

N83447.AR.000355
NAS FORT WORTH
5090.3a

INFORMAL TECHNICAL REPORT TRINITY RIVER SURFACE WATER SAMPLES BASE
SERVICE STATION NAS FORT WORTH TX
12/1/1997
INTERNATIONAL TECHNOLOGIES



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

**ADMINISTRATIVE RECORD
COVER SHEET**

AR File Number 406

**Informal Technical Report
Trinity River Surface Water Samples
Base Service Station
Naval Air Station Fort Worth
Joint Reserve Base, Carswell Field
Fort Worth, Texas
LPST ID No. 104524
Facility ID No. 009696**

Prepared for:

**Air Force Center for Environmental Excellence
Brooks Air Force Base, Texas
Contract No. F41624-94-D-8047
Delivery Order No. 0039**

Prepared by:

**IT Corporation
312 Directors Drive
Knoxville, Tennessee 37923**

**Project No. 768579
Revision 1**

December 1997

1.0 Introduction

In August 1996, IT Corporation (IT) conducted a review of available historical soil and groundwater data from several investigations and removal activities that occurred from 1992 to 1996 at the Base Service Station located at Naval Air Station (NAS) Ft. Worth JRB, Carswell Field, Ft. Worth, Texas, from 1992 to 1996. This data consolidation was performed at the request of Air Force Center for Environmental Excellence (AFCEE) to provide data necessary to complete a TNRCC Plan A assessment. This Informal Technical Report presents the analytical results of Trinity River surface water samples collected down gradient of the Base Service Station and Sanitary Sewer System at NAS Fort Worth JRB at Carswell Field. The surface water samples were collected on September 23, 1997 by IT at the request of Mr. Antonio Pena of the TNRCC Petroleum Storage Tank Division.

2.0 Background

The results of this Base Service Station investigation can be found in the report titled NAS Fort Worth Assessment Report, January 1997, prepared for and submitted to AFCEE, Brooks AFB, San Antonio, Texas. Appendix P of this report is the document titled TNRCC Assessment Report Form, Base Service Station, March 1997, and includes the TNRCC Plan A assessment forms. The findings of this investigation indicated concentrations of benzene, benzo (a) pyrene, benzo (b) flouranthene, dibenzo (a,h) anthracene, and indeo (1,2,3-cd) pyrene in the soil and concentrations of benzene and toluene in groundwater that exceed Plan A criteria. Based on historical chemical analytical data and on geotechnical data gathered by the USACE in 1993 and reviewed during this investigation, IT subsequently completed a Plan B assessment of the site. The Plan B assessment can be found as Section 8.0, Risk Assessment in the NAS Fort Worth Assessment Report, dated January 1997.

3.0 Summary of Findings

The surface water samples were collected on September 23, 1997 from the west bank of the West Fork of the Trinity River down gradient of the Base Service Station LPST release site. Figure 1 shows the location of the surface water samples. The samples were analyzed for; BTEX and MTBE by EPA Method SW8020, PAH by EPA Method 8310, and lead by EPA Method 7421. Surface water samples were collected up stream (surface water sample location TRSWS01,

sample number MS1604) and at the site where the petroleum sheen was observed on the Trinity River (surface water sample location TRSWS02, sample number MS1605). A field duplicate surface water sample was collected at location TRSWS02 (sample number MS1606). The surface water samples were collected at the surface of the water with a decontaminated polyethylene pitcher one to two feet from the bank of the Trinity River and the water was poured directly into the sample container. Samples were labeled, packaged, and shipped under chain-of-custody with a VOA trip blank (sample number MS1603) to Paragon Analytics, Inc., for analysis. The analytical results for the surface water samples are included as Attachment 1.

The surface water sample TRSWS01 was collected up gradient of the area where a petroleum sheen was observed on the Trinity River in 1992. This sample had a concentration of MTBE of 1.4 ug/l and benzene of 3.5 ug/l. The detection of the compounds up stream from the former release site are not representative of surface water conditions where the petroleum sheen was observed down stream. The benzene and MTBE detected in sample TRSWS01 are probably representative of surface water concentrations in the Trinity River at that moment. The surface water sample TRSWS02 and the field duplicate sample, collected where the petroleum sheen was observed in 1992, was non-detect for petroleum hydrocarbons.

The concentration of the petroleum hydrocarbons was less than maximum detections of compounds reported from previous Base Service Station surface water samples. The highest surface water hydrocarbon concentrations previously reported were 0.024 mg/l for benzene and 0.350 mg/l for MTBE at sample location SW-2, which was located near the release area in the ditch between the Base Service Station and Military Parkway. Petroleum hydrocarbons were not detected in a Trinity River surface water sample (SW-1) collected in 1993 by USACE at the same area of the former petroleum sheen area where TRSWS02 was collected. The TNRCC Assessment Report Form for the Base Service Station (TNRCC-0562) is presented as Attachment 2 for review.

The absence of contaminants in the surface water analytical results at the area of the petroleum sheen on the Trinity River should be adequate to fulfill closure requirements of the Base Service Station.

FIGURE 1
 11:45 AM
 2ND DIV 517

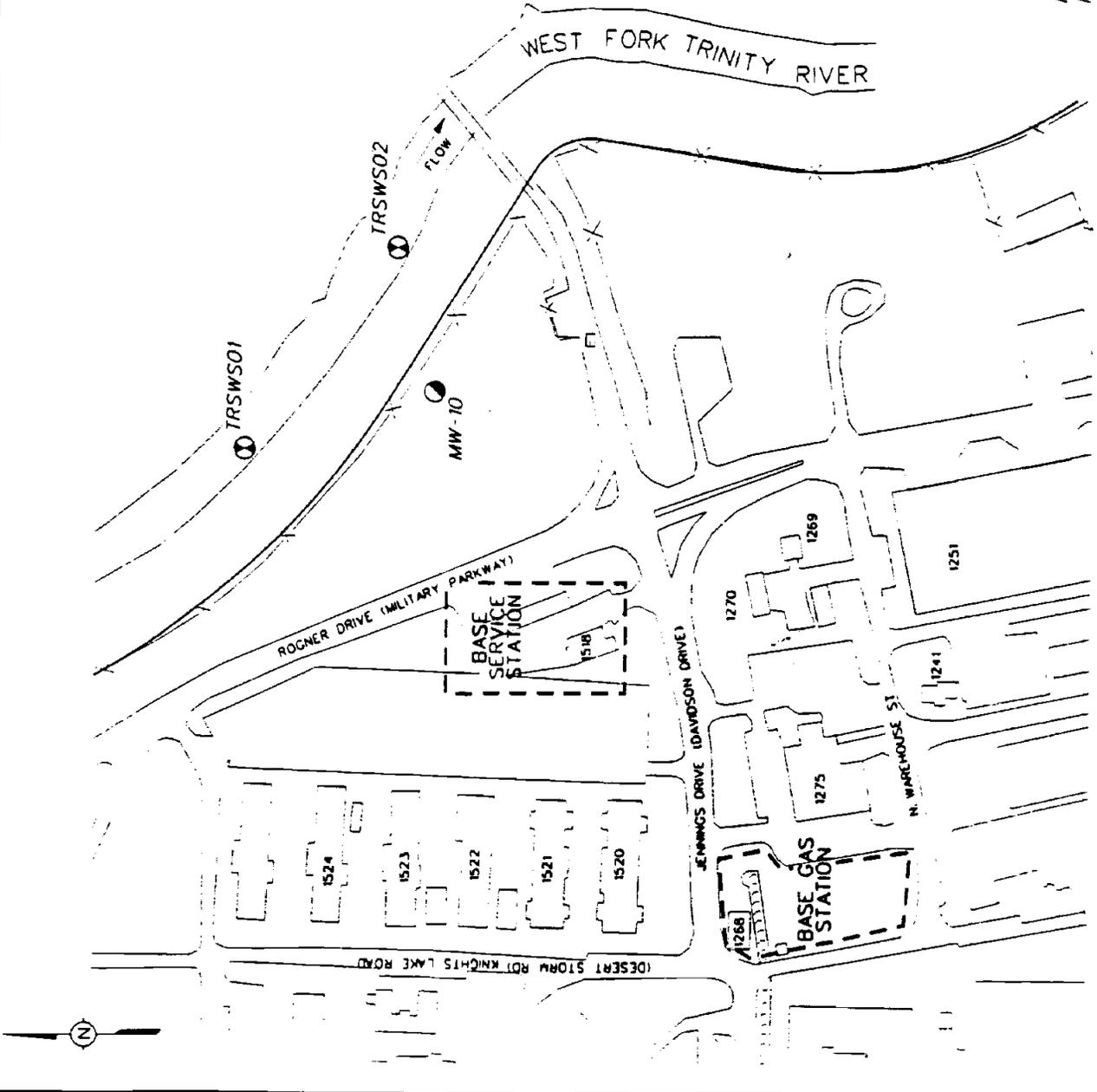
STARTING DATE 11/20/97
 DRAWN BY DTHAI

DATE LAST REV'D NOV 97
 DRAWN BY

DRAFT CHECK BY C LUMBIN
 DTHAI

INITIATOR M MAKI
 PROJ MGR W CAPLER

DWG NO. 57685-10-114
 PROJ NO. 768579



LEGEND:

- SITES TO BE INVESTIGATED
- OPEN, DRAINAGE DITCH
- NEW NAVY STREET NAME
- INSTALLATION BOUNDARY
- SURFACE WATER SAMPLE LOCATION
- MONITORING WELL

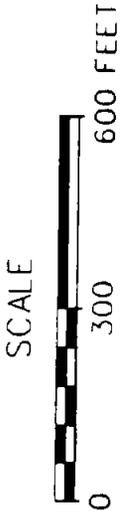


FIGURE 1
 SURFACE WATER SAMPLE
 LOCATION MAP
 BASE GAS STATION AND
 BASE SERVICE STATION

NAVAL AIR STATION FORT WORTH
 FORT WORTH, TEXAS



Attachment 1
Surface Water Analytical Results

Volatile Aromatics by GC/FID

Method SW8020

Method Blank

Lab Name: Paragon Analytics, Inc.

Work Order Number: 9709232

Client Name: IT Corporation

Client Project ID: 768579-70300000

Reported on: Saturday, November 01, 1997

| | | | |
|--------------------------|-----------------------|---------------------------|-------------------|
| Field ID: LABQC | Sample Matrix: liquid | Date Collected: 07-Oct-97 | Sample Aliquot: 5 |
| Lab ID: BTX-WRB1100797MB | % Moisture: N/A | Date Extracted: 07-Oct-97 | Final Volume: 5 |
| | Cleanup Method: NONE | Date Analyzed: 07-Oct-97 | Dilution: 1 |
| | Report Basis: NA | Prep Batch: BTX100797B1 | |

| CASNO | Target Analyte | Result | Units | Reporting Limit | Result Qualifier | Result Footnote |
|-----------|-----------------------------|--------|-------|-----------------|------------------|-----------------|
| 1634-04-4 | METHYL TERTIARY BUTYL ETHER | 1 | ug/L | 1 | U | |
| 71-43-2 | BENZENE | 2 | ug/L | 2 | U | |
| 108-88-3 | TOLUENE | 2 | ug/L | 2 | U | |
| 108-90-7 | CHLOROBENZENE | 2 | ug/L | 2 | U | |
| 100-41-4 | ETHYLBENZENE | 2 | ug/L | 2 | U | |
| 1330-20-7 | TOTAL XYLENES | 2 | ug/L | 2 | U | |
| 541-73-1 | 1,3-DICHLOROBENZENE | 4 | ug/L | 4 | U | |
| 106-46-7 | 1,4-DICHLOROBENZENE | 3 | ug/L | 3 | U | |
| 95-50-1 | 1,2-DICHLOROBENZENE | 4 | ug/L | 4 | U | |

Surrogate Recovery

| CASNO | Surrogate Analyte | Result | Units | Spike Amount | Percent Recovery | Control Limits |
|-------|------------------------|--------|-------|--------------|------------------|----------------|
| | 2,3,4-TRIFLUOROTOLUENE | 99.1 | ug/l | 100 | 99 | 44 - 165 |

U = Less than the Reporting Limit

000008

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Volatile Aromatics by GC/PID

Method SW8020

Lab Name: Paragon Analytics, Inc.

Work Order Number: 9709232

Client Name: IT Corporation

Client Project ID: 768579-70300000

Reported on: Saturday, November 01, 1997

| |
|-------------------|
| Field ID: MS1603 |
| Lab ID: 9709232-1 |

| | | |
|---------------------------|---------------------------|-------------------|
| Sample Matrix: liquid | Date Collected: 23-Sep-97 | Sample Aliquot: 5 |
| % Moisture: N/A | Date Extracted: 07-Oct-97 | Final Volume: 5 |
| Cleanup Method: NONE | Date Analyzed: 07-Oct-97 | Dilution: 1 |
| Report Basis: AS RECEIVED | Prep Batch: BTX100797B1 | |

| CASNO | Target Analyte | Result | Units | Reporting Limit | Result Qualifier | Result Footnote |
|-----------|-----------------------------|--------|-------|-----------------|------------------|-----------------|
| 1634-04-4 | METHYL TERTIARY BUTYL ETHER | 1 | ug/L | 1 | U | |
| 71-43-2 | BENZENE | 2 | ug/L | 2 | U | |
| 108-88-3 | TOLUENE | 2 | ug/L | 2 | U | |
| 108-90-7 | CHLORO BENZENE | 2 | ug/L | 2 | U | |
| 100-41-4 | ETHYLBENZENE | 2 | ug/L | 2 | U | |
| 1330-20-7 | TOTAL XYLENES | 2 | ug/L | 2 | U | |
| 541-73-1 | 1,3-DICHLOROBENZENE | 4 | ug/L | 4 | U | |
| 106-46-7 | 1,4-DICHLOROBENZENE | 3 | ug/L | 3 | U | |
| 95-50-1 | 1,2-DICHLOROBENZENE | 4 | ug/L | 4 | U | |

Surrogate Recovery

| CASNO | Surrogate Analyte | Result | Units | Spike Amount | Percent Recovery | Control Limits |
|-------|------------------------|--------|-------|--------------|------------------|----------------|
| | 2,3,4-TRIFLUOROTOLUENE | 97 | ug/l | 100 | 97 | 44 - 165 |

U = Less than the Reporting Limit

000009

406 3

Volatile Aromatics by GC/PID

Method SW8020

Lab Name: Paragon Analytics, Inc.

Work Order Number: 9709232

Client Name: IT Corporation

ClientProject ID: 768579-70300000

Reported on: Saturday, November 01, 1997

| |
|-------------------|
| Field ID: MS1604 |
| Lab ID: 9709232-2 |

| | | |
|---------------------------|---------------------------|-------------------|
| Sample Matrix: liquid | Date Collected: 23-Sep-97 | Sample Aliquot: 5 |
| % Moisture: N/A | Date Extracted: 07-Oct-97 | Final Volume: 5 |
| Cleanup Method: NONE | Date Analyzed: 07-Oct-97 | Dilution: 1 |
| Report Basis: AS RECEIVED | Prep Batch: BTX100797B1 | |

| CASNO | Target Analyte | Result | Units | Reporting Limit | Result Qualifier | Result Footnote |
|-----------|-----------------------------|--------|-------|-----------------|------------------|-----------------|
| 1634-04-4 | METHYL TERTIARY BUTYL ETHER | 1.4 | ug/L | 1 | | |
| 71-43-2 | BENZENE | 3.7 | ug/L | 2 | | |
| 108-88-3 | TOLUENE | 0.71 | ug/L | 2 | J | |
| 108-90-7 | CHLOROBENZENE | 2 | ug/L | 2 | U | |
| 100-41-4 | ETHYLBENZENE | 2 | ug/L | 2 | U | |
| 1330-20-7 | TOTAL XYLENES | 2 | ug/L | 2 | U | |
| 541-73-1 | 1,3-DICHLOROBENZENE | 4 | ug/L | 4 | U | |
| 106-46-7 | 1,4-DICHLOROBENZENE | 3 | ug/L | 3 | U | |
| 95-50-1 | 1,2-DICHLOROBENZENE | 4 | ug/L | 4 | U | |

Surrogate Recovery

| CASNO | Surrogate Analyte | Result | Units | Spike Amount | Percent Recovery | Control Limits |
|-------|------------------------|--------|-------|--------------|------------------|----------------|
| | 2,3,4-TRIFLUOROTOLUENE | 98.3 | ug/l | 100 | 98 | 44 - 165 |

U = Less than the Reporting Limit

406

Volatile Aromatics by GC/PID

Method SW8020

Lab Name: Paragon Analytics, Inc.
 Work Order Number: 9709232
 Client Name: IT Corporation
 Client Project ID: 768579-70300000

Reported on: Saturday, November 01, 1997

| | | | |
|-------------------|---------------------------|---------------------------|-------------------|
| Field ID: MS1805 | Sample Matrix: liquid | Date Collected: 23-Sep-97 | Sample Allquot: 5 |
| Lab ID: 9709232-3 | % Moisture: N/A | Date Extracted: 07-Oct-97 | Final Volume: 5 |
| | Cleanup Method: NONE | Date Analyzed: 07-Oct-97 | Dilution: 1 |
| | Report Basis: AS RECEIVED | Prep Batch: BTX100797B1 | |

| CASNO | Target Analyte | Result | Units | Reporting Limit | Result Qualifier | Result Footnote |
|-----------|-----------------------------|--------|-------|-----------------|------------------|-----------------|
| 1634-04-4 | METHYL TERTIARY BUTYL ETHER | 1 | ug/L | 1 | U | |
| 71-43-2 | BENZENE | 2 | ug/L | 2 | U | |
| 108-88-3 | TOLUENE | 2 | ug/L | 2 | U | |
| 108-90-7 | CHLOROBENZENE | 2 | ug/L | 2 | U | |
| 100-41-4 | ETHYLBENZENE | 2 | ug/L | 2 | U | |
| 1330-20-7 | TOTAL XYLENES | 2 | ug/L | 2 | U | |
| 541-73-1 | 1,3-DICHLOROBENZENE | 4 | ug/L | 4 | U | |
| 106-46-7 | 1,4-DICHLOROBENZENE | 3 | ug/L | 3 | U | |
| 95-50-1 | 1,2-DICHLOROBENZENE | 4 | ug/L | 4 | U | |

Surrogate Recovery

| CASNO | Surrogate Analyte | Result | Units | Spike Amount | Percent Recovery | Control Limits |
|-------|------------------------|--------|-------|--------------|------------------|----------------|
| | 2,3,4-TRIFLUOROTOLUENE | 100 | ug/l | 100 | 100 | 44 - 165 |

U = Less than the Reporting Limit

000011

Volatile Aromatics by GC/PID

Method SW8020

Lab Name: Paragon Analytcs, Inc.

Work Order Number: 9709232

Client Name: IT Corporation

ClientProject ID: 768579-70300000

Reported on: Saturday, November 01, 1997

| | | | |
|-------------------|---------------------------|---------------------------|-------------------|
| Field ID: MS1806 | Sample Matrix: liquid | Date Collected: 23-Sep-97 | Sample Allquot: 5 |
| Lab ID: 9709232-4 | % Moisture: N/A | Date Extracted: 07-Oct-97 | Final Volume: 5 |
| | Cleanup Method: NONE | Date Analyzed: 07-Oct-97 | Dilution: 1 |
| | Report Basis: AS RECEIVED | Prep Batch: BTX100797B1 | |

| CASNO | Target Analyte | Result | Units | Reporting Limit | Result Qualifier | Result Footnote |
|-----------|-----------------------------|--------|-------|-----------------|------------------|-----------------|
| 1634-04-4 | METHYL TERTIARY BUTYL ETHER | 0.56 | ug/L | 1 | J | |
| 71-43-2 | BENZENE | 2 | ug/L | 2 | U | |
| 108-88-3 | TOLUENE | 2 | ug/L | 2 | U | |
| 108-90-7 | CHLOROBENZENE | 2 | ug/L | 2 | U | |
| 100-41-4 | ETHYLBENZENE | 2 | ug/L | 2 | U | |
| 1330-20-7 | TOTAL XYLENES | 2 | ug/L | 2 | U | |
| 541-73-1 | 1,3-DICHLOROBENZENE | 4 | ug/L | 4 | U | |
| 106-46-7 | 1,4-DICHLOROBENZENE | 3 | ug/L | 3 | U | |
| 95-50-1 | 1,2-DICHLOROBENZENE | 4 | ug/L | 4 | U | |

Surrogate Recovery

| CASNO | Surrogate Analyte | Result | Units | Spike Amount | Percent Recovery | Control Limits |
|-------|------------------------|--------|-------|--------------|------------------|----------------|
| | 2,3,4-TRIFLUOROTOLUENE | 103 | ug/l | 100 | 103 | 44 - 165 |

U = Less than the Reporting Limit

000012

Total Recoverable Petroleum Hydrocarbons

Method EPA 418.1

Sample Results

Lab Name: Paragon Analytics, Inc.

Page 1 of 1

ClientName: IT Corporation

Client Project ID: NAS Ft. Worth-DO 32 768579-70300000

Work Order Number: 9709232

Final Volume: 25 ML

Reporting Basis: AS RECEIVED

Reported on: Wednesday, October 08, 1997

Matrix: Water

| Client Sample ID | Lab ID | Date Collected | Date Prepared | Date Analyzed | Percent Moisture | Dilution Factor | Result | Units | Detection Limit | Flag | Sample Aliquot |
|------------------|-----------|----------------|---------------|---------------|------------------|-----------------|--------|-------|-----------------|------|----------------|
| MS1604 | 9709232-2 | 9/23/97 | 10/8/97 | 10/8/97 | N/A | 1 | ND | MG/L | 1 | | 250 ML |
| MS1605 | 9709232-3 | 9/23/97 | 10/8/97 | 10/8/97 | N/A | 1 | ND | MG/L | 1 | | 250 ML |
| MS1606 | 9709232-4 | 9/23/97 | 10/8/97 | 10/8/97 | N/A | 1 | ND | MG/L | 1 | | 250 ML |

Comments:

1. ND = Not Detected at or above the client requested detection limit.

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406 15 Polynuclear Aromatic Hydrocarbons

Method SW8310

Method Blank

Lab Name: Paragon Analytics, Inc.

Work Order Number: 9709232

Client Name: IT Corporation

Client Project ID: 768579-70300000

Reported on: Tuesday, November 04, 1997

| | | | |
|--------------------------|-----------------------|---------------------------|----------------------|
| Field ID: LABQC | Sample Matrix: liquid | Date Collected: 29-Sep-97 | Sample Allquot: 1000 |
| Lab ID: PAH-WRB1092997MB | % Moisture: N/A | Date Extracted: 29-Sep-97 | Final Volume: 1 |
| | Cleanup Method: NONE | Date Analyzed: 02-Oct-97 | Dilution: 1 |
| | Report Basis: NA | Prep Batch: 145102 | |

| CASNO | Target Analyte | Result | Units | Reporting Limit | Result Qualifier | Result Footnote |
|----------|------------------------|--------|-------|-----------------|------------------|-----------------|
| 91-20-3 | NAPHTHALENE | 0.5 | ug/L | 0.5 | U | |
| 208-98-8 | ACENAPHTHYLENE | 1 | ug/L | 1 | U | |
| 83-32-9 | ACENAPHTHENE | 1 | ug/L | 1 | U | |
| 86-73-7 | FLUORENE | 0.1 | ug/L | 0.1 | U | |
| 85-01-8 | PHENANTHRENE | 0.05 | ug/L | 0.05 | U | |
| 120-12-7 | ANTHRACENE | 0.1 | ug/L | 0.1 | U | |
| 206-44-0 | FLUORANTHENE | 0.1 | ug/L | 0.1 | U | |
| 129-00-0 | PYRENE | 0.05 | ug/L | 0.05 | U | |
| 56-55-3 | BENZO(A)ANTHRACENE | 0.05 | ug/L | 0.05 | U | |
| 218-01-9 | CHRYSENE | 0.05 | ug/L | 0.05 | U | |
| 205-99-2 | BENZO(B)FLUORANTHENE | 0.1 | ug/L | 0.1 | U | |
| 207-08-9 | BENZO(K)FLUORANTHENE | 0.05 | ug/L | 0.05 | U | |
| 50-32-8 | BENZO(A)PYRENE | 0.05 | ug/L | 0.05 | U | |
| 53-70-3 | DIBENZO(A,H)ANTHRACENE | 0.1 | ug/L | 0.1 | U | |
| | BENZO(GHI)PERYLENE | 0.1 | ug/L | 0.1 | U | |
| 193-39-5 | INDENO(1,2,3-CD)PYRENE | 0.1 | ug/L | 0.1 | U | |

Surrogate Recovery

| CASNO | Surrogate Analyte | Result | Units | Spike Amount | Percent Recovery | Control Limits |
|-------|--------------------|--------|-------|--------------|------------------|----------------|
| | 2-CHLOROANTHRACENE | 0.597 | ug/l | 1 | 60 | 15 - 117 |

U = Less than the Reporting Limit

Polynuclear Aromatic Hydrocarbons

Method SW8310

Lab Name: Paragon Analytics, Inc.

Work Order Number: 9709232

Client Name: IT Corporation

ClientProject ID: 768579-70300000

Reported on: Tuesday, November 04, 1997

| | | | |
|-------------------|---------------------------|---------------------------|----------------------|
| Field ID: MS1604 | Sample Matrix: liquid | Date Collected: 23-Sep-97 | Sample Aliquot: 1000 |
| Lab ID: 9709232-2 | % Moisture: N/A | Date Extracted: 29-Sep-97 | Final Volume: 1 |
| | Cleanup Method: NONE | Date Analyzed: 02-Oct-97 | Dilution: 1 |
| | Report Basis: AS RECEIVED | Prep Batch: 145102 | |

| CASNO | Target Analyte | Result | Units | Reporting Limit | Result Qualifier | Result Footnote |
|----------|------------------------|--------|-------|-----------------|------------------|-----------------|
| 91-20-3 | NAPHTHALENE | 0.5 | ug/L | 0.5 | U | |
| 208-96-8 | ACENAPHTHYLENE | 1 | ug/L | 1 | U | |
| 86-73-7 | FLUORENE | 0.1 | ug/L | 0.1 | U | |
| 83-32-9 | ACENAPHTHENE | 1 | ug/L | 1 | U | |
| 85-01-8 | PHENANTHRENE | 0.05 | ug/L | 0.05 | U | |
| 120-12-7 | ANTHRACENE | 0.1 | ug/L | 0.1 | U | |
| 206-44-0 | FLUORANTHENE | 0.1 | ug/L | 0.1 | U | |
| 129-00-0 | PYRENE | 0.05 | ug/L | 0.05 | U | |
| 56-55-3 | BENZO(A)ANTHRACENE | 0.05 | ug/L | 0.05 | U | |
| 218-01-9 | CHRYSENE | 0.05 | ug/L | 0.05 | U | |
| 205-99-2 | BENZO(B)FLUORANTHENE | 0.1 | ug/L | 0.1 | U | |
| 207-08-9 | BENZO(K)FLUORANTHENE | 0.05 | ug/L | 0.05 | U | |
| 50-32-8 | BENZO(A)PYRENE | 0.05 | ug/L | 0.05 | U | |
| 53-70-3 | DIBENZO(A,H)ANTHRACENE | 0.1 | ug/L | 0.1 | U | |
| | BENZO(GH)PERYLENE | 0.1 | ug/L | 0.1 | U | |
| 193-39-5 | INDENO(1,2,3-CD)PYRENE | 0.1 | ug/L | 0.1 | U | |

Surrogate Recovery

| CASNO | Surrogate Analyte | Result | Units | Spike Amount | Percent Recovery | Control Limits |
|-------|--------------------|--------|-------|--------------|------------------|----------------|
| | 2-CHLOROANTHRACENE | 0.588 | ug/l | 1 | 59 | 15 - 117 |

U = Less than the Reporting Limit

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Polynuclear Aromatic Hydrocarbons

Method SW8310

Lab Name: Paragon Analytics, Inc.

Work Order Number: 9709232

Client Name: IT Corporation

Client Project ID: 768579-70300000

Reported on: Tuesday, November 04, 1997

| | | | |
|-------------------|---------------------------|---------------------------|----------------------|
| Field ID: MS1605 | Sample Matrix: liquid | Date Collected: 23-Sep-97 | Sample Allquot: 1000 |
| Lab ID: 9709232-3 | % Moisture: N/A | Date Extracted: 29-Sep-97 | Final Volume: 1 |
| | Cleanup Method: NONE | Date Analyzed: 02-Oct-97 | Dilution: 1 |
| | Report Basis: AS RECEIVED | Prep Batch: 145102 | |

| CASNO | Target Analyte | Result | Units | Reporting Limit | Result Qualifier | Result Footnote |
|----------|------------------------|--------|-------|-----------------|------------------|-----------------|
| 91-20-3 | NAPHTHALENE | 0.5 | ug/L | 0.5 | U | |
| 208-96-8 | ACENAPHTHYLENE | 1 | ug/L | 1 | U | |
| 86-73-7 | FLUORENE | 0.1 | ug/L | 0.1 | U | |
| 83-32-9 | ACENAPHTHENE | 1 | ug/L | 1 | U | |
| 85-01-8 | PHENANTHRENE | 0.05 | ug/L | 0.05 | U | |
| 120-12-7 | ANTHRACENE | 0.1 | ug/L | 0.1 | U | |
| 206-44-0 | FLUORANTHENE | 0.1 | ug/L | 0.1 | U | |
| 129-00-0 | PYRENE | 0.05 | ug/L | 0.05 | U | |
| 56-55-3 | BENZO(A)ANTHRACENE | 0.05 | ug/L | 0.05 | U | |
| 218-01-9 | CHRYSENE | 0.05 | ug/L | 0.05 | U | |
| 205-99-2 | BENZO(B)FLUORANTHENE | 0.1 | ug/L | 0.1 | U | |
| 207-08-9 | BENZO(K)FLUORANTHENE | 0.05 | ug/L | 0.05 | U | |
| 50-32-8 | BENZO(A)PYRENE | 0.05 | ug/L | 0.05 | U | |
| 53-70-3 | DIBENZO(A,H)ANTHRACENE | 0.1 | ug/L | 0.1 | U | |
| | BENZO(GH)PERYLENE | 0.1 | ug/L | 0.1 | U | |
| 193-39-5 | INDENO(1,2,3-CD)PYRENE | 0.1 | ug/L | 0.1 | U | |

Surrogate Recovery

| CASNO | Surrogate Analyte | Result | Units | Spike Amount | Percent Recovery | Control Limits |
|-------|--------------------|--------|-------|--------------|------------------|----------------|
| | 2-CHLOROANTHRACENE | 0.632 | ug/l | | 63 | 15 - 117 |

U = Less than the Reporting Limit

0000:0

Polynuclear Aromatic Hydrocarbons

Method SW8310

Lab Name: Paragon Analytics, Inc.

Work Order Number: 9709232

Client Name: IT Corporation

Client Project ID: 768579-70300000

Reported on: Tuesday, November 04, 1997

Field ID: MS1608
Lab ID: 9709232-4

Sample Matrix: liquid

% Moisture: N/A

Cleanup Method: NONE

Report Basis: AS RECEIVED

Date Collected: 23-Sep-97

Date Extracted: 29-Sep-97

Date Analyzed: 02-Oct-97

Prep Batch: 145102

Sample Aliquot: 1000

Final Volume: 1

Dilution: 1

| CASNO | Target Analyte | Result | Units | Reporting Limit | Result Qualifier | Result Footnote |
|----------|------------------------|--------|-------|-----------------|------------------|-----------------|
| 91-20-3 | NAPHTHALENE | 0.5 | ug/L | 0.5 | U | |
| 208-96-8 | ACENAPHTHYLENE | 1 | ug/L | 1 | U | |
| 83-32-9 | ACENAPHTHENE | 1 | ug/L | 1 | U | |
| 86-73-7 | FLUORENE | 0.1 | ug/L | 0.1 | U | |
| 85-01-8 | PHENANTHRENE | 0.05 | ug/L | 0.05 | U | |
| 120-12-7 | ANTHRACENE | 0.1 | ug/L | 0.1 | U | |
| 206-44-0 | FLUORANTHENE | 0.1 | ug/L | 0.1 | U | |
| 129-00-0 | PYRENE | 0.05 | ug/L | 0.05 | U | |
| 56-55-3 | BENZO(A)ANTHRACENE | 0.05 | ug/L | 0.05 | U | |
| 218-01-9 | CHRYSENE | 0.05 | ug/L | 0.05 | U | |
| 205-99-2 | BENZO(B)FLUORANTHENE | 0.1 | ug/L | 0.1 | U | |
| 207-08-9 | BENZO(K)FLUORANTHENE | 0.05 | ug/L | 0.05 | U | |
| 50-32-8 | BENZO(A)PYRENE | 0.05 | ug/L | 0.05 | U | |
| 53-70-3 | DIBENZO(A,H)ANTHRACENE | 0.1 | ug/L | 0.1 | U | |
| | BENZO(GHI)PERYLENE | 0.1 | ug/L | 0.1 | U | |
| 193-39-5 | INDENO(1,2,3-CD)PYRENE | 0.1 | ug/L | 0.1 | U | |

Surrogate Recovery

| CASNO | Surrogate Analyte | Result | Units | Spike Amount | Percent Recovery | Control Limits |
|-------|--------------------|--------|-------|--------------|------------------|----------------|
| | 2-CHLOROANTHRACENE | 0.64 | ug/l | 1 | 64 | 15 - 117 |

U = Less than the Reporting Limit

Polynuclear Aromatic Hydrocarbons

Method SW8310

Method Blank

Lab Name: Paragon Analytics, Inc.

Work Order Number: 9709232

Client Name: IT Corporation

Client Project ID: 768579-70300000

Reported on: Tuesday, November 04, 1997

| | | | |
|--------------------------|-----------------------|---------------------------|----------------------|
| Field ID: LABQC | Sample Matrix: liquid | Date Collected: 30-Sep-97 | Sample Aliquot: 1000 |
| Lab ID: PAH-WRB1093097MB | % Moisture: N/A | Date Extracted: 30-Sep-97 | Final Volume: 1 |
| | Cleanup Method: NONE | Date Analyzed: 02-Oct-97 | Dilution: 1 |
| | Report Basis: NA | Prep Batch: 145103 | |

| CASNO | Target Analyte | Result | Units | Reporting Limit | Result Qualifier | Result Footnote |
|----------|------------------------|--------|-------|-----------------|------------------|-----------------|
| 81-20-3 | NAPHTHALENE | 0.5 | ug/L | 0.5 | U | |
| 208-96-8 | ACENAPHTHYLENE | 1 | ug/L | 1 | U | |
| 83-32-9 | ACENAPHTHENE | 1 | ug/L | 1 | U | |
| 86-73-7 | FLUORENE | 0.1 | ug/L | 0.1 | U | |
| 85-01-8 | PHENANTHRENE | 0.05 | ug/L | 0.05 | U | |
| 120-12-7 | ANTHRACENE | 0.1 | ug/L | 0.1 | U | |
| 206-44-0 | FLUORANTHENE | 0.1 | ug/L | 0.1 | U | |
| 129-00-0 | PYRENE | 0.05 | ug/L | 0.05 | U | |
| 58-55-3 | BENZO(A)ANTHRACENE | 0.05 | ug/L | 0.05 | U | |
| 218-01-9 | CHRYSENE | 0.05 | ug/L | 0.05 | U | |
| 205-99-2 | BENZO(B)FLUORANTHENE | 0.1 | ug/L | 0.1 | U | |
| 207-08-8 | BENZO(K)FLUORANTHENE | 0.05 | ug/L | 0.05 | U | |
| 50-32-8 | BENZO(A)PYRENE | 0.05 | ug/L | 0.05 | U | |
| 53-70-3 | DIBENZO(A,H)ANTHRACENE | 0.1 | ug/L | 0.1 | U | |
| 191-24-2 | BENZO(G,H,I)PERYLENE | 0.1 | ug/L | 0.1 | U | |
| 193-39-5 | INDENO(1,2,3-CD)PYRENE | 0.1 | ug/L | 0.1 | U | |

Surrogate Recovery

| CASNO | Surrogate Analyte | Result | Units | Spike Amount | Percent Recovery | Control Limits |
|-------|--------------------|--------|-------|--------------|------------------|----------------|
| | 2-CHLOROANTHRACENE | 0.704 | ug/l | 1 | 70 | 15 - 117 |

U = Less than the Reporting Limit

Attachment 2
TNRCC Assessment Report Form - Base Service Station

**TEXAS NATURAL RESOURCE CONSERVATION COMMISSION
PETROLEUM STORAGE TANK DIVISION
ASSESSMENT REPORT FORM**

This form should only be submitted when all information has been obtained as outlined in the document entitled *Guidance for Risk-Based Assessments at LPST Sites in Texas*. If the Table of Contents (page 2) is not fully completed, the TNRCC will return this form to the responsible party without review. This document must not be altered in any manner. Requested information denoted with "*" is beyond the minimal requirements for a site assessment as defined by 30 TAC 334.78(a)(5). Attach a workplan(s) and preapproval request(s) for those activities on sites eligible for reimbursement for the next appropriate activity.

LPST ID No: 104524 Facility ID No: 009696 Site priority: 2

Facility Name: Base Service Station

Facility Address: NAS Fort Worth, Carswell Field

City: Fort Worth State: Texas Zip: 76114

RP Name: Air Force Base Conversion Agency

RP Address: 6550 White Settlement Road

City: Fort Worth State: Texas Zip: 76114

I certify that all work has been conducted in accordance with accepted industry standards/practices and adhered to TNRCC guidance and rules. I certify that I am aware that misrepresentation of any of the above claims is a violation of 30 TAC 33.4453(b)(1)(E) and that this violation may result in the disciplinary actions set forth in 30 TAC 334.453 and or 334.463 and 334.465.

IT Corporation RCAS00429 12/13/97
(Registered Corrective Action Specialist) (RCAS Reg. No.) (Expiration date)

(Signature) _____ (Date)
972/570-2000 972/258-0399
(Telephone #) (FAX #)

Robert Schoenewe 00659 _____
(Project Manager) (CAPM Reg. No.) (Expiration date)

(Signature) _____ (Date)
972/570-2000 972-258-0399
(Telephone #) (FAX #)

By signature below, I certify that I have reviewed this report for completeness.

Olen Long Air Force Base Conversion Agency
(Name of Responsible Party Contact) (Company)

(Signature) _____ (Date)
817/731-8973 817/731-8137
(Telephone #) (FAX #)

mailing address: TNRCC/PST Division/RPR Section
MC 137
P.O. Box 13087
Austin, TX 78711-3087

SITE ASSESSMENT

LPST ID: 104524
 Site Name: Base Service Station
 Site Location: NAS Fort Worth, Carswell Field

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| Item | Title | Page | (■) Completed |
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| Worksheet 2.0 | Land Use | 5 | ■ |
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| Worksheet 5.0 | Site Assessment History | 9 | ■ |
| Worksheet 6.0 | Tank System Characterization | 10 | ■ |
| Worksheet 7.0 | Soil Assessment | 11-12 | ■ |
| Worksheet 8.0 | Groundwater Assessment | 13-14 | ■ NA □ |
| Worksheet 9.0 | Vapor Assessment | 15 | ■ |
| Worksheet 10.0 | Surface Water Assessment | 16 | ■ NA □ |
| Worksheet 11.1-5 | Plan A Evaluation | 17-22 | ■ |
| Worksheet 12.0 | Site Prioritization | 23-25 | ■ |
| Abbreviations | | 26 | |
| | | | (■) Enclosed |
| Attachment 1 | Site plan illustrating location of entire former/current UST/AST system(s), subsurface utilities, limits of excavation, system removal or repair, sampling points, and surface cover | | ■ |
| Attachment 2 | Vicinity map or aerial photograph illustrating surrounding land use and receptors identified within a 500-foot radius | | ■ |
| Attachment 3 | USGS topographic map with plotted water well locations | | ■ |
| Attachment 4 | Copies of completion details and water well drillers reports for located wells (0.5 mile radius) | | ■ |
| Attachment 5 | Site plan(s) illustrating former/current UST/AST system(s) and all (i.e., soil, groundwater, vapor, surface water) sampling points | | ■ |
| Attachment 6 | Soil contaminant concentration maps | | ■ |
| Attachment 7 | Groundwater gradient map | | ■ NA □ |
| Attachment 8 | Groundwater contaminant concentration maps | | ■ NA □ |
| Attachment 9 | Biodegradation Indicator Distribution Map* | | □ NA ■ |
| Attachment 10 | Soil Gas Survey Maps* | | ■ NA □ |
| Attachment 11 | Vapor Contaminant Concentration Map | | ■ |
| Attachment 12 | Surface Water Contaminant Concentration Map | | ■ NA □ |
| Attachment 13 | Surface Water Flow Map | | ■ NA □ |
| Attachment 14 | Soil boring logs to include: lithology, field screening, sample locations, well completion details, TNRCC Form 0019 | | ■ |
| Attachment 15 | Summary table of all soil, groundwater, surface water, and vapor analytical results, including from all sampling points, and tank removal or repair activities | | ■ |
| Attachment 16 | Summary tables of all gauging data, water level data, NAPL thickness and corrected water level data and well screen interval (if applicable) | | ■ NA □ |
| Attachment 17 | Copies of all analytical reports including complete chain-of-custody and quality assurance/quality control documentation | | ■ |
| Attachment 18 | Copies of manifests, waste receipts, or other documents necessary to document waste disposition | | □ |
| Attachment 19 | Photographic documentation | | ■ |
| Attachment 20 | Proposal for next appropriate action and/or Site Closure Request | | □ |

LPST ID: 104524

Site Name: Base Service Station

Site Location: Jennings & Rogner Drive, NAS Fort Worth, Fort Worth, Texas

EXECUTIVE SUMMARY

Check all applicable boxes.

UST/AST System Status: Active Permanently Removed from Service
 Temporarily Out of Service Temporarily Indefinitely Out of Service (Variance Due Date: _____)

Current site land use:
 vacant indus./coml. residential agricultural recreational UST/AST Facility

Sources of Release: tank(s) piping spills dispenser Other: _____

Substance Released:
 gasoline diesel waste oil hydraulic fluid AV gas jet fuel Other: _____

Site Assessment History:
 Preliminary/LSA Groundwater Monitoring Remedial Action Emergency Response

Affected environmental media: surficial soil (<2 ft. BGS) soil (2 to 15 ft. BGS) soil (> 15 ft. BGS)
 groundwater surface water air

Identified affected receptors: water wells basements/structures habitat building underground utilities
 surface water exposed contaminated soil Other Distance from site (ft.): _____

Samples collected yes no Abatement initiated: yes no Type: Tank Removal

Identified potential receptors: water wells basements/structures habitat building underground utilities
 surface water exposed contaminated soil Other Distance from site (ft.): _____

Depth to first encountered groundwater (ft.) BGS: > 50 15-50 0-15

Presence of NAPLs (ft.):
 sheen 0.1-0.5 ft. 0.5-2 ft. 2-5 ft. > 5 ft. none Recovery Initiated: yes no

Current NAPL extent: on-site off-site

Dissolved-phase extent: on-site off-site unknown

Groundwater beneficial use category:
 Cat. I Cat. II Cat. III Cat. IV Soils only affected, regional beneficial use can not be established.

Contaminants of Concern Exceed Target Concentrations of Affected media:
 Soil (Worksheets 7.0, 11.1-5): yes no
 Groundwater (Worksheet 8 & 11.1-4): yes no
 Vapors (Worksheet 9.0): yes no
 Surface Water (Worksheet 10.0): yes no

Site Priority: 1. _____ 2. X 3. _____ 4. _____

Recommended Actions:
 a) Affected Receptors Identified - Propose additional corrective action and/or monitoring program.
 b) Site does not exceed Plan A criteria - Submit site closure request form.
 c) Site does not exceed Plan A criteria - Propose verification groundwater monitoring program.
 d) Site exceeds Plan A criteria - Propose corrective action to achieve Plan A criteria.
 e) Site exceeds Plan A criteria - Propose Plan B risk assessment and/or evaluation.

SITE ASSESSMENT

Worksheet 1.0

LPST ID: 104524

SITE DESCRIPTION

Location Description

Facility Name: Base Service StationAddress: NAS Fort Worth, Carswell FieldCross-Street: Military Parkway and Davidson DriveCity: Fort WorthCounty: TarrantCurrent Site Water Supply: City of Fort Worth Water Department

Notes:

Topography

Terrain: Flat Steep Variable

Ground Surface Slope

Direction E Grade (ft./ft.) 0.03ft/ft

Other Comments:

*Discuss any significant onsite or adjacent significant topographic feature.**Drainage ditch to the immediate east of former UST location. Steep embankment (300 feet to east) to West Fork Trinity River (400 feet to east).*

Local Climate:

Average Annual Rainfall (in.): 31.5 in.Within 100 Year Floodplain: yes / no

Other Comments:

Discuss recent (i.e., within the past year) extreme climatic changes. Discuss engineered modifications to floodplain status or designation.

LPST ID: 104524

LAND USE

PAST, CURRENT, AND FUTURE USE (check all that apply)

Past use of site:
 Commercial/Industrial
 Residential
 Agricultural
 Recreational
 Vacant
 UST/AST Facility
 Past Predominant Land Use of the Area:
 Commercial/Industrial
 Residential

Describe: Gasoline (UST) station at military installation.

Current use of site:
 Commercial/Industrial
 Residential
 Agricultural
 Recreational
 Vacant
 UST/AST Facility
 Current Predominant Land Use of the Area:
 Commercial/Industrial
 Residential
 Type of Residential Area:
 Minority/Low Income
 Non-minority/Low Income
 Other

Describe: Vacant (unused) facility at military installation.

Future use of site:
 Commercial/Industrial
 Residential
 Agricultural
 Recreational
 Vacant
 UST/AST Facility
 Future Predominant Land Use of the Area:
 Commercial/Industrial
 Residential

Describe: Site will remain within military installation. Future use may include resumption of gasoline sales.

List all facilities (not limited to PST regulated) within 500 feet of the site that could be a source of contaminants: Other Comments:

Facility Name & Type: Base Gas Station (AST)
 Address: Davidson Drive and Desert Storm Road
 Facility No.: N/A
 LPST ID No.: N/A
 Owner/Operator: U. S. Department of Defense

Additional facilities may be listed and noted on Attachment 2.

Facility Name & Type: Chevron Product Pipeline
 Address: Located between Trinity River & eastern boundary fence.
 Facility No.: N/A
 LPST ID No.: N/A
 Owner/Operator: Chevron Pipeline Company

Facility Name & Type: _____
 Address: _____
 Facility No.: _____
 LPST ID No.: _____
 Owner/Operator: _____

LPST ID: 104524

WATER WELL INVENTORY

SUMMARY OF WELLS WITHIN 0.5 MILE RADIUS OF THE SITE

| | Total No. | Active No. | Downgradient Direction | | |
|-------------------|-----------|------------|------------------------|------------|-------------------------------|
| | | | Total No. | Active No. | No. Screened in Affected Zone |
| Public/Municipal: | 0 | 0 | 0 | 0 | 0 |
| Industrial: | 0 | 0 | 0 | 0 | 0 |
| Domestic: | 5 | 4 | 2 | 1 | 0 |
| Agricultural: | 1 | 1 | 1 | 1 | 0 |

POTENTIAL RECEPTOR POINTS

| | Closest Downgradient Water Well | Closest Downgradient Well Screened Within Affected Zone |
|--|---------------------------------|---|
| Well No./Designation: | 32-13-912 | N/A |
| Distance from Site (ft.): | 2,500' East | N/A |
| Total Well Depth (ft.): | 200 feet | N/A |
| Current Use of Water: | Domestic Supply | N/A |
| Screened Interval below Ground Surface (ft): | 150 feet to 200 feet | N/A |
| Year Constructed: | 1971 | N/A |

Comments: *(Include discussion of any ordinances which prevent or influence the future installation of water wells at the site or surrounding area.)*

LPST ID: 104524

RECEPTOR SURVEY

Underground Utility Survey **Other Comments:**

Nearest Underground Utility
 Name: _____ N/A
 Type: _____ Sanitary Sewer
 Depth of Utility: _____ Unknown
 Distance & Direction: _____
 From Affected Zone: _____ 40 feet to south

Discuss other receptors and indicate on Attachment 2. If affected discuss abatement measures.

Nearest Downgradient Utility
 Name: _____
 Type: _____
 Depth of Utility: _____
 Distance & Direction: _____
 From Affected Zone: _____

Building Survey **Other Comments:**

Nearest Building
 Name: _____ Building 1518
 Type: _____ Base Service Station Bays
 Distance & Direction: _____
 From Affected Zone: _____ Overlies Site

Discuss nearest and other receptors and indicate on Attachment 2. Buildings should include residences, schools, day care facility, nursing home, etc.

Nearest Downgradient Building
 Name: _____
 Type: _____ Residential Area
 Distance & Direction: _____
 From Affected Zone: _____ 1200' east & across
 West Fork Trinity River

Surface Water Hydrology **Other Comments:**

Nearest Surface Water
 Name: _____ West Fork Trinity River
 Type: _____ Perennial
 Distance & Direction: _____
 From Affected Zone: _____ 450 feet NE

If affected complete Worksheet 10.0. Describe potential for affected storm water or groundwater discharge to surface water feature.

Impacted Surface Water
 Name: _____ West Fork Trinity River
 Type: _____ Perennial
 Distance & Direction: _____
 From Affected Zone: _____ 450 feet NE

Nearest Downgradient Surface Water
 Name: _____ West Fork Trinity River
 Type: _____ Perennial
 Distance & Direction: _____
 From Affected Zone: _____ 450 feet NE

SITE ASSESSMENT

Worksheet 4.0 (cont.)

LPST ID: 104524

HABITAT SURVEY

Presence of Sensitive Habitat

Site located within or affects a sensitive or protected habitat? yes (explain below) no

Name: _____

Location: _____

Discussion: *Provide the habitat type (wildlife sanctuary, wetlands, etc.), condition, regulatory authority, and other information relative to habitat characterization.*

SUMMARY AND RECOMMENDED ACTION

| Observed or Potential Impacts | - | Recommended Action |
|---|---|---|
| <input type="checkbox"/> None observed or anticipated | - | No action required |
| <input type="checkbox"/> Potential for Significant Impact | - | Additional Corrective Action Required (See Attachment 20) |
| <input checked="" type="checkbox"/> Significant Impact Observed | - | Additional Corrective Action Required (See Attachment 20) |

Comments: *Discuss any emergency abatement and continued corrective action.*

Tanks removed in 1993. Three hundred ten (310) feet of fuel line was capped and 75 feet was removed. Ongoing groundwater monitoring.

LPST ID: 104524

SITE ASSESSMENT HISTORY

SUMMARY OF PREVIOUS SITE ACTIVITIES

Typical site activities to be recorded include:

- Preliminary/Limited/Comprehensive Site Assessment
- Emergency Response ● Risk/Exposure Assessment ● Remedial/Corrective Actions

Types of sampling to be included: ● Soil ● Groundwater ● Surface Water ● Vapors

| Date Completed | Description of Activity | Sampling and Testing | Result/Impact/Target Cleanup |
|-----------------------|---|----------------------|---|
| Between 1972 and 1983 | Two leaking flex lines replaced. | None | Leak stopped. |
| 12/83 | Leaking flex line replaced. | None | Leak stopped. |
| 11/84 | Leaking rubber transfer line to pump replaced. | None | Leak stopped. |
| 12/84 | Undocumented quantity of gasoline removed from drainage ditch adjacent to site. | None | Fuel removed. |
| 2/88 | Soil boring BSS-D drilled and wells BSS-A, BSS-B, and BSS-C installed. | | Data obtained and reported. Site designated ST16 for further investigation under Air Force IRP. |

SITE ASSESSMENT

Worksheet 5.0

LPST ID: 104524

SITE ASSESSMENT HISTORY

SUMMARY OF PREVIOUS SITE ACTIVITIES

Typical site activities to be recorded include:

- Preliminary/Limited/Comprehensive Site Assessment
- Emergency Response • Risk/Exposure Assessment • Remedial/Corrective Actions

Types of sampling to be included: • Soil • Groundwater • Surface Water • Vapors

| Date Completed | Description of Activity | Sampling and Testing | Result/Impact/Target Cleanup |
|----------------|---|---|--|
| 4/92 | Petroleum seep observed in West Fork Trinity River. Booms placed into river to contain/remove petroleum. NOV issued by TWC. | None | TWC notified, TWC issued NOV for release to river. |
| 8/92 | Monitoring wells MW-1 and MW-2 installed. Geophysics detected hydrocarbon plume east of site. | Groundwater and soil analysis by EPA 418.1, EPA 8020. | See attached Tables 4-1 and 6-1. |
| 9/92 | Tanks failed leak test. MW-3 installed. | Groundwater and soil analysis by EPA Method 418.1, 8020, and 120.1. | See attached Tables 4-1 and 6-1. |
| 10/92 | MW-4, MW-5, MW-6 installed. | Leak Tech Report NA | Leak Tech Report NA |
| 12/92 | Soil borings ST16-1, ST16-2, ST16-3 drilled along fuel lines. | Soil analysis by EPA 8020, EPA 6010, EPA 418.1. | See attached Table 4-1. |

LPST ID:104524

SITE ASSESSMENT HISTORY

SUMMARY OF PREVIOUS SITE ACTIVITIES

Typical site activities to be recorded include:

- Preliminary/Limited/Comprehensive Site Assessment
- Emergency Response • Risk/Exposure Assessment • Remedial/Corrective Actions

Types of sampling to be included: • Soil • Groundwater • Surface Water • Vapors

| Date Completed | Description of Activity | Sampling and Testing | Result/Impact/Target Cleanup |
|----------------|---|---|--|
| 2/93 | Soil gas survey performed. | 86 samples 4'-9'. EPA 602 modified. | Highest concentration total FID volatiles calculated in $\mu\text{g/l}$ at sample location #80 @ 144,800 $\mu\text{g/l}$. |
| 4/93 | Wells SAV-1 and SAV-2 installed as recovery wells. | Soil data not available. Groundwater sampled and analyzed at later date. | See attached Table 6-1. |
| 5/93 | SAV-1 SAV-2, BSS-A, BSS-B, MW-1, MW-2, MW-3, MW-4, MW-5, MW-6, SED-1, SW-1, SW-2, SW-3, SW-4, SW-5 sampled. | Groundwater: EPA 8020, 8240, 418.1, 7421, 160.1, 8310 Surface Waters: EPA 8240, 418.1, 7421, 8310 Shallow Soils: EPA 8240, 418.1, 7421, 8310 | See attached Tables 4-1, 4-2, 6-1, and 7-1. |
| 5/93 | USTs removed and fuel lines were capped. | Soil samples tested from tankhold by EPA Methods 418.1, 8020 and 7420. | See attached Table 4-2. |
| 9/93 | SED-1A collected. | Analysis: EPA 8240, 418.1, 7421, and 8310 (BTEX, TPH, Lead, PAH) | See attached Table 4-2. |

SITE ASSESSMENT

Worksheet 5.0

LPST ID: 104524

SITE ASSESSMENT HISTORY

SUMMARY OF PREVIOUS SITE ACTIVITIES

Typical site activities to be recorded include:

- Preliminary/Limited/Comprehensive Site Assessment
- Emergency Response • Risk/Exposure Assessment • Remedial/Corrective Actions

Types of sampling to be included: • Soil • Groundwater • Surface Water • Vapors

| Date Completed | Description of Activity | Sampling and Testing | Result/Impact/Target Cleanup |
|----------------|---|---|--|
| 10/93 | SW/SED-2A, SW-3A, SW/SED-4A, and SW/SED-5A sampled. | Shallow soils (SED): EPA 8240, 418.1, 7421, 8310 Surface Water (SW): EPA 8240, 418.1, 7421, 8310 | See attached Tables 4-2 and 7-1. |
| 12/93 | MW-7 through MW-12 installed. BSS-C plugged. | Soils and groundwater tested by EPA Methods 418.1, 8020, 7421, and 160.1 | See attached Tables 4-1, 4-2, 6-1, and 7-1. |
| 1/94 | SAV-1, SAV-2, BSS-A, BSS-B, and MW-1 through MW-12 sampled. | Groundwater: EPA 8020, 8240, 418.1, 7421, 160.1, 8310 | See attached Table 6-1. |
| 6/94 | Comprehensive Site Assessment prepared. | Groundwater and Sediments tested by EPA Methods 418.1, 8020, 8310, 7421, and field methods. | See attached BSS Comprehensive Site Assessment report. |
| 4/95 | Quarterly Base-Wide Groundwater Monitoring | Groundwater tested by EPA Methods 8260, 8270, and 6010 | See attached Table 6-1. |

LPST ID: 104524

UST/AST SYSTEM CHARACTERIZATION

| Release Information | Other Comments: |
|---|---|
| <p>UST/AST System Status: <input type="checkbox"/> Active <input checked="" type="checkbox"/> Permanently Removed From Service <input type="checkbox"/> Temporarily Out of Service <input type="checkbox"/> Temporarily/Indefinitely Out of Service (Due Date: _____)</p> <p>Method of release discovery: <input type="checkbox"/> UST Removal <input type="checkbox"/> Release Detection Equipment <input type="checkbox"/> Divestiture Assessment <input checked="" type="checkbox"/> Inventory Control <input checked="" type="checkbox"/> System Tightness Testing <input checked="" type="checkbox"/> Other: <u>Seepage into ditch</u></p> <p>Substance released (check all that apply): <input checked="" type="checkbox"/> Gasoline <input type="checkbox"/> Diesel <input type="checkbox"/> Waste Oil <input type="checkbox"/> AV Gas <input type="checkbox"/> Jet Fuel <input type="checkbox"/> Hydraulic Fluid <input type="checkbox"/> Other: _____</p> <p>Source of release(s): Date Discovered: <input type="checkbox"/> Spills/overfills _____ <input checked="" type="checkbox"/> Piping _____ 1992-1993, 1983, 1984 <input type="checkbox"/> Dispenser _____ <input checked="" type="checkbox"/> Tank _____ 1992 <input type="checkbox"/> Other _____</p> | <p><i>Describe the measures taken to abate the release:</i></p> <p>USTs removed. Piping capped. Floating product recovered.</p> |

| Removal Information | Other Comments: |
|---|--|
| <p>Date(s) of removal(s): _____ 5/93</p> <p>Type of removal: <input checked="" type="checkbox"/> Removal from the ground <input type="checkbox"/> Closure in place</p> <p>Water in tankhold during excavation? <input checked="" type="checkbox"/> yes <input type="checkbox"/> no</p> <p>Depth of water in tankhold (BGS): <input type="checkbox"/> < 5 ft. <input checked="" type="checkbox"/> 5-10 ft. <input type="checkbox"/> 11-15 ft. <input type="checkbox"/> None</p> <p>NAPL: <input type="checkbox"/> yes <input checked="" type="checkbox"/> no Thickness (ft.): _____</p> <p>Water Evacuated from tankhold: <input type="checkbox"/> yes <input checked="" type="checkbox"/> no Volume (gal.): _____</p> <p>Groundwater recharged into tankhold: <input checked="" type="checkbox"/> yes <input type="checkbox"/> no Depth (ft. BGS): <u>6ft BGS</u></p> <p>Status of excavation(s): <input type="checkbox"/> Open with water <input type="checkbox"/> Open/dry <input checked="" type="checkbox"/> Backfilled with impervious cover <input type="checkbox"/> Backfilled with no impervious cover</p> <p>Type of fill material: <input checked="" type="checkbox"/> Untreated backfill <input type="checkbox"/> Treated backfill <input type="checkbox"/> Other <input type="checkbox"/> Clean fill - gravel <input checked="" type="checkbox"/> Clean fill - sandy/clay</p> | <p><i>Provide the maximum contaminant concentrations milligrams per kilograms (mg/kg) of untreated backfill returned to the tankhold(s): Benzene N/A TEX N/A TPH 630 OTHER 1119 (BTEX) 15 (Lead). If a new UST/AST system was installed describe & indicate on Attachment 1.</i></p> |

| Maximum level of contamination detected in native soils upon completion of removal/repair (mg/kg): | | | | |
|--|-------------|-------------------------|-----------------------------------|-------------------------------|
| Chemical of Concern | Sample Date | Sample Location/Depth | Laboratory Method Detection Limit | Maximum Concentration (mg/kg) |
| Benzene | 5/12/93 | Southeast wall, 8ft BGS | N/A | 14 |
| Toluene | 5/12/93 | Northeast wall, 8ft BGS | N/A | 110 |
| Ethylbenzene | 5/12/93 | Southeast wall, 8ft BGS | N/A | 51 |
| Total Xylenes | 5/12/93 | Southeast wall, 8ft BGS | N/A | 960 |
| TPH | 5/12/93 | Southeast wall, 8ft BGS | 10 | 630 |
| Metals | N/A | | | |
| VOC | N/A | | | |
| Other Total BTEX | 5/12/93 | Southeast wall, 8ft BGS | N/A | 1119 |
| Other <u>Lead</u> | 5/12/93 | South wall, 8ft BGS | N/A | 15 |

SITE ASSESSMENT

Worksheet 7.0

LPST ID: 104524

SOIL ASSESSMENT

SOIL DATA COLLECTION AND EVALUATION

Number of soil sampling points: 33Method of determination: Direct Push Borings Other: Sharpshooter - Shallow SurfaceSurface cover over affected soil zone (check all that apply):
 Concrete Asphalt Gravel Dirt Grass Other:Percent of affected soil zone covered with impervious cover:
 0-25 % 25-50 % 50-75 % 75-100 %If there is no impervious surface cover, is there public access to the affected surface (0-2 ft.) soil? yes noAffected soil zone thickness (ft.): 10'*Affected soil zone surface area dimensions (ft.): UnknownMaximum depth of contamination exceeding appropriate Plan A risk-based levels: 10 ft. BGS*Estimated volume of soil exceeding Plan A target concentration (yd³): Unknown*Minimum distance from affected soil zone to property boundary: 0-10 ft. 10-50 ft. 50-100 ft.
 100-300 ft. 300-500 ft. > 500 ft. Extends beyond property boundaryWaste disposal: Landfill On-site treatment Off-site treatment
 Other Pending None

Maximum level of contamination detected in native soils (mg/kg):

| Chemical of Concern | Sample Date | Sample Depth (ft.) | Sample ID | Laboratory Method Detection Limit | Max Conc. (mg/kg) | Target Cleanup Goals † |
|---------------------|-------------|--------------------|------------------|-----------------------------------|-------------------|------------------------|
| Benzene | 5/12/93 | 10' | CAF13-1518-D-SEW | EPA 8020 | 14 | 0.74 |
| Toluene | 9/28/93 | 0' - 2' | SED-1A | EPA 8020 | 287 | 503 |
| Ethylbenzene | 9/28/93 | 0' - 2' | SED-1A | EPA 8020 | 118 | 835 |
| Total Xylenes | 5/12/93 | 10' | CAF13-1518-D-SEW | EPA 8020 | 960 | 968 |
| TPH | 10/8/92 | 0' - 5' | MW-3 | EPA 418.1 | 12,000 | N/A |
| Total Lead | 10/28/93 | 0' - 2' | SED-2A | EPA 7421 | 52 | N/A |
| Naphthalene | 9/28/93 | 0' - 2' | SED-1A | EPA 8310 | 36 | 389 |
| Other _____ | | | | | | |
| Other _____ | | | | | | |

* Beyond the minimal requirements for a Site Assessment as defined by 30 TAC 334.

† Refer to Worksheets 11.1-5 and Risk-Based Corrective Action for Leaking Storage Tank Sites, RG-36, Table A-1.

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*** Geotechnical soil parameters:**

| Parameter | Result | Depth | Location/Sample ID | Method of Determination |
|--|-----------|--------|--------------------|-------------------------|
| Dry Bulk Density (g/m ³): | 120.3 pcf | 7 - 8' | MW-8/ 93/4753 | ASTM D 2937 |
| | 96.5 pcf | 2 - 4' | MW-10/ 93/4752 | |
| Effective Porosity (%): | 27% | 7 - 8' | MW-8/ 93/4753 | Calculated |
| | 42.1% | 2 - 4' | MW-10/ 93/4752 | |
| Fraction Organic Carbon (g/g): | 2.1% | 7 - 8' | MW-8/ 93/4753 | ASTM D 2974 |
| | 1.8% | 2 - 4' | MW-10/ 93/4752 | |
| Intrinsic Permeability (cm ²): | N/A | N/A | N/A | N/A |
| Water Content (cm ³ /cm ³): | 12.1% | 7 - 8' | MW-8/ 93/4753 | ASTM D 2216 |
| | 14.2% | 2 - 4' | MW-10/ 93/4752 | |
| Other Specific Gravity | 2.64 | 7 - 8' | MW-8 /934753 | ASTM D 854 |
| | 2.67 | 2 - 4' | MW-10/ 93/4752 | |

*** Biodegradation Indicators:**

Present spatial distribution of O₂, CO₂, CH₄, etc. levels on map. (Attachment 9)

Not Available.

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GROUNDWATER ASSESSMENT

GROUNDWATER DATA AND EVALUATION

Groundwater affected by release: yes no (If no, complete only the Beneficial Groundwater Use Categories on this Worksheet.)

| Site Hydrogeology | Upper Most Zone | Other |
|--|------------------------|------------------------|
| Depth to groundwater (ft.) | Terrace - 5' to 15' | Paluxy - 30' to 40' |
| Aquifer type (Perched, confined, unconfined) | Unconfined | Confined |
| *Estimated Aquifer thickness (ft.) | 5' to 45' | 150' |
| *Water level fluctuations (± ft.) | ± 5 ft. | ± 1 ft. |
| Gradient (ft./ft.)/Direction | 1'/25' / East/SE | Unknown / Southeast |
| *Saturated hydraulic conductivity (ft./day) | 2.9 x 10 ⁻¹ | 3,700 spd/ft |
| *Approximate well yield (gpd) | Unknown | Unknown |
| Lithology | Clay, Sand, Gravel | Limestone, Sand, Shale |
| Geologic Formation | Pleistocene Terrace | Paluxy Formation |
| Major/minor aquifer name | Trinity River Alluvium | Paluxy |
| Total dissolved solids (mg/l) | 464 mg/l to 1035 mg/l | Unknown |
| Confining layer depth (ft. BGS) | None | 20' |
| Confining layer thickness (ft.) | None | 20' |

Beneficial Groundwater Use Categories

Mark the potential beneficial use category for the impacted zone and indicate the selection criteria. Complete the appropriate worksheet (11.1-5) for the Category indicated.

| <input type="checkbox"/> Category I | <input checked="" type="checkbox"/> Category II | <input type="checkbox"/> Category III | <input type="checkbox"/> Category IV |
|---|--|---|--|
| <input type="checkbox"/> Impacted or threatened water supply well(s)† | <input checked="" type="checkbox"/> Affected groundwater zone TDS <3,000 ppm, and no beneficial use† is documented within 0.5 miles of the site. | <input type="checkbox"/> Affected groundwater zone TDS 3,000 - 10,000 ppm, and no beneficial use† within 0.5 miles of the site. | <input type="checkbox"/> Affected groundwater zone TDS >10,000 ppm, and no beneficial use† is documented within 0.5 miles of the site. |
| OR <input type="checkbox"/> Affected groundwater zone TDS <3,000 ppm, and water well(s)‡ or water supply spring within 0.5 miles of the site. OR <input type="checkbox"/> Soils only affected. Regional groundwater beneficial use† cannot be established. | OR <input type="checkbox"/> TDS 3,000 - 10,000 ppm, and beneficial use† is documented within the 0.5 miles of the site. | | OR <input type="checkbox"/> Well yield <150 gpd (i.e., affected zone is not considered to have a beneficial use†) |

‡ If construction details of water well(s) are unknown or can not be proven, the interval is assumed to be connected.

† Applies to a drinking water source producing from the same or connected interval as the affected groundwater zone.

Groundwater Sampling Points

| | On-Site (provide well ID) | *Beyond Property Boundary (provide well ID) |
|---|------------------------------|--|
| Number of Sampling points: | 16 | None |
| | See Attached Table 1 | |
| Number of permanent monitoring wells: | 16 | None |
| Static water levels above screened intervals: <input type="checkbox"/> yes <input checked="" type="checkbox"/> no | | None |

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DISSOLVED-PHASE PLUME

*Aerial extent of dissolved-phase plume (ft²): 143,000.

*Distance from edge of plume to property boundary if on-site: < 10 ft. 10-50 ft. 50-100 ft. 100-300 ft. > 300 ft.

*Distance from property boundary to edge of plume if off-site: < 10 ft. 10-50 ft. 50-100 ft. 100-300 ft. > 300 ft.

Maximum level of contamination detected in groundwater (mg/l):

| Contaminant | Sample Date | Sample ID | Laboratory Method Detection Limit | Maximum Concentration (mg/l) | Target Cleanup Goals† |
|---------------|-------------|-----------|--------------------------------------|---------------------------------|-----------------------|
| Benzene | 5/13/93 | BSS-B | EPA 8020 | 13.0 | 0.0294 |
| Toluene | 1/6/94 | BSS-B | EPA 8240 | 25.2 | 21.6 |
| Ethylbenzene | 1/4/94 | MW-1 | EPA 8240 | 4.61 | 3.65 |
| Total Xylenes | 1/3/94 | MW-10 | EPA 8240 | 13.9 | 73 |
| MTBE | 1/3/94 | MW-10 | EPA 8240 | 6.09 | N/A |
| TPH | 1/3/94 | MW-10 | EPA 418.1 | 9.8 | N/A |
| Naphthalene | 1/3/94 | MW-10 | EPA 8310 | 0.704 | 1.46 |
| Other Lead | 1/5/94 | SAV-2 | EPA 7421 | 0.041 | N/A |

† Refer to Worksheet 11.1-3 and the Risk-Based Correction Action for Leaking Storage Tank Sites, RG-36, Table A1.

NAPL PLUME

NAPL Present? yes no

| | On-Site (provide well ID) | Thickness (ft.) | *Beyond Property Boundary (provide well ID) | Thickness (ft.) |
|---------------------------------------|---------------------------------|-----------------|---|-----------------|
| Current maximum NAPL thickness (ft.): | | 0 | None | |
| | | | | |
| | | | | |

NAPL recovery method: hand bail passive skimmer sorbent socks automated system none

Volume recovered to date (gals.): _____

*Aerial extent of NAPL plume: (ft²) 0 beyond property boundary

*Distance from edge of NAPL plume to property boundary if on-site: < 10 ft. 10-50 ft. 50-100 ft. 100-300 ft. > 300 ft.

*Distance from edge of NAPL plume from property boundary if off-site: < 10 ft. 10-50 ft. 50-75 ft. 75-100 ft. > 100 ft.

*** Biodegradation Indicators:**

Present spatial distribution of dissolved Oxygen, dissolved CO₂, dissolved CH₄, Fe, SO₄, or other alternate electron acceptors on isoconcentration map. (Attachment 9)

SITE ASSESSMENT

Worksheet 9.0

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VAPOR ASSESSMENT

VAPOR DATA AND EVALUATION

Known vapor impact: yes noLocation: ambient air utilities residences
 hospital school/day care commercial buildings other: _____Lower Explosive Limit (LEL) concentrations: not measured measured calculated¹NAPL present or soil concentration near saturation (for calculating soil vapor concentrations, refer to *Risk-Based Correction Action for Leaking Storage Tank Sites, RG-36*): yes no Depth (ft. BGS): _____

Vapor monitoring data:

| Sample No. | Location | Depth | % LEL | Total Organic Vapors (ppmv) | Benzene (ppmv) | Other |
|------------|----------|-------|-------|-----------------------------|----------------|-----------------|
| 80 | 80 | 9 | N/A | 141.8 | 0.4 | Toluene 0.64 |
| 81 | 81 | 9 | N/A | 62.61 | 0.1 | Toluene 0.35 |
| 79 | 79 | 9 | N/A | 28.08 | 0.03 | Toluene 0.23 |
| 74 | 74 | 4 | N/A | 21.0 | 0.1 | Toluene 0.25 |
| 76 | 76 | 9 | N/A | 3.59 | 0.04 | Toluene 0.03 |
| 91 | 91 | 9 | N/A | 0.24 | 0.005 | Toluene 0.01 |
| 86 | 86 | 9 | N/A | 0.13 | 0 | Toluene 0.01 |

If vapor concentrations exceed 25% of the LEL or other potential for explosive vapor exist in surface or subsurface structure, describe affected area, methods of determination, and any abatement measure. Identify and discuss any occupational or indoor air exposures to released contaminants. Provide all calculations for the determination of the target concentrations:

A soil gas survey was performed in 1993 by Target Environmental Services, Inc. Soil gas samples were obtained from 86 locations ranging in depth from 4' to 9' BGS. All soil gas samples were analyzed by EPA Method 602 (modified)

¹LEL% should reflect whole mixture evaluation. If more than one compound is present, actual measurement of vapors will typically be warranted.

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SURFACE WATER ASSESSMENT

SURFACE WATER DATA AND EVALUATION

Surface water(s) affected: yes no Name: West Fork Trinity River Type: River
 Name: Drainage Ditch Type: Surface Drainage

NAPL present on surface water or run off: yes no

NAPL recovery method: passive skimmer sorbent socks automated system booms other _____ none

Volumes recovered to date (gals.): Unknown

Aerial extent of NAPL plume (ft.²): Unknown - Sheen Only

Uses of affected surface water: drinking water contact recreation habitat for endangered species agriculture

Is a public or domestic surface water intake impacted? yes no

If impacted lake or pond, indicate affected surface area (ft.²): _____

Average depth of surface water (ft.): 20' in river; > 1 foot ditch

Maximum level of contamination detected in surface water (mg/l):

| Contaminant | Sample Date | Sample Location & ID | Laboratory Method Detection Limit | Maximum Concentration (mg/l) | Target Cleanup Goals† |
|-------------------|-------------|----------------------|-----------------------------------|------------------------------|-----------------------|
| Benzene | 05/14/93 | SW-2 | EPA 8240 | 0.024 | 0.005 |
| Toluene | 10/22/93 | SW-2A | EPA 8240 | 0.112 | |
| Ethylbenzene | 10/22/93 | SW-2A | EPA 8240 | 0.010 | |
| Total Xylenes | 10/22/93 | SW-2A | EPA 8240 | 0.103 | |
| MTBE | 05/14/93 | SW-2 | EPA 8240 | 0.350 | |
| TPH | 05/14/93 | SW-3 | EPA 418.1 | 1.1 | |
| Naphthalene | 5/93&10/93 | All Locations | EPA 8310 | Non Detect | |
| Other <u>Lead</u> | 10/22/93 | SW-2A | EPA 7421 | 0.002 | 0.005 |
| Other _____ | | | | | |

† Refer to 30 TAC, Chapter 307, the MCL or the *Risk-Based Correction Action for Leaking Storage Tank Sites*, RG-36.

Describe affected area, methods of determination an any abatement measures. Discuss the migration pathway between the source of contamination and the surface water body.

Release is through seep on river bank, presumably as discharge from groundwater. Seep is occasional (during rain events) and results in sheen on water. Sheen removed by absorbent pads.

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PLAN A EVALUATION

CATEGORY II: Soil and Groundwater Target Cleanup Level Determination

- Complete this worksheet for Category II sites. Indicate the maximum detected concentration for the chemicals of concern.
- If groundwater is > 15 feet BGS, calculate groundwater protective soil concentrations using the equilibrium partition equation on Worksheet 11.5 (when site specific geotechnical parameters have been analyzed).
- Check the box for each compound that exceeds the target concentrations. If any boxes are checked, further corrective action (i.e. monitoring, Plan B, CAP) will be required.
- If other chemicals of concern are present but not listed, refer to Risk-Based Corrective Action for Leaking Storage Tank Sites (RG-36)

| Chemical of Concern | GROUNDWATER (mg/l) | | | SOIL (mg/kg) | | |
|------------------------|--|--------------------------|--|--------------------------|---------------------------------|--------------------------|
| | TARGET CONC. | MAX. LAB. ANALYZED CONC. | Depth to Affected Soil ≤ 15 ft. | | Depth to Affected Soil > 15 ft. | |
| | | | TARGET CONC. | MAX. LAB. ANALYZED CONC. | TARGET CONC. | MAX. LAB. ANALYZED CONC. |
| BENZENE | <input checked="" type="checkbox"/> 0.0294 | 5.26 | <input checked="" type="checkbox"/> 0.74 | 14 | <input type="checkbox"/> 0.74 | |
| ETHYLBENZENE | <input checked="" type="checkbox"/> 3.65 | 4.85 | <input type="checkbox"/> 835 | 51 | <input type="checkbox"/> 835 | |
| TOLUENE | <input checked="" type="checkbox"/> 7.3 | 21.6 | <input type="checkbox"/> 503 | 94 | <input type="checkbox"/> 503 | |
| XYLENE | <input type="checkbox"/> 73 | 13.9 | <input type="checkbox"/> 968 | 960 | <input type="checkbox"/> 968 | |
| ACENAPHTHENE | <input type="checkbox"/> 2.19 | 0.454 | <input type="checkbox"/> 314 | | <input type="checkbox"/> 314 | |
| ANTHRACENE | <input type="checkbox"/> 11 | | <input type="checkbox"/> 13 | | <input type="checkbox"/> 13 | |
| BENZO(A)ANTHRACENE | <input type="checkbox"/> 0.00117 | | <input type="checkbox"/> 0.877 ^H | | <input type="checkbox"/> 32 | |
| BENZO(B)FLUORANTHENE | <input type="checkbox"/> 0.00117 | | <input type="checkbox"/> 0.877 ^H | | <input type="checkbox"/> 129 | |
| BENZO(K)FLUORANTHENE | <input type="checkbox"/> 0.0117 | | <input type="checkbox"/> 8.77 ^H | | <input type="checkbox"/> 47 | |
| BENZO(A)PYRENE | <input type="checkbox"/> 0.000117 | | <input type="checkbox"/> 0.0877 ^H | | <input type="checkbox"/> 220 | |
| CHRYSENE | <input type="checkbox"/> 0.117 | | <input type="checkbox"/> 7.2 | | <input type="checkbox"/> 7.2 | |
| DIBENZO(A,H)ANTHRACENE | <input type="checkbox"/> 0.000117 | | <input type="checkbox"/> 0.0877 ^H | | <input type="checkbox"/> 33 | |
| FLUORANTHENE | <input type="checkbox"/> 1.46 | | <input type="checkbox"/> 156 | | <input type="checkbox"/> 156 | |
| FLUORENE | <input type="checkbox"/> 1.46 | | <input type="checkbox"/> 247 | | <input type="checkbox"/> 247 | |
| INDENO(1,2,3-CD)PYRENE | <input type="checkbox"/> 0.00117 | | <input type="checkbox"/> 0.877 ^H | | <input type="checkbox"/> 17 | |
| NAPHTHALENE | <input type="checkbox"/> 1.46 | 0.700 | <input type="checkbox"/> 389 | | <input type="checkbox"/> 389 | |
| PYRENE | <input type="checkbox"/> 1.1 | | <input type="checkbox"/> 99 | | <input type="checkbox"/> 99 | |
| OTHER MTBE | <input type="checkbox"/> | 18.60 | <input type="checkbox"/> | | <input type="checkbox"/> | |
| OTHER PAH | <input type="checkbox"/> | | <input type="checkbox"/> | | <input type="checkbox"/> | |
| OTHER Lead | <input type="checkbox"/> | 0.019 | <input type="checkbox"/> | | <input type="checkbox"/> | |

H - Value represents health-based concentration

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PRIORITY 2 SITES

| PRIORITY | | ACTIONS |
|---|---|---|
| <input type="checkbox"/> 2.1 | Soils or water contaminated by the release are exposed and unsecured from public access and dwellings, playgrounds, parks, day care centers, schools, or similar use facilities are located within 500 feet of those soils. | Remove, cover, or otherwise secure exposed soils or water. Fill open excavations. Conduct actions necessary to contain contamination or prevent impact or exposure. |
| <input type="checkbox"/> 2.2 | A former vapor impact is associated with this site, or NAPL is present in close proximity to subsurface utilities or other natural or man-made conduit and there is potential for the accumulation of explosive vapors or vapors that could cause acute effects in a building or other structure. | Remediate/remove vapors, NAPL, or contaminated soils. Determine migration pathways and remove/prevent migration pathways. Conduct assessment of contaminant plumes in relation to the potential vapor pathway. Determine target cleanup levels. Conduct actions necessary to contain contamination or prevent impact or exposure. |
| <input type="checkbox"/> 2.3 | A domestic water supply well or line, or a domestic surface water intake is affected or immediately threatened by the release, but the user has access to another public or private water supply. (Ensure the user and the local TNRCC Region Office have been notified.) | Notify proper authorities, users, and property owners. Prevent migration to water intake. Provide alternative water supply if necessary. Conduct assessment to identify contaminant plumes and exposure pathways in relation to water intake. Determine appropriate target cleanup goals based on site conditions. Conduct actions necessary to contain contamination or prevent impact or exposure. |
| <input type="checkbox"/> 2.4 | A non-public or non-domestic water supply well is affected or immediately threatened. (Do not consider monitor wells.) (Ensure the user and the local TNRCC Region Office have been notified.) | Notify proper authorities, well users, and property owners. Prevent migration to water well. Provide alternative water supply if necessary. Plug water well if necessary. Conduct assessment to identify contaminant plumes and exposure pathways in relation to water well. Determine appropriate target cleanup goals based on site conditions. Conduct actions necessary to contain contamination or prevent impact or exposure. |
| <input type="checkbox"/> 2.5 ¹ | Groundwater is affected and a public or domestic water supply well is located within 0.25 miles of the UST/AST system or source area. (Check if a well is present, but the well use is unknown.) (See footnote 1 before responding.) | Determine completion data and usage of well(s) if not already known. Conduct receptor survey to locate additional wells and other potential receptors (if not already done). Evaluate well impact potential. Determine appropriate cleanup goals based on site conditions. Conduct actions necessary to contain contamination or prevent impact or exposure. |
| <input checked="" type="checkbox"/> 2.6 | Groundwater or storm water runoff is affected and discharges within 500 feet of the known extent of contamination to a surface water body used for human drinking water, contact recreation, habitat to a protected or listed endangered plant and animal species. | Conduct assessment which addresses the contaminant plumes in relation to the surface water. Determine target cleanup levels. Conduct actions necessary to contain contamination or prevent impact or exposure. Notify property owners if impact is documented. |
| <input type="checkbox"/> 2.7 | A public or domestic water supply well that produces from a groundwater zone which is not affected or threatened is located within the known extent of contamination. (Check if a well is present, but the well use is unknown.) | Notify well users and property owners. Determine completion data and usage of water well(s). Conduct receptor survey to locate additional sensitive receptors. Investigate well impact or cross-contamination potential. Plug well(s) if necessary. Determine target cleanup levels. Conduct actions necessary to contain contamination or prevent impact or exposure. Monitor water well for groundwater quality. |

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ADMINISTRATIVE RECORD

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