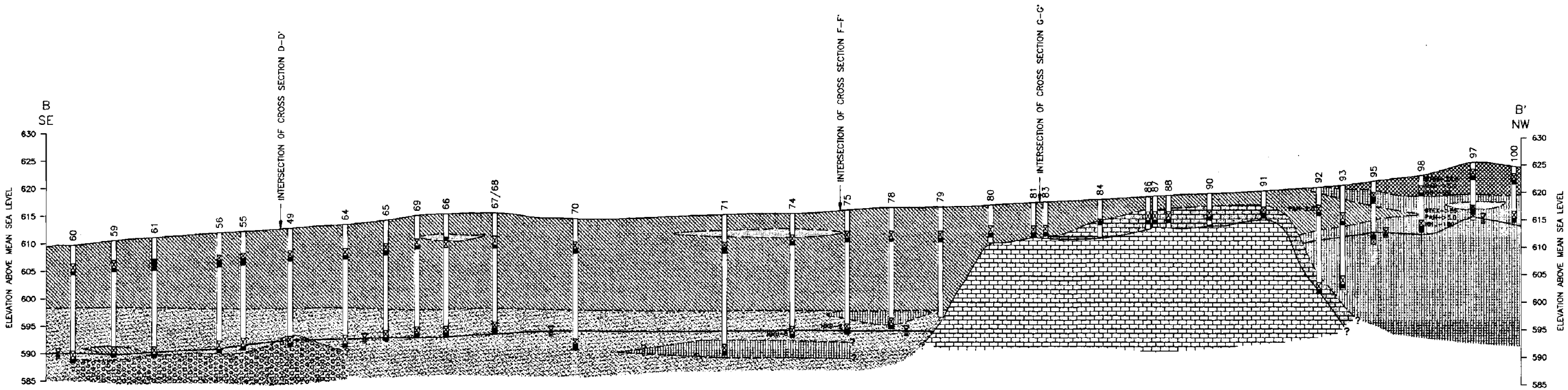
CROSS SECTION A-A'
NAVY RAMP, AREA 4

PROJ. MGR.	ACAD FILE NO.	FIGURE NO.
L. SCHUETTER	CROSSA	PLATE 2
DRAWN BY	PROJ. NO.	DATE
J. HUNTER	10-K-70100	7/3/95



LEGEND

- SANDY CLAY WITH VARYING AMOUNTS OF CLAY AND FINE SUBROUNDED AND SUBANGULAR GRAVEL. TRACES OF ORGANICS NOTED TO 6' DEEP
- SILTY SAND. VARYING AMOUNTS OF SILT AND PLASTICITY
- FINE TO COARSE POORLY GRADED SAND INTERBEDDED WITH FINE TO COARSE, WELL GRADED SAND
- WELL-GRADED SANDS, GRAVELLY SANDS, LITTLE OR NO FINES
- POORLY-GRADED SANDS, GRAVELLY SANDS, LITTLE OR NO FINES
- WELL-GRADED GRAVELS, GRAVEL-SAND MIXTURES, LITTLE OR NO FINES
- FILL MATERIAL
- WEATHERED LIMESTONE BEDROCK
- LIMESTONE BEDROCK
- DRIVE INTERVAL SHOWING SAMPLED INTERVAL
- GROUNDWATER ELEVATION, ALL GROUNDWATER ELEVATIONS ARE ESTIMATED
- BTEX-1.25 — BENZENE, TOLUENE, ETHYLBENZENE, AND XYLENE TOTAL CONCENTRATION IN ppm
- PAH-4.2 — POLYCYCLIC HYDROCARBONS TOTAL CONCENTRATION IN ppm
- HNU-5.5 — HNU READING FROM DRIVE INTERVAL IF GREATER THAN BACKGROUND



CROSS SECTION B-B'
ORIENTATION - N45°

VERTICAL SCALE IN FEET: 10
0 100 200
HORIZONTAL SCALE IN FEET

NAS FORT WORTH JRB
CARSWELL FIELD

CROSS SECTION B-B'
MARINE RAMP, AREA 3

PROJ. MGR.	ACAD FILE NO.	FIGURE NO.
L. SCHUETTER	CROSSB	PLATE 3
DRAWN BY	PROJ. NO.	DATE
J. HUNTER	10-K-70100	7/17/95

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