SITE INSPECTION AND PRIORITIZATION REPORT

GARLAND CITY OF QUAIL CREEK LANDFILL
GARLAND, DALLAS COUNTY,TEXAS
EPA CERCLA ID NO.: TXD980697205

Prepared for

U.S. Environmental Protection Agency
Region 6
1445 Ross Avenue
Dallas, Texas 75202

Contract No.: 68-W9-0015
Work Assignment No.: 23-6JZZ
Document Control No.: 4603-23-0372

Submitted by

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March 1997

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B	CLP Data Package Excerpts
C	Contract Required Detection/Quantification Limits and Analytical Data Summary Tables
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SECTION 1
INTRODUCTION

Under the authority of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) and the Superfund Amendments and Reauthorization Act of 1986 (SARA), Roy F. Weston, Inc. (WESTON®) has completed a Site Inspection and Prioritization (SI) of the Garland City of Quail Creek Landfill site (EPA CERCLA Identification Number TXD980697205) located in Garland, Dallas County, Texas. A Site Location Map is included as Figure 1-1. The U.S. Environmental Protection Agency (EPA) Region 6 retained WESTON to complete this investigation under EPA Contract Number 68-W9-0015 and Work Assignment Number 23-6JZZ.

This document represents the final report for the SI. The purpose of this report is to provide the background information collected for the site, to discuss the SI sampling activities, and to present the analytical data obtained as part of the investigation.

1.1 OBJECTIVES OF THE INVESTIGATION

The SI is generally the second screening investigation in a series of site assessments that EPA may complete at a known or potential hazardous waste site that is being investigated under CERCLA/SARA prior to its possible inclusion on the National Priorities List (NPL). The SI has two primary objectives:

- To identify potential source areas at the site in an attempt to document the presence of hazardous substances in the source areas and to evaluate the threat that migration of or exposure to the hazardous substances from the site may pose.

- To collect information that can be used to assess the site, using EPA's Hazard Ranking System (HRS), to help determine whether further investigation of the site under CERCLA/SARA is warranted to pursue listing of the site on the NPL.

EPA will use the information obtained during the SI to help prioritize further work for the site. Based on the results of the SI, EPA may rank the site on the NPL, decide that additional investigation of the site is required, or assign a No Further Remedial Action Planned (NFRAP) status to the site.

1.2 SCOPE OF WORK

The SI is a screening investigation of the site. The SI Scope of Work is, therefore, centered on characterizing the site through the completion of limited site-related research, site reconnaissance, and focused sampling activities. As part of this SI, WESTON performed the following major tasks:

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- An off-site reconnaissance was performed to document current site conditions and identify potential sources of hazardous substances at the site. As part of the reconnaissance, a survey of the site vicinity was completed to identify potential receptors or targets of hazardous substance migration and exposure attributable to the site.

- A site-specific Task Work Plan (TWP) and Health and Safety Plan (HASP) were prepared to provide a detailed plan of action for subsequent SI sampling activities.

- Information concerning the environmental setting of the site was obtained to describe the groundwater, surface water, soil exposure, and air pathways.

- Available regulatory compliance files from federal, state, and local government agencies were reviewed, and telephone interviews were conducted with authorities knowledgeable of the site and its surroundings.

- Samples were collected in known or suspected source areas at the site and in the suspected pathways of contaminant migration and exposure. The samples were collected in general accordance with the site-specific TWP and HASP to document the presence and migration of hazardous substances attributable to the site.

- All of the available information from off-site observations, records review, interviews, site environmental and demographic characteristics, and historical sample analyses were reviewed and tabulated.

- The analytical data generated from the SI samples, which were sent to EPA-designated laboratories for analysis, were reviewed and tabulated.

- This report was prepared to present the findings of the SI.

1.3 REPORT FORMAT

The SI Report is presented in a format that is intended to facilitate evaluation of the site using the HRS. The report contains the following sections:

- Section 1 – Introduction
- Section 2 – Site Characteristics
- Section 3 – Source Characterization
- Section 4 – Groundwater Pathway
- Section 5 – Surface Water Pathway
- Section 6 – Soil Exposure
- Section 7 – Air Pathway
- Section 8 – Conclusions
- Section 9 – References

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Additional information is provided in the appendices following the text of the report. The appendices are as follows:

- Appendix A – Photographs
- Appendix B – CLP Data Package Excerpts
- Appendix C – Contract-Required Quanitation and Detection Limits [CRQLs and CRDLs] and Analytical Data Summary Tables and
- Appendix D – References

The complete laboratory data packages will be maintained on file at WESTON'S San Antonio, Texas office until they are requested by the EPA Work Assignment Manager (WAM). Data tables are summarized and are included in this report.

The figures and tables referred to throughout the report are provided following the text of each section.

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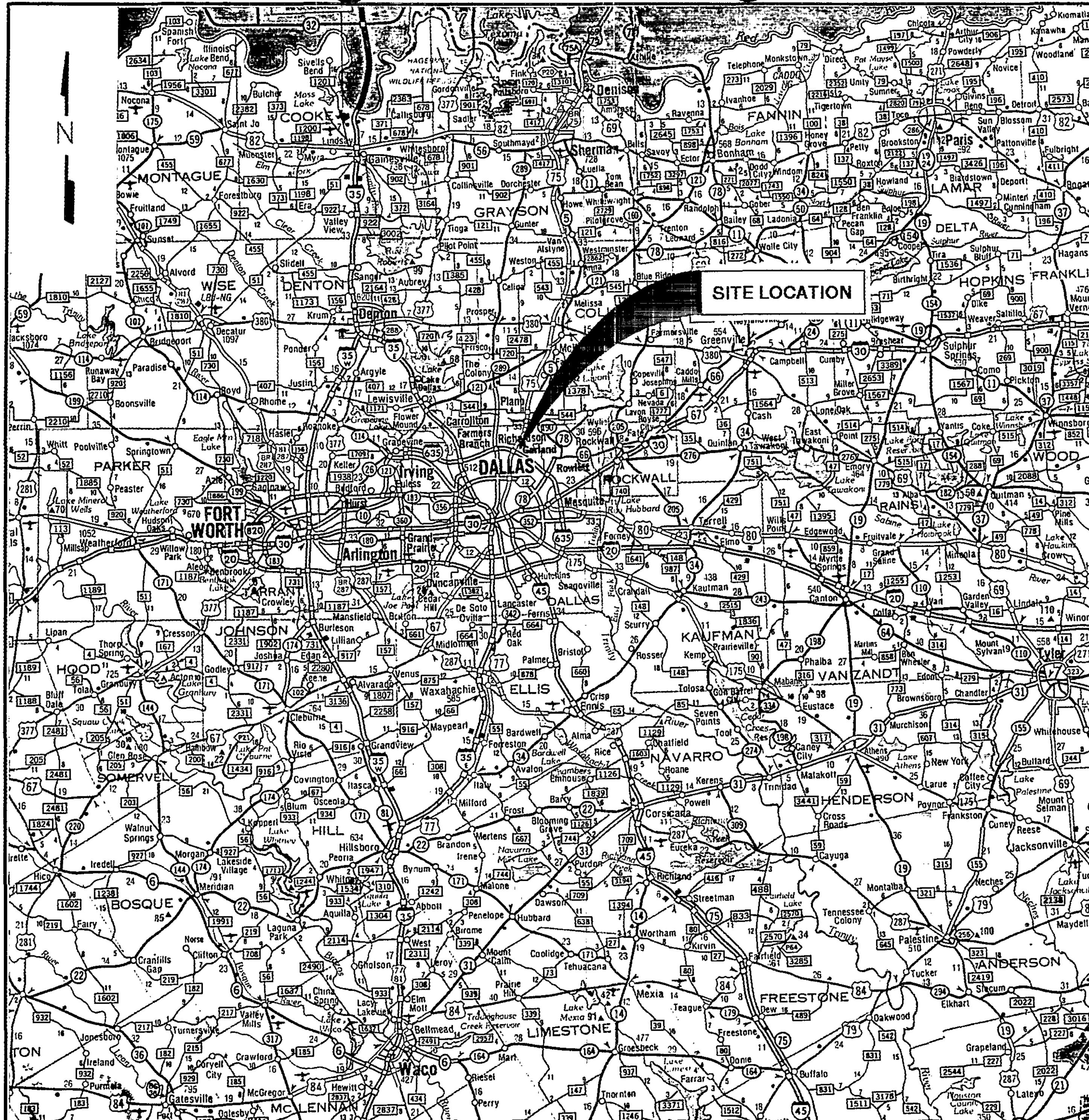

BASE MAP FROM:

TEXAS DEPARTMENT OF TRANSPORTATION
HIGHWAY ROAD ATLAS

TEXAS
1993 EDITION

0 11.5 23

SCALE IN MILES

WESTON®
MANAGERS DESIGNERS/CONSULTANTS

FIGURE 1–1

SITE LOCATION MAP
GARLAND CITY OF
QUAIL CREEK LANDFILL
GARLAND, DALLAS COUNTY, TEXAS
CERCLA ID NO.: TXD980697205

EPA REGION 6
ARCS SITE INSPECTION & PRIORITIZATION

W.O. NO.: 04603–023–027–2100

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SECTION 2
SITE CHARACTERISTICS

WESTON collected and reviewed available background information regarding the location, ownership, description, operational history, site regulatory compliance, and nearby land use of the site. The discussion in this section of the report is based on this background information, which is referenced throughout the text.

2.1 SITE DESCRIPTION AND BACKGROUND INFORMATION

The following characteristics of the site are summarized in this subsection of the report:

- Site location
- Site ownership
- Site description
- Site operational history
- Site regulatory compliance history
- Nearby land use

2.1.1 Site Location

The site location has been identified based on observations made during the off-site reconnaissance, as recorded in the SI field logbook (Reference 1), and based on the description of the site included in the Task Work Plan (TWP) provided by the Fluor Daniel, Inc. ARCS Team dated 14 June 1993 (Reference 2).

The Garland City of Quail Creek Landfill is located in Garland, Dallas County, Texas. The approximate geographical coordinates of the site are latitude 32°54'19" north and longitude 96°36'24" west (Reference 2). A Site Area Map is provided as Figure 2-1.

The Garland City of Quail Creek Landfill can be reached by traveling east for approximately 1.33 miles from Garland on Hwy 66. From Hwy 66, travel south on Centerville Road for approximately 0.28 mile. The site is located on the west side of Centerville Road, directly south of the Union Pacific railroad tracks (Reference 3).

2.1.2 Site Ownership

Several unsuccessful attempts were made by WESTON to determine site ownership. WESTON, with the concurrence of EPA, conducted an off-site reconnaissance and sampling investigation. Additional information concerning the chronological events leading to the sampling investigation conducted by WESTON can be found in Appendix D (Reference 4).

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2.1.3 Site Description

WESTON initially conducted an off-site reconnaissance in October 1994. After numerous attempts by WESTON to contact the site owners, it was agreed by WESTON and EPA that an off-site reconnaissance and sampling investigation would be conducted. An off-site reconnaissance and sampling visit was performed on 10 December 1996. WESTON performed the reconnaissance and sampling visit in accordance with the following documents:

- WESTON's Generic SI Work Plan (Document Control No. 4603-23-0008) dated 15 August 1991.
- The site-specific TWP and HASP (Document Control No. 4603-23-0297) prepared by WESTON for the SI and sent to EPA for approval prior to the SI sampling visit.
- EPA's "Guidance for Performing Site Inspections Under CERCLA," September 1992.

Based on information provided in the Flour Daniel, Inc. 1993 TWP, the Garland City of Quail Creek Landfill encompasses approximately 80 acres, as shown on the Site Plan Map (Figure 2-2). The site is currently vacant. There are no buildings or other structures onsite. The site is heavily vegetated, and dumping of trash, wood waste, tires, etc. has occurred since the landfill stopped receiving refuse. Three groundwater monitoring wells are located offsite between the northeastern site boundary and the Union Pacific railroad track. There is no documentation that these wells have been previously sampled.

Other physical features of the site are Mills Branch Creek that trends from the northwest to the southeast through the site. Three drainage channels are located along the northern property boundary. The north, south, and west sides of the site are not fenced, and access is unrestricted. Access to the site is along a dirt road that crosses a bridge in the northwest corner of the site (Reference 2).

During WESTON's off-site reconnaissance conducted in December 1996, WESTON personnel visited the site, walked the area surrounding the property, recorded observations in a field logbook, and took photographs to document site conditions. Photographs are included as Appendix A. The area surrounding the site was examined to identify potential receptors or targets of hazardous substance migration from the site. Nearby land use and potential alternative source sites also were documented.

The off-site reconnaissance was conducted along the northern property boundary between the railroad tracks and the property line. The site appeared to be heavily overgrown with assorted weeds and vegetation. In addition, various types of small to medium sized trees were scattered throughout the site. No buildings or other structures were observed onsite. The site contained a large amount of trash and scattered tires on the surface.

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2.1.4 Site Operational History

The City of Garland, which leased the property, disposed of approximately 73,000 tons of refuse at the landfill from May 1972 to March 1975. Reportedly, the landfill was exclusively filled with municipal waste. The landfill had a 2-foot final cover of topsoil applied after disposal activities ceased. Although the site does not have an engineered liner, the site is noted to have a 3-foot natural clay liner (Reference 2).

2.1.5 Site Regulatory Compliance History

WESTON reviewed available files and interviewed authorities from regulatory agencies to collect background information regarding the regulatory compliance history of the site. This history is summarized as follows:

- An EPA Region 6 Potential Hazardous Waste Site Identification Form was prepared by the Texas Department of Health (TDH) on 24 February 1981. This form indicated that the site operated as the city landfill. It also indicated that only municipal solid waste was accepted at this site. No liquid or hazardous waste was accepted (Reference 5).

- Fluor Daniel, Inc. completed a TWP on 14 June 1993. The TWP provided background information including on-site features and potential source areas associated with the site (Reference 2).

2.1.6 Nearby Land Use

Land use in the vicinity of the site was observed during the SI off-site reconnaissance and sampling visits. The site is situated in a commercial and limited residential setting. The land use immediately north of the site is predominantly an industrial park. The land adjacent to the southern boundary is undeveloped. The land east of Centerville Road is the location of The City of Garland Waste Treatment Facility (Reference 1).

2.2 POTENTIAL SOURCE AREA AND SITE CONCERNS

The potential source identified at the site is described in this subsection along with site-related concerns regarding the migration of hazardous substances attributable to the site by the groundwater, surface water, soil exposure, and air pathways.

2.2.1 Potential Source Area

Based on available background information (Reference 2), 10 distinct landfill cells have been identified at the site. All 10 cells are potential source areas. The areas of the cells are estimated as follows:

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CELL NUMBER	LENGTH (ft)	WIDTH (ft)
A1	900	60
A2	900	60
A3	2,400	60
B1	875	80
B2	850	80
B3	950	80
C	750	60
D	500	80
E2	475	60
F3	450	80

The depth of each of the cells is unknown. There are no known containment features associated with the source areas.

2.2.2 Site Concerns

The concerns associated with the sources at the site and the migration of or exposure to any potentially hazardous substances at the site through the groundwater, surface water, soil exposure, and air pathways include the following:

- The presence of hazardous waste substances at the site is of general concern. Refer to Section 3 for more information.

- A release to the groundwater pathway is of minimal concern, as groundwater is not extensively used for drinking water purposes in the vicinity of the site. However, the landfill is not lined and therefore, a potential for a release to the groundwater pathway exists. Refer to Section 4 for a discussion of the groundwater pathway.

- A release to the surface water pathway is of moderate concern. The nearest perennial surface water body, Mills Branch Creek is located onsite. There is no single point of entry as this site is located adjacent to Mills Branch Creek for over one mile of its length. Overland flow from the site can enter Mills Branch Creek at numerous points along the southern site boundary. Mills Branch Creek drains into Rowlett Creek less than 1 mile from the site. Rowlett Creek then flows into Lake Ray Hubbard, 0.6 mile to the south. Refer to Section 5 for a discussion of the surface water pathway.

- The soil pathway is of low concern based on the potential presence of contaminated soils resulting from historical activities associated with the site. The site has a 2-foot topsoil cover and is currently heavily vegetated (References 1 and 2). Refer to Section 6 for a discussion of the soil exposure pathway.

- The air pathway is of minimal concern since the site has a 2-foot topsoil cover and is heavily vegetated. Refer to Section 7 for a discussion of the air pathway.

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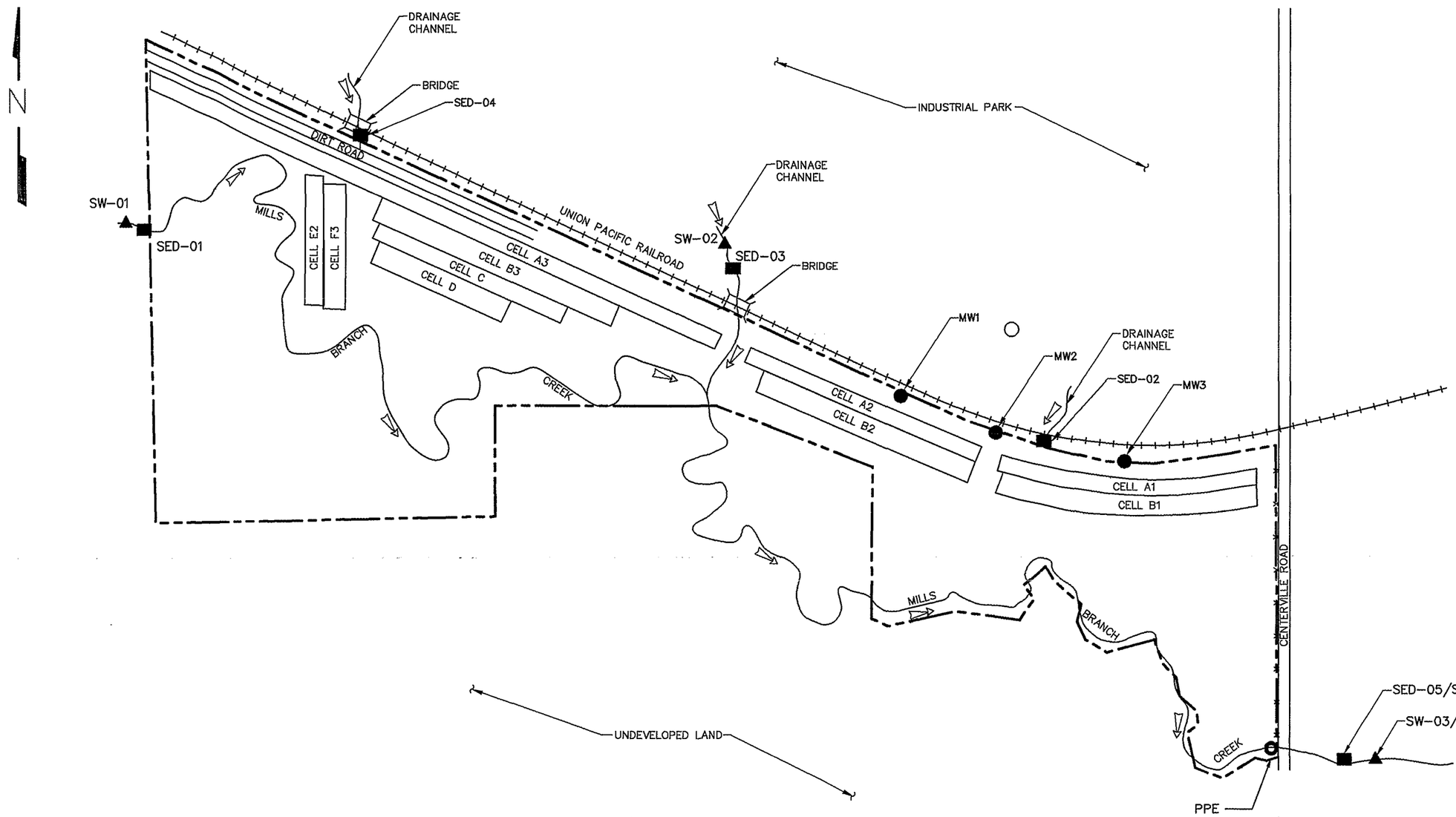

LEGEND:

- PROPERTY BOUNDARY
- FLOW DIRECTION
- RAILROAD
- FENCE
- SEDIMENT SAMPLE LOCATION
- SURFACE WATER SAMPLE LOCATION
- MONITOR WELL
- PPE

NOTE: MW1, MW2, AND MW3 ARE LOCATED OFF SITE BETWEEN THE NORTH SITE BOUNDARY AND THE UNION PACIFIC RAILROAD TRACK; 450 YARDS, 350 YARDS, AND 180 YARDS, RESPECTIVELY, EAST OF THE NORTHEAST CORNER OF THE SITE.

0 200 400
SCALE IN FEET

WESTON
MANAGERS DESIGNERS/CONSULTANTS

FIGURE 3-1

EPA REGION 6
ARCS SITE INSPECTIONS
SAMPLE LOCATION MAP

QUAIL CREEK LANDFILL
GARLAND, DALLAS COUNTY, TEXAS
CERCLA ID. NO. : TXD980697205

W.O. NO. : 04603-023-027-2100

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SECTION 3
SOURCE CHARACTERIZATION

In general accordance with the objectives of the SI, WESTON implemented a sampling strategy aimed primarily at documenting the presence of hazardous substances at the Garland City of Quail Creek Landfill site.

3.1 SOURCE SAMPLING AND ANALYSIS

WESTON personnel collected sediment and surface water samples from locations upstream and downstream of the site on 10 December 1996. The sampling activities were completed in general accordance with the site-specific TWP and HASP, as well as the other documents listed in Subsection 2.1.3.

The sampling activities and analytical results are summarized in this section of the report. The sampling activities and related analytical results applicable to the evaluation of the migration and exposure pathways are summarized in the subsequent pathway sections of the report.

3.1.1 Source Sampling

WESTON collected six sediment samples (SED-01 through SED-06), including one duplicate and one background sample, and four surface water samples (SW-01 through SW-04), including one duplicate and one background in an effort to document the presence of hazardous substances associated with the site. The prefixes "SED" and "SW" were assigned before the respective station number of each sample. The sample locations are shown on Figure 3-1 following the text of this section. SI sampling station descriptions and rationales are summarized in Table 3-1.

3.1.2 Laboratory Analysis

WESTON shipped all samples collected during the SI to EPA-designated laboratories by Federal Express Priority Overnight Service. The organic and inorganic samples collected were sent to different EPA Contract Laboratory Program (CLP) laboratories. Samples requiring organic analyses were sent to Industrial Environmental Analysis located in Whippany, New Jersey. Samples requiring inorganic analyses were sent to Industrial Corrosion Management located in Randolph, New Jersey.

All samples were analyzed for the following parameters:

- Volatile organic compounds (VOCs)
- Semivolatile organic compounds (SVOCs)
- Pesticide and polychlorinated biphenyl (PCB) constituents
- Inorganic constituents and cyanide

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The Target Compound List (TCL) and Target Analyte List (TAL) for the above parameters are presented as Tables C-1 and C-2 in Appendix C.

3.2 SOURCE ANALYTICAL RESULTS

The analytical data available to characterize the source of potential hazardous substances identified at the site are summarized in the following subsections.

3.2.1 Analytical Results from Previous Investigations

Based on available file information, no previous sampling activities have occurred on or near the site.

3.2.2 SI Analytical Results

Analytical results for the sediment and surface water samples are represented in Appendix C. No VOCs, SVOCs, pesticides, PCBs, or metals were reported at significant levels above background concentrations in any of the sediment or surface water samples collected. Therefore, based on these analytical results, there has been no source area documented at the site.

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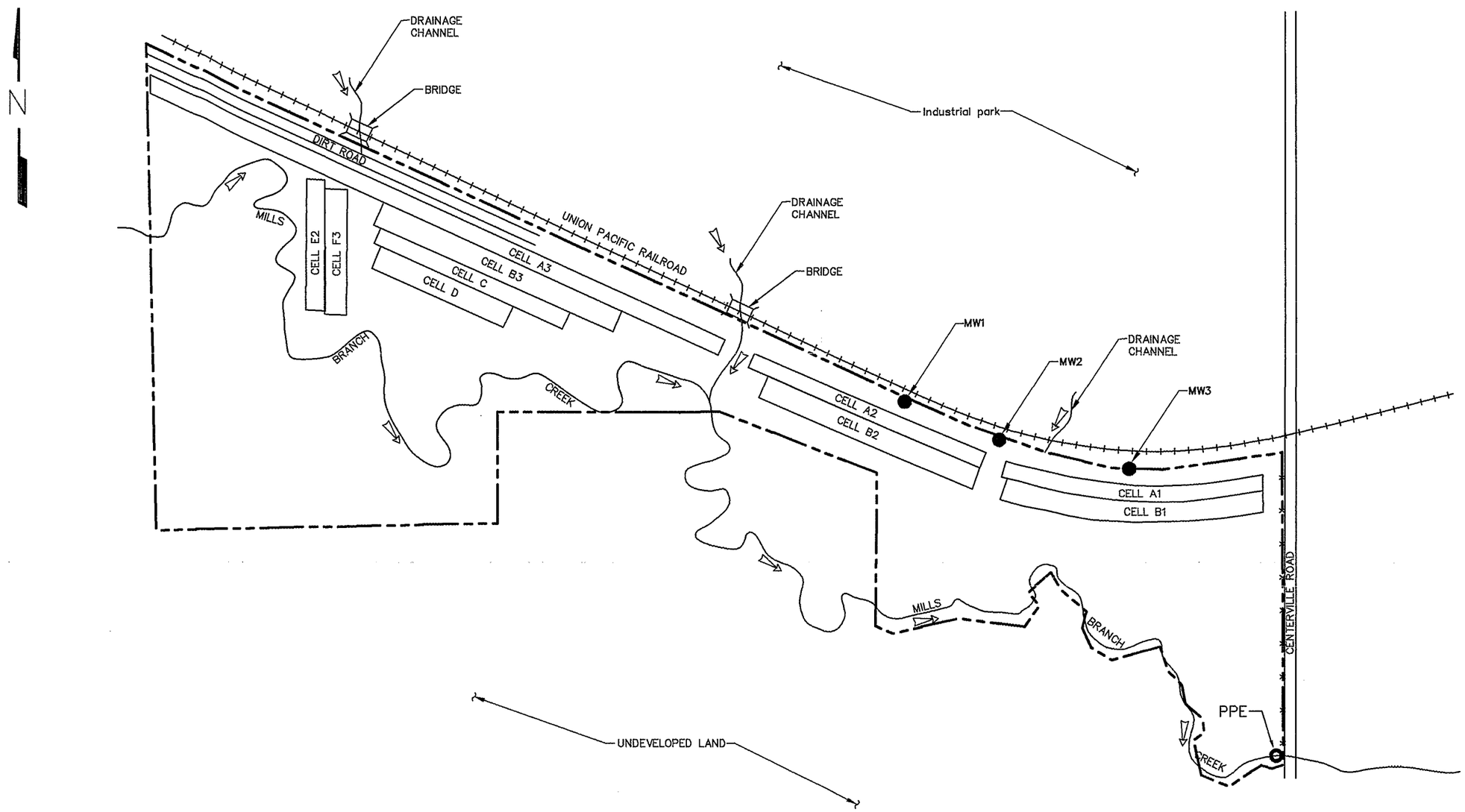

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- FLOW DIRECTION
- RAILROAD
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- MONITOR WELL
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NOTE: MW1, MW2, AND MW3 ARE LOCATED OFF SITEBETWEEN THE NORTH SITE BOUNDARY AND THE UNION PACIFIC RAILROAD TRACKS; 450 YARDS, 350 YARDS, AND 180 YARDS, RESPECTIVELY, EAST OF THE NORTHEAST CORNER OF THE SITE.

0 200 400
SCALE IN FEET

WESTON
MANAGERS DESIGNERS/CONSULTANTS

FIGURE 2-2

EPA REGION 6
ARCS SITE INSPECTIONS
SITE PLAN MAP

QUAIL CREEK LANDFILL
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CERCLA ID. NO. : TXD980697205

W.O. NO. : 04603-023-027-2100

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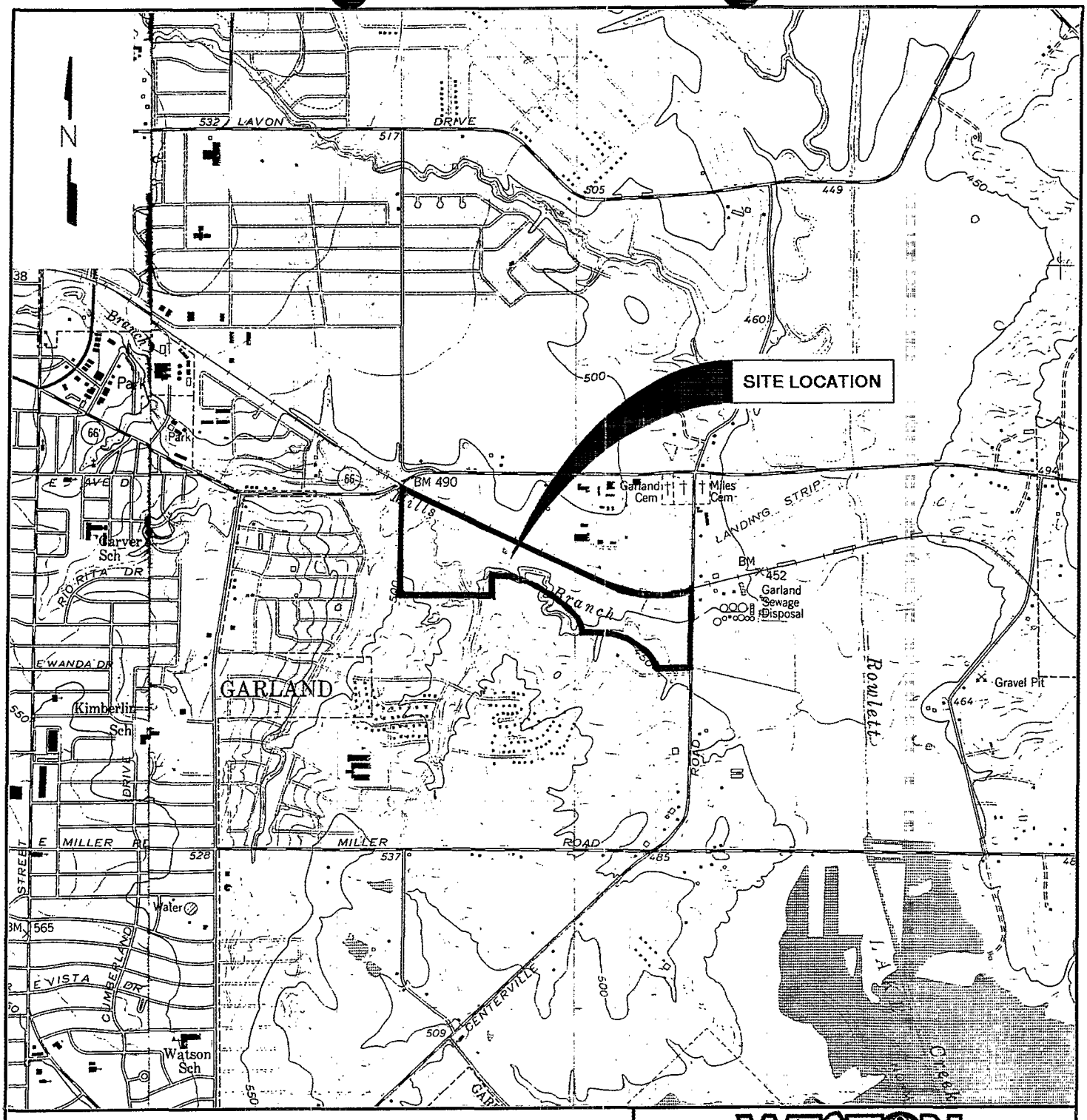

BASE MAP FROM:
U.S. DEPT. OF THE INTERIOR
GEOLOGICAL SURVEY

GARLAND QUADRANGLE
ROWLETT QUADRANGLE
TEXAS

7.5 MINUTE SERIES (TOPOGRAPHIC)
1959 SERIES (REVISED 1967, 1968, AND 1973)

0 1,000 2,000
SCALE IN FEET

WESTON®
MANAGERS DESIGNERS/CONSULTANTS

FIGURE 2-1
SITE AREA MAP
GARLAND CITY OF
QUAIL CREEK LANDFILL
GARLAND, DALLAS COUNTY, TEXAS
CERCLA ID NO.: TXD980697205

EPA REGION 6
ARCS SITE INSPECTION & PRIORITIZATION

W.O. NO.: 04603-023-027-2100

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Table 3-1
Garland City of Quail Creek Landfill (CERCLIS ID TXD980697205)
Sampling Station Descriptions and Rationales

Station Identification/Type	**Description**	**Rationale**	**Sample** Identification/QC Type
SED-01 Background	Low-concentration sample collected upstream of the site from Mills Branch Creek along Country Club Road.	Sample collected to document background concentrations.	SED-01 Normal
SED-02 Characterization	Low-concentration sample collected off-site approximately 1140 yards east of the the western boundary within a drainage channel near the northern property line.	Sample collected to characterize a potential waste source upgradient of the site.	SED-02 Normal
SED-03 Characterization	Low-concentration sample collected off-site approximately 770 yards east of the western boundary within a drainage channel.	Sample collected to characterize a potential waste source upgradient of the site.	SED-03 Normal
SED-04 Characterization	Low-concentration sample collected off-site approximately 280 yards east of the western boundary within a drainage channel.	Sample collected to characterize a potential waste source upgradient of the site.	SED-04 Normal
SED-05 Characterization	Low-concentration sample collected approximately 200 feet east of Centerville Road in Mills Branch Creek.	Sample collected to document migration of site-attributable contaminants to off-site areas via Mills Branch Creek.	SED-05 Normal SED-06 Duplicate
SW-01 Background	Low-concentration surface water sample collected from Mills Branch Creek upstream of the site along Country Club Road.	Sample collected to document background concentrations.	SW-01 Normal
SW-02 Characterization	Low-concentration surface water sample collected off-site approximately 770 yards east of the western boundary line within a drainage channel.	Sample collected to document contamination in the surface water pathway.	SW-02 Normal
SW-03 Characterization	Low-concentration collected approximately 200 feet east Centerville Road in Mills Branch Creek.	Sample collected to document migration of site-attributable contaminants via Mills Branch Creek.	SW-03 Normal SW-04 Duplicate

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SECTION 4
GROUNDWATER PATHWAY

A discussion of the groundwater pathway, one of four major pathways of potential hazardous waste migration assessed in this report, is provided in this section. The discussion focuses on the aquifer characteristic of the region, the likelihood of a release to groundwater, and the potential targets of hazardous waste migration through the groundwater pathway.

4.1 HYDROGEOLOGIC SETTING

The site is located in the western portion of the East Texas Province. The regional geologic setting is characterized by mixed thick sequences of sandstone, siltstone, shale and carbonate (limestone, dolomite) units that appear relatively underformed. The general trends of the out crop pattern of these strata and of the regional fault pattern is northeast-southwest. The local geological setting is described as the Ozan Formation ("lower Taylor marl"), which has a thickness of greater than 500 feet. The native clays have a variable but generally very low permeability and are characterized by moderate to very high shrink-swell potential (Reference 6).

4.2 LIKELIHOOD OF RELEASE

This subsection presents important factors related to the likelihood of a release to groundwater from a source of hazardous substances at the site. Based on the available information, a release to groundwater is of minimal concern because groundwater is not used for drinking water purposes in the vicinity of the site (Reference 7).

4.2.1 Depth to Groundwater

Based on available file information, the depth to groundwater beneath the site cannot be determined. Three monitoring wells are located off-site adjacent to the northeastern boundary line. There is no documentation of the well installations, completion depths of the wells, or that these wells have been previously sampled.

4.2.2 Depth of Contamination

The depth of contamination at the site is not known, as groundwater samples were not collected as part of the investigation.

4.2.3 Net Precipitation

The net annual precipitation after accounting for evapotranspiration for the site is 10.51 inches (Reference 8).

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4.2.4 Thickness of Impermeable Layers

An impermeable layer between a potential source area and groundwater has not been identified at the site because detailed site-specific stratigraphic information is not available.

4.2.5 Hydraulic Conductivity of Impermeable Layers

A hydraulic conductivity value cannot be assigned because the presence of an impermeable layer between groundwater and the source area at the site has not been identified.

4.2.6 Analytical Results from Previous Investigations

No groundwater samples were known to have been collected during previous investigations.

4.2.7 SI Groundwater Sampling and Analytical Results

No groundwater samples were collected as part of the SI.

4.3 GROUNDWATER PATHWAY TARGETS

The potential receptors or targets of the groundwater pathway include the population and resources that rely on local aquifers as a source of water supply. The targets identified for the groundwater pathway are discussed in the following subsections. Based on available file information, the cities of Garland and Dallas receive all of their drinking water from Lake Levon and Lake Ray Hubbard (Reference 9).

4.3.1 Nearest Well

There are four domestic water wells within 1 mile of the site (Reference 10). However, these are assumed to be inactive because after 1960 the drinking water source for Garland has been identified as Lake Levon and Lake Ray Hubbard (Reference 9).

4.3.2 Other Nearby Wells

Additional wells have been identified within 4 miles of the site. A total of 6 plugged public supply wells are known to exist within 4 miles of the site (Reference 11). No groundwater sampling was conducted as part of the SI.

4.3.3 Wellhead Protection Areas

No Wellhead protection areas (WHPAs) are known to be located within 4 miles of the site (Reference 12).

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4.4 GROUNDWATER PATHWAY CONCLUSIONS

A release of hazardous substances to the groundwater pathway is not of concern. No groundwater targets have been identified within 1 mile of the site. No groundwater samples were collected onsite as part of the SI, and a release to this pathway is not suspected.

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SECTION 5
SURFACE WATER PATHWAY

Surface water is the second of four pathways of potential hazardous waste migration assessed for the site. A discussion of the types of surface water draining the site, probable point of entry (PPE) for a hazardous substance from the site to enter surface water, likelihood of a release, and potential targets of the pathway are discussed in this section.

5.1 HYDROLOGIC SETTING

Surface runoff originating onsite is assumed to flow in a southeasterly direction into Mills Branch Creek, which flows directly through the site. Surface water in Mills Branch Creek flows southeast toward Rowlett Creek. From Rowlett Creek, surface water flows southward into Lake Ray Hubbard, eventually ending in the Trinity River.

5.1.1 Overland Flow Segment

Runoff from the site generally flows south into Mills Branch Creek, which flows through the site. There are three drainage ditches along the north boundary. Overland flow from the site enters Mills Branch Creek at numerous points along the southern site boundary (Reference 13).

5.1.2 Probable Point of Entry

The probable point of entry (PPE) for a release of potentially hazardous substances from the site to perennially flowing surface water is located at the southern-most section of the site along Mills Branch Creek. Mills Branch Creek is located onsite (Reference 13).

5.1.3 Surface Water Flow Path

The perennial water bodies of the surface water pathway consist of Mills Branch Creek, Rowlett Creek, Lake Ray Hubbard, and the Trinity River. Surface runoff in Mills Branch Creek generally flows southeast for 0.3 mile before entering Rowlett Creek. Flow in Rowlett Creek is directed for approximately 0.6 mile south into Lake Ray Hubbard. From this confluence, flow in Lake Ray Hubbard continues for approximately 6.5 miles southeast to the Trinity River. The 15-mile target distance limit (TDL) of the surface water pathway is completed in the Trinity River (Reference 13). The flow path of surface water from the PPE to the 15-mile TDL in the Trinity River is shown on Figure 5-1 and summarized in Table 5-1.

5.2 LIKELIHOOD OF RELEASE

The following subsections present important factors related to the likelihood of a release to surface water from a source of hazardous substances at the site.

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5.2.1 Distance to Surface Water

The shortest distance from the site to perennially flowing water, Mills Branch Creek, is approximately 0.1 mile (References 1 and 13).

5.2.2 Flood Frequency

According to floodplain maps obtained from the Federal Emergency Management Agency (FEMA), the site is located outside the 500-year flood plain boundary.

5.2.3 2-Year, 24-Hour Rainfall

The 2-year, 24-hour rainfall for the area of the site is approximately 4.2 inches (Reference 14).

5.2.4 Flood Containment

Based on available file information, the landfill has no containment features (Reference 2).

5.2.5 Analytical Results from Previous Investigations

No previous surface water investigations are known to have been performed at the Garland City of Quail Creek Landfill site.

5.2.6 SI Sediment/Surface Water Sampling and Analytical Results

WESTON collected six sediment and four surface water samples as part of the SI to document a release of site-attributable contaminants to the surface water pathway. Based on a review of these analytical data, a release of site-attributable contaminants has not been documented.

5.3 SURFACE WATER PATHWAY TARGETS

The potential targets of the surface water pathway include the downstream fisheries, sensitive environments, and surface water resources. The potential targets identified within the surface water pathway are discussed in the following subsections.

5.3.1 Drinking Water Intakes

Based on available file information and the local U.S. Geological Survey (USGS) 30 x 60 topographical map, the City of Dallas has a drinking water intake located on the southwest corner of Lake Ray Hubbard at the Forney Dam (References 9, 13, and 15). This intake is within the 15-mile target distance limit from the PPE.

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5.3.2 Wetlands and Other Sensitive Environments

No state or federally listed endangered species occupy the surface water pathway environments in the vicinity of the site (References 16 and 17). However, 7.75 miles of designated wetlands are present along the 15-mile downstream segment. According to the National Wetlands Inventory Maps, approximately 0.75 mile of Paulstrine wetland frontage occurs along the Mills Branch Creek on site. Approximately 1 mile of Paulstrine wetland frontage occurs offsite along the remainder of the surface water pathway. The Lacustrine wetland was identified for approximately 6 miles within Lake Ray Hubbard (Reference 18).

5.3.3 Fisheries

According to the local USGS 30 x 60 topographic map, a commercial fish hatchery has been identified along the Trinity River (Reference 13). Mills Branch Creek is not believed to be used for recreational fishing. However, based on available file information, Rowlett Creek and Lake Ray Hubbard are used for recreational fishing (Reference 2).

5.3.4 Resources

No resources have been identified within the surface water pathway.

5.4 SURFACE WATER PATHWAY CONCLUSIONS

A release of hazardous substances to the surface water pathway is not of concern. Surface runoff from the site flows directly into Mills Branch Creek, which flows through the center of the site. However, based on SI sampling results, no release of site-attributable hazardous substances has been documented in the surface water pathway.

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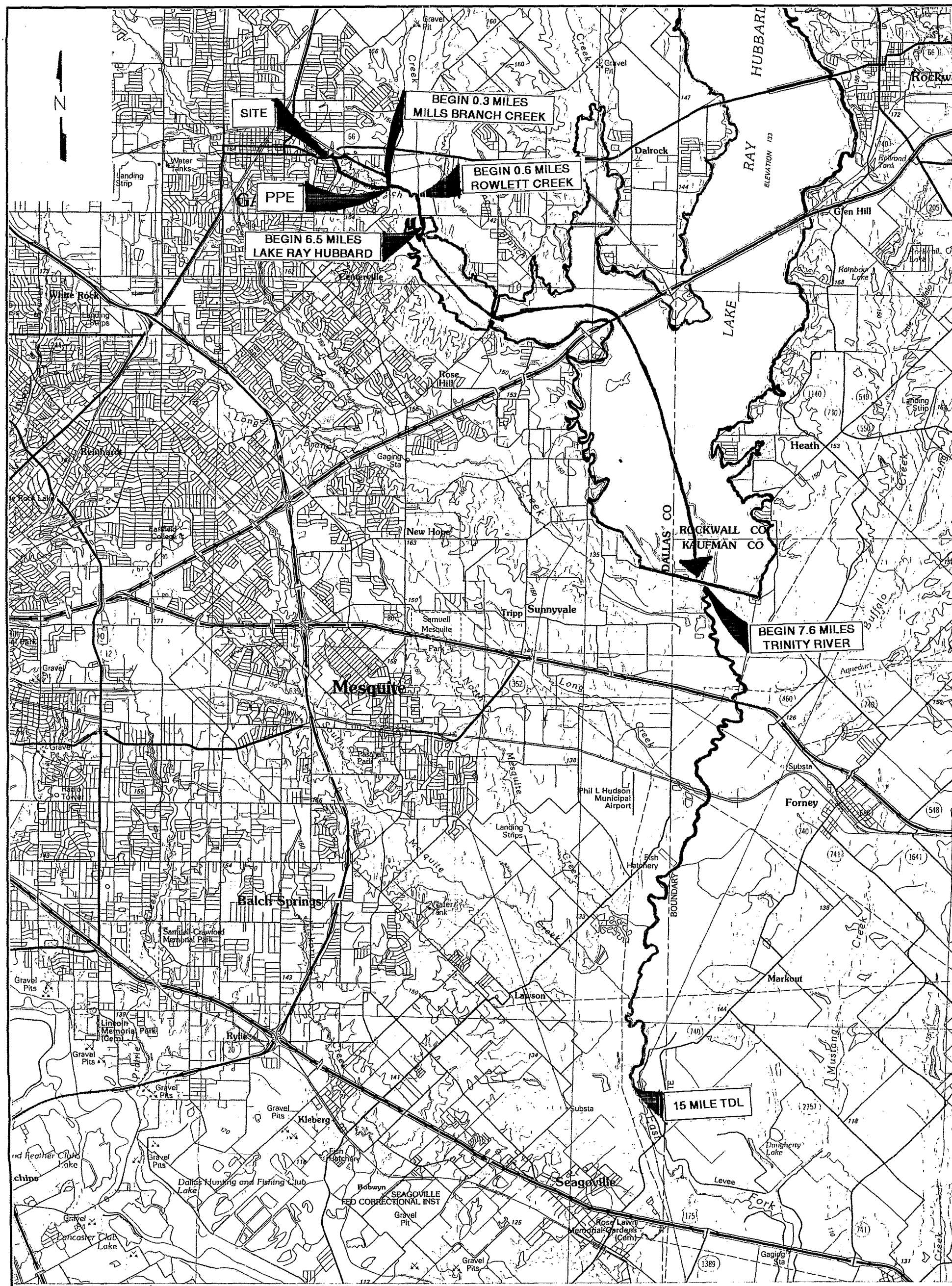

MAP PREPARED FROM:
U.S. DEPT. OF THE INTERIOR
GEOLOGICAL SURVEY
DALLAS, TEXAS
30 X 60 STET
1986 EDITION

0 0.8 1.6
SCALE IN MILES

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FIGURE 5-1
SURFACE WATER PATHWAY MAP
GARLAND CITY OF
QUAIL CREEK LANDFILL
GARLAND, DALLAS COUNTY, TEXAS
CERCLA ID NO.: TXD980697205

EPA REGION 6
ARCS SITE INSPECTION & PRIORITIZATION

W.O. NO.: 04603-023-027-2100

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TABLE 5-1
SURFACE WATER DRAINAGE PATHWAY SUMMARY

Surface Water Segment	Distance from site (miles)	Segment Length (miles)	Downstream Distance from PPE (miles)	Estimated Flow Rate (CFS)[2]
Overland flow	N/A[3]	0.1	N/A	N/A
Mills Branch Creek	0	0.3	0	100
Rowlett Creek	0.3	0.6	0.3	100
Lake Ray Hubbard	0.9	6.5	0.9	100
Trinity River	7.4	7.6	7.4	600[4]

[1] Source: Reference 13

[2] CFS - cubic feet per second

[3] N/A = Not Applicable

[4] Source: Reference 23

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SECTION 6
SOIL EXPOSURE

Soil exposure is another potential route of exposure to hazardous substances attributable to the site. The discussion in this section focuses on important soil exposure factors such as soil type, area of contamination, accessibility, and the likelihood of exposure.

6.1 SURFICIAL CONDITIONS

Information regarding the surficial conditions at the site is summarized in this subsection.

6.1.1 Soil Type

Soils at the Garland City of Quail Creek Landfill site are classified in the Houston Black-Heiden association. The Houston Black-Heiden association consists of nearly level and strongly sloping, clayey soils. More specifically, the soil at the site is Houston Black clay (1 to 3 % slopes).

The Houston Black clay is a deep, moderately well drained, gently sloping soil on smooth uplands. Typically, the surface layer is moderately alkaline, very dark gray clay 6 inches thick. To a depth of 38 inches, the soil is moderately alkaline, black clay and to a depth of 52 inches, it is moderately alkaline and very dark gray clay (Reference 19).

6.1.2 Areas of Contamination

Visible areas of contamination were not observed during the off-site reconnaissance and off-site sampling visit. Based on the analytical results discussed in Sub-section 3.2.3, no site-attributable contaminants have been identified.

6.2 LIKELIHOOD OR EXPOSURE

The following subsections present important factors related to the likelihood of exposure to an area of contaminated soil or direct contact with another source of hazardous substances at the site.

6.2.1 Attractiveness of the Site

The attractiveness of the site is considered low, as it has no public recreational uses.

6.2.2 Site Accessibility

Access to the site is unrestricted, as the site is not fenced. A dirt road enters the site along the northwest site boundary (References 1 and 2).

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6.2.3 Analytical Results from Previous Investigations

No previous soil exposure investigations are known to have been performed at the Garland City of Quail Creek Landfill site.

6.2.4 SI Soil Sampling and Analytical Results

No soil samples were collected as part of the SI.

6.3 SOIL EXPOSURE TARGETS

Potential targets of soil exposure are the resident population living or working in an area of soil contamination, the population living near areas of soil contamination, designated recreational areas, and terrestrial resources such as agriculture. The potential soil exposure targets identified are summarized in the following subsections.

6.3.1 Resident Population

The resident population includes those persons in houses, schools, or daycare facilities who are located on a property where soil contamination attributable to the site has been documented within 200 feet of the residence. A resident population has not been identified since no soil contamination attributable to the site has been documented.

6.3.2 Workers

Workers include those persons whose workplace is located on a property where soil contamination attributable to the site has been documented and is within 200 feet of their workplace. No workers have been identified onsite (Reference 1).

6.3.3 Nearby Population

The nearby population includes persons who live within 1 mile of areas of soil contamination attributable to the site. Those person in houses, schools, or daycare facilities within 1 mile of the site have been considered part of the nearby population.

WESTON used 1990 Census information, 1988 City and County Data Book and the EPA Landview database to estimate the population living in specific distance intervals within 1 mile of the site (References 20, 21 and 22, and 23). Based on available 1990 Census information, there are approximately 3 persons per household living in the area of the site (Reference 20). Although there is no site-attributable soil contamination, a potential nearby population was identified. The potential nearby population is summarized in Table 6-1.

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6.3.4 Resources

No known resources are associated with the site.

6.3.5 Terrestrial Sensitive Environments

No terrestrial sensitive environments are known to exist on or near the site (References 16 and 17).

6.4 SOIL EXPOSURE CONCLUSIONS

Based on the results of WESTON's investigation, the soil exposure pathway is not of concern. Although the potential presence of contaminated soils resulting from historical activities may have existed, the site has a 2-foot topsoil cover and is heavily vegetated. No soil samples were collected as part of the SI investigation.

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TABLE 6-1
NEARBY POPULATION

DISTANCE INTERVAL (miles)	REPORTED POPULATION	REFERENCE
0 to ¼	759	20, 21,22,23
¼ to ½	1,543	20, 21, 22
½ to 1	4,297	20, 21, 22

Note: Population for the 0-to 1/4-mile, the 1/4-1/2 mile, and the 1/2-to 1-mile distance intervals was estimated by taking the number of houses within each distance interval and multiplying by the number

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SECTION 7
AIR PATHWAY

The discussion in this section of the report focuses on the air pathway, another potential route of hazardous substance migration from the site. Atmospheric conditions, the likelihood of a release to air, and potential air pathway targets are identified below.

7.1 METEOROLOGICAL CONDITIONS

The meteorological conditions at the site are summarized as follows (Reference 19):

- The average annual temperature is approximately 66.3° F.
- The total annual precipitation is approximately 36 inches.
- The prevailing wind is from the south.

7.2 LIKELIHOOD OF RELEASE

Information concerning a release to the air pathway is summarized in this subsection.

7.2.1 Analytical Results from Previous Investigations

No air quality analytical data from previous investigations are known to exist.

7.2.2 SI Air Sampling and Analytical Results

Quantitative air sampling was not completed as part of the SI.

7.3 AIR PATHWAY TARGETS

The population, resources, and sensitive environments within 4 miles of the site are potential targets of a release of hazardous constituents to the air pathway. The potential targets identified for the air pathway are discussed in the following subsections.

7.3.1 Population Within 4 Miles

Using the 1990 Census information, the 1988 City and County Data book, and the EPA Landview database, WESTON identified the approximate population residing in specific distance intervals within approximately 4 miles of the site (References 20, 21, and 22). The population within 4 miles of the site is summarized in Table 7-1.

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7.3.2 Sensitive Environments

Sensitive environments have been identified previously in this report. Surface-water-related sensitive environments are described in Section 5.3, Surface Water Pathway Targets. Terrestrial sensitive environments are discussed in Section 6.3, Soil Exposure Targets.

7.3.3 Resources

No known resources are associated with the site.

7.4 AIR PATHWAY CONCLUSIONS

A release of hazardous substances to the air pathway is not of concern. Quantitative air sampling was not performed as part of this investigation, and a release to the air pathway has not been documented.

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TABLE 7-1
POPULATION WITHIN 4 MILES

DISTANCE INTERVAL (miles)	APPROXIMATE POPULATION	REFERENCE
0 to ¼	759	20, 21, 22, 23
¼ to ½	1,543	20, 21, 22
½ to 1	4,297	20, 21, 22
1 to 2	30,119	20, 21
2 to 3	42,740	20, 21
3 to 4	84,031	20, 21

Note: 1) Population for the 0-to 1/4-mile, 1/4-to 1/2-mile, and the 1/2-to 1-mile distance intervals was estimated by taking the number of houses within each distance interval and multiplying by the number of people per household (3 people).

2) If the reported population differed between the 1990 Census and Landview database information, the higher population figure was selected.

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SECTION 8
CONCLUSIONS

The Garland City of Quail Creek Landfill site is located approximately 6.5 miles east of downtown Garland, Texas. The approximately 80-acre site is currently vacant. The site owners have not been identified. The City of Garland, which leased the property, disposed of approximately 73,000 tons of refuse at the landfill from May 1972 to March 1975. Reportedly, the landfill was exclusively filled with municipal waste.

WESTON collected off-site sediment and surface water samples during the SI. WESTON was unable to locate the current site owners and, therefore, was unable to gain access. In agreement with the EPA, WESTON performed sampling activities at various offsite locations. The sediment samples were collected upstream and downstream of the site along Mills Branch Creek. Sediment samples were also collected along various drainage pathways located offsite along the northern perimeter of the site. Surface water samples were collected upstream and downstream of the site along Mills Branch Creek. Based on the analytical results of the sediment and surface water samples, site-attributable contaminants have not been identified at the site.

The migration pathways are summarized as follows:

- Based on information in Section 4, the groundwater pathway is not of concern because groundwater is not extensively used for drinking water purposes in the vicinity of the site. No targets have been identified within 1 mile of the site, and a release to this pathway has not been documented.

- Based on information provided in Section 5, the surface water pathway is not of concern because no site-attributable contaminants have been identified in the surface water pathway.

- Based on information provided in Section 6, soil exposure is not of concern. The landfill had a 2-foot final cover of topsoil applied after disposal activities ceased and was currently heavily vegetated.

- Based on information provided in Section 7, a release of hazardous substances to the air pathway is not of concern. Quantitative air sampling was not performed as part of this investigation, and a release to the air pathway has not been documented.

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SECTION 9
REFERENCES

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2. Fluor Daniel, Inc. 1993 Site Inspection Task Work Plan for Quail Creek, Garland, Texas. 14 June 1993.

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6. Bureau of Economic Geology. Geological Atlas of Texas, Dallas Sheet. The University of Texas at Austin, 1972.

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APPENDIX A
PHOTOGRAPHS

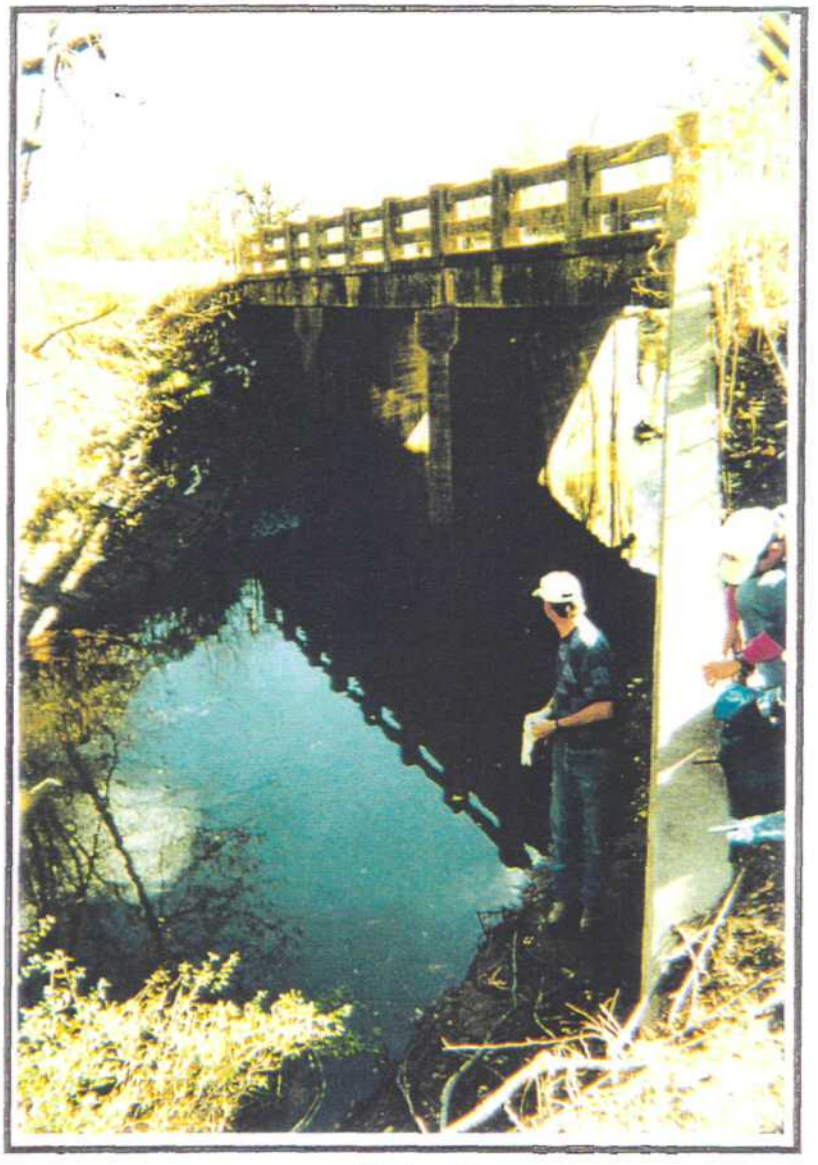
Photograph: 1

Site Name:	Garland City of Quail Creek Landfill
Site Location:	Garland, TX
CERCLIS ID:	TXD980697205
Photographer:	Ria Aiken RA
Witness:	Troy Hile TH
Date of Photograph:	12/10/96
Description:	Photograph is taken off-site at the northwest corner of the site to document on-site conditions.

Photograph: 2

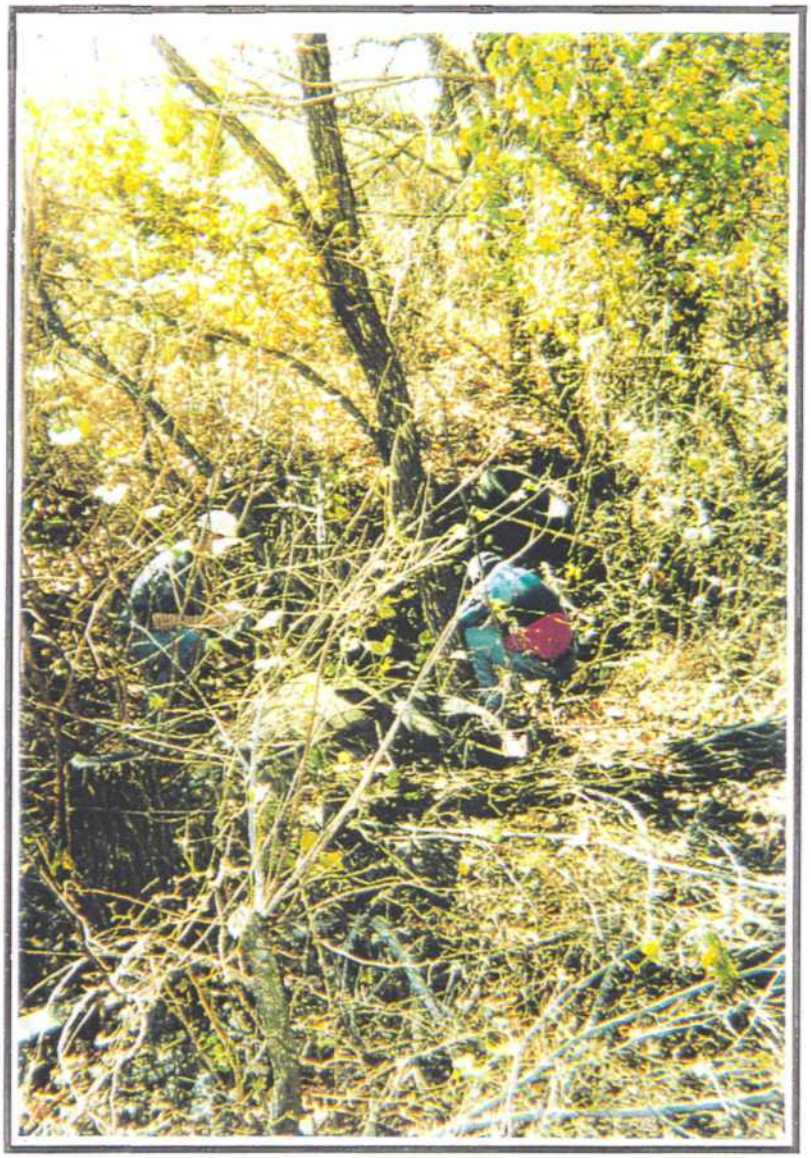
Site Name:	Garland City of Quail Creek Landfill
Site Location:	Garland, TX
CERCLIS ID:	TXD980697205
Photographer:	Ria Aiken RA
Witness:	Troy Hile TH
Date of Photograph:	12/10/96
Description:	Photograph taken of John Warren collecting sample SW-01 upstream of the site at the intersection of the bridge and Country Club Road.

Photograph: 3



Site Name:	Garland City of Quail Creek Landfill
Site Location:	Garland, TX
CERCLIS ID:	TXD980697205
Photographer:	Ria Aiken RA
Witness:	Troy Hile JH
Date of Photograph:	12/10/96
Description:	Photograph shows a portion of Mills Branch Creek, located upstream of the site. Samples SW-01 and SED-01 were collected here.

Photograph: 4

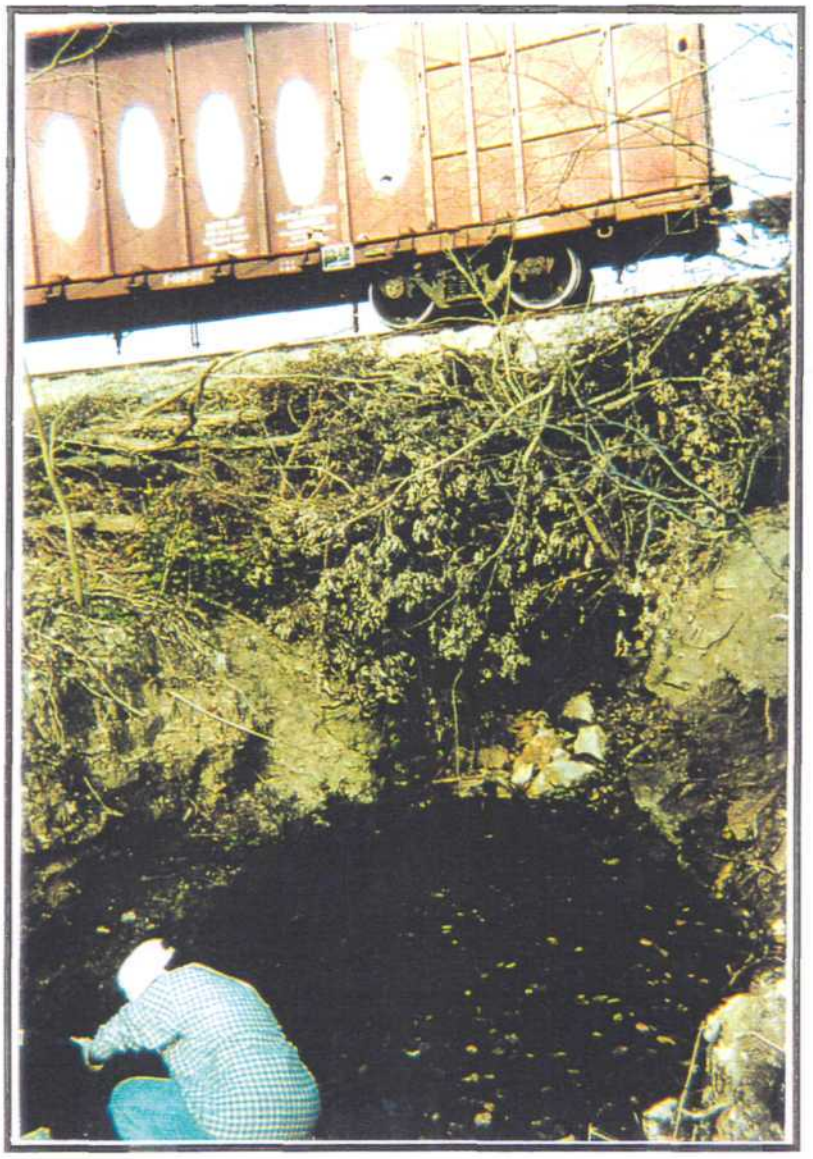


Site Name:	Garland City of Quail Creek Landfill
Site Location:	Garland, TX
CERCLIS ID:	TXD980697205
Photographer:	Ria Aiken RA
Witness:	Troy Hile TH
Date of Photograph:	12/10/96
Description:	Photograph shows John Warren and Troy Hile retrieving SED-04 at the drainage ditch located 280 yards east of the western site boundary.

Photograph: 5

Site Name:	Garland City of Quail Creek Landfill
Site Location:	Garland, TX
CERCLIS ID:	TXD980697205
Photographer:	Troy Hile JH
Witness:	Ria Aiken RA
Date of Photograph:	12/10/96
Description:	Photograph of drainage ditch located 770 yards east of western site boundary. Ria Aiken (team member) collected sample SED-03 and SW-02. Photograph was taken facing south.

Photograph: 6



Site Name:	Garland City of Quail Creek Landfill
Site Location:	Garland, TX
CERCLIS ID:	TXD980697205
Photographer:	Troy Hile TH
Witness:	Ria Aiken RA
Date of Photograph:	12/10/96
Description:	Photograph taken of drainage ditch located 770 yards east of western site boundary. Ria Aiken (team member) collected samples SED-03 and SW-02. Photograph was taken facing north.

Photograph: 7

Site Name:	Garland City of Quail Creek Landfill
Site Location:	Garland, TX
CERCLIS ID:	TXD980697205
Photographer:	Troy Hile TH
Witness:	Ria Aiken RA
Date of Photograph:	12/10/96
Description:	Photograph showing the drainage ditch located 1140 yards east of the western site boundary. Photograph was taken facing south. Sample SED-02 was collected here.

Photograph: 8

Site Name:	Garland City of Quail Creek Landfill
Site Location:	Garland, TX
CERCLIS ID:	TXD980697205
Photographer:	Troy Hile TH
Witness:	John Warren JW
Date of Photograph:	12/10/96
Description:	Photograph showing the intersection of Centreville Road and Mills Branch Creek, just east of the site. Photograph taken facing north.

Photograph: 9

Site Name:	Garland City of Quail Creek Landfill
Site Location:	Garland, TX
CERCLIS ID:	TXD980697205
Photographer:	Troy Hile TH
Witness:	John Warren JW
Date of Photograph:	12/10/96
Description:	Photograph taken downstream of the site at the intersection of Centerville Road and Mills Branch Creek, just east of the site. Photograph taken facing east. Sample SED-05 was collected here.

APPENDIX B
CLP DATA PACKAGE EXCERPTS

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 6
HOUSTON BRANCH
10625 FALLSTONE RD.
HOUSTON, TEXAS 77099

MEMORANDUM

Date: 1-23-1997

Subject: **Contract Laboratory Program Data Review**

From: Melvin L. Ritter, ESAT RPO, 6MD-HC MLRitter 1/23/97

To: L. Biasco , 6SF-RA

Site: GC OF QUAIL CREEK

Case#: 25210

SDG#: FE-Q01

The EPA Region 6 Houston Branch ESAT data validation team has completed a review of the submitted Contract Laboratory Program (CLP) data package for the referenced site. The samples analyzed and reviewed are detailed in the attached Regional data review and assessment report for this case.

The data package was found to be:

(X) Acceptable: No major problems with data package.

( ) Provisional: Use of data requires caution.
Data is acceptable for Regional use. Problems are noted in the review report.

( ) Unacceptable: Some or all of data should not be used.
Problems are noted in the review report.

Questions regarding the data review report can be addressed to me.

Attachments

cc: R. Flores, Region 6 CLP/TPO
M. El-feky, Region 6 Data Coordinator

Files (2)

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 6
HOUSTON BRANCH
10625 FALLSTONE RD.
HOUSTON, TEXAS 77099

RECEIPT OF PACKAGE FROM USEPA

I ACKNOWLEDGE RECEIPT OF THE FOLLOWING CONTRACT LABORATORY PROGRAM DATA PACKAGE FROM THE USEPA - HOUSTON:

SITE : GC OF QUAIL CREEK
CASE NO.: 25210
SDG NO. : FE-Q01

RECEIVED BY: P. [signature] DATE: 1/28/97

REPRESENTING: ROY F. WESTON, INC.

ADDRESS/PHONE: 5599 SAN FELIPE # 700
HOUSTON, TEXAS 77056

CONCURRENCE BY EPA REPRESENTATIVE:

MAHMOUD ELFEKY M. Elfeky DATE: 1-31-1997

CC: USEPA PROJECT OFFICER
ESAT FILE

A COPY OF THIS RECEIPT SHALL BE SENT TO THE EPA PROGRAM OFFICE ALONG WITH A COPY OF THE ENCLOSED DATA REVIEW.

Recycled/Recyclable
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LOCKHEED MARTIN SERVICES GROUP
ONE STERLING PLAZA
10101 SOUTHWEST FREEWAY, SUITE 500
HOUSTON, TX 77074

MEMORANDUM

DATE: January 14, 1997

TO: Dr. Melvin Ritter, ESAT RPO, Region VI

FROM: Dr. Tom C. H. Chiang, ESAT TM, Region VI

Tom C.H. Chiang

SUBJECT: CLP Data Review

REF: TDF # 6-7123A ESAT File # O-1786

Attached is the data review summary for Case # 25210
SDG # FEO01
Site GC of Quail Creek

COMMENTS:

I. CONTRACTUAL ASSESSMENT OF DATA PACKAGE

The hardcopy data review detected the following contractual noncompliances which were not reported by the CCS report.

A. The laboratory reported acceptable resolution results, but the raw data did not support some reported results. The laboratory measured peak and valley heights based on creative baseline settings solely to meet the resolution criteria. The chromatograms showed that the resolution between peaks in the following listed compound pairs failed contractual requirements:

DDE/dieldrin and methoxychlor/endrin ketone in RESCO9A (OLM03.0, p. D-27/PEST, 9.2.5.2) and

DDD/DDT in INDAM91 (OLM03.0, p. D-28/PEST, 9.2.5.8) and INDAMB2 (OLM03.0, p. D-32/PEST, 9.3.5.2).

These problems did not cause data qualification. However, the Agency needs to be aware that this is a recurring problem for IEANJ.

B. The data package was 4 days late for the 14-day turnaround time.

LOCKHEED MARTIN SERVICES GROUP
ONE STERLING PLAZA
10101 SOUTHWEST FREEWAY, SUITE 500
HOUSTON, TX 77074

MEMORANDUM

Attached is the data review summary for Case # 25210
SDG # FE001
Site GC of Quail Creek

COMMENTS (continued):

II. TECHNICAL ASSESSMENT OF DATA PACKAGE

A total of 750 results were reviewed for this data package. The data package is technically acceptable although several contractual noncompliances were reported above.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 6
HOUSTON BRANCH
10625 FALLSTONE ROAD
HOUSTON, TEXAS 77099

ORGANIC REGIONAL DATA ASSESSMENT

CASE NO. 25210
LABORATORY IEANJ
CONTRACT# 68-D5-0011
SDG# FE001
SOW# CLP SOW OLM03.2
ACCT# 7FAXJN29 SF# FAXUZZ

SITE GC of Quail Creek
NO. OF SAMPLES 6
MATRIX Soil
REVIEWER (IF NOT ESD) ESAT
REVIEWER'S NAME T. Y. Fan
COMPLETION DATE January 14, 1997

SAMPLE NO.					
	FE-001	FE-005			
	FE-002	FE-006			
	FE-003				
	FE-004				

DATA ASSESSMENT SUMMARY

	VOA	BNA	PEST
1. HOLDING TIMES	O	O	O
2. GC/MS TUNE/INSTR. PERFORM.	O	O	O
3. CALIBRATIONS	O	O	O
4. BLANKS	O	O	O
5. SMCS/SURROGATES	O	O	O
6. MATRIX SPIKE/DUPLICATE	O	O	O
7. OTHER QC	O	O	O
8. INTERNAL STANDARDS	O	O	N/A
9. COMPOUND ID/QUANTITATION	O	O	O
10. PERFORMANCE/COMPLETENESS	O	O	O
11. OVERALL ASSESSMENT	O	O	O

O = Data had no problems.
M = Data qualified due to major or minor problems.
Z = Data unacceptable.
N/A = Not applicable.

ACTION ITEMS: The data package was 4 days late for the 14-day turnaround time. Three Pest/PCB calibration analyses failed contractual resolution criteria.

AREA OF CONCERN: None.

NOTABLE PERFORMANCE: None.

COMMENTS/CLARIFICATIONS
REGION VI CLP QA REVIEW

CASE 25210 SDG FE001 SITE GC of Quail Creek LAB IEANJ

The following is a summary of sample qualifiers used by Region 6 in reporting this CLP data:

No.	Acceptable	Provisional	Unacceptable
VOA	6		
BNA	6		
PEST	6		

COMMENTS: The case consisted of six soil samples for complete RAS organics analysis by OLM03.2. According to the OTR/COC record, samples FE-Q05 and FE-Q06 were field duplicates, and sample FE-Q05 was designated for MS/MSD analyses.

The data package was 4 days late for the 14-day turnaround time. Three Pest/PCB calibration analyses failed the contractual resolution criteria, but sample data were not affected. The samples did not contain TCL analytes above the CRQL's. All results are acceptable as indicated by the attached Data Summary Table.

NOTE: THE FOLLOWING REVIEW NARRATIVE ADDRESSES BOTH CONTRACTUAL AND TECHNICAL ISSUES. THE ASSESSMENT MADE FOR EACH QC PARAMETER IS SOLELY BASED ON THE TECHNICAL DATA USABILITY, WHICH MAY NOT NECESSARILY BE AFFECTED BY CONTRACTUAL PROBLEMS.

1. **Holding Times:** Acceptable. All samples met contractual holding time criteria. No technical holding time criteria exist for the soil samples.

2. **Tuning/Performance:** Acceptable. BFB and DFTPP analyses met GC/MS tuning criteria. Several pesticides failed the contractual resolution criteria for one resolution check and two individual A calibration standards. Endosulfan II and DDD coeluted on the DB-1701 column. Since the analytes with resolution problems were not detected in the samples, result qualification was unnecessary. Other Pest/PCB performance was acceptable.

3. **Calibrations:** Acceptable. The target analytes met contractual calibration criteria. One BNA analyte failed technical minimum RRF criteria for two concentration levels of the initial calibration. Since the instrument responses for this analyte improved and significantly exceeded the minimum requirement in the daily calibrations, sample results were not qualified.

ORGANIC QA REVIEW
CONTINUATION PAGE

CASE 25210 SDG FEQ01 SITE GC of Quail Creek LAB IEANJ

4. **Blanks:** Acceptable. The method, storage, and instrument blanks met QC guidelines. The VOA method blanks contained acetone below the CRQL. All acetone results "B"-flagged by the laboratory should be considered as undetected because of laboratory contamination. Acetone was detected in the storage blank and the associated method blank at similar concentrations. In the reviewer's opinion, acetone was introduced into the storage blank during the analysis.

5. **System Monitoring Compounds/Surrogates:** Acceptable. One DCB recovery was marginally below the QC limit. In the reviewer's opinion, data qualification is unnecessary. Other surrogate and SMC recoveries were acceptable.

6. **Matrix Spike/Matrix Spike Duplicate:** Acceptable. MS/MSD results were within QC limits.

7. **Other QC:**

   Field Duplicates: Acceptable. Field duplicate results were consistent.

8. **Internal Standards (IS):** Acceptable. IS performance was acceptable for all VOA and BNA samples.

9. **Compound Identity/Quantitation:** Acceptable. The samples did not contain TCL analytes above CRQL's. Target compounds reported below the CRQL's included methylene chloride, PAH's, bis(2-ethylhexyl)phthalate, dieldrin, and chlordanes. The reported analytes met compound identification criteria.

10. **Performance/Completeness:** Acceptable. The data package was complete with minor reporting errors. The laboratory was contacted for resubmission (see attached FAX Logs).

11. **Overall Assessment:** Data are acceptable for all samples.

ORGANIC DATA QUALIFIER DEFINITIONS

The following definitions provide brief explanations of the ESAT-Region 6 qualifiers assigned to results in the Data Summary Table.

U	Not detected at reported quantitation limit.
N	Identification is tentative.
J	Estimated value.
R	Unusable.
^	High biased. Actual concentration may be lower than the concentration reported.
v	Low biased. Actual concentration may be higher than the concentration reported.
F+	A false positive exists.
F-	A false negative exists.
B	This result may be high biased because of laboratory/field contamination. The reported concentration is above 5X or 10X the concentration reported in the method/field blank.
UJ	Estimated quantitation limit.
T	Identification is questionable because of absence of other commonly coexisting pesticides.
*	Result not recommended for use because of associated QA/QC performance inferior to that from other analysis.

ORGANIC DATA SUMMARY

Case No.: 25210 SDG: FEQ01 Reviewer: T. FAN

Laboratory: IEANJ Matrix: SOIL Units: ug/Kg

VOLATILES	FLAG	FLAG	FLAG	FLAG	FLAG	FLAG	FLAG
EPA SAMPLE NUMBER:	FE-Q01	FE-Q02	FE-Q03	FE-Q04	FE-Q05	FE-Q06	
Chloromethane	15 U	16 U	14 U	17 U	14 U	15 U	
Bromomethane	15 U	16 U	14 U	17 U	14 U	15 U	
Vinyl chloride	15 U	16 U	14 U	17 U	14 U	15 U	
Chloroethane	15 U	16 U	14 U	17 U	14 U	15 U	
Methylene chloride	9 J	15 J	12 J	12 J	7 J	8 J	
Acetone	15 U	16 U	14 U	17 U	14 U	15 U	
Carbon disulfide	15 U	16 U	14 U	17 U	14 U	15 U	
1,1-Dichloroethene	15 U	16 U	14 U	17 U	14 U	15 U	
1,1-Dichloroethane	15 U	16 U	14 U	17 U	14 U	15 U	
1,2-Dichloroethene (total)	15 U	16 U	14 U	17 U	14 U	15 U	
Chloroform	15 U	16 U	14 U	17 U	14 U	15 U	
1,2-Dichloroethane	15 U	16 U	14 U	17 U	14 U	15 U	
2-Butanone	15 U	16 U	14 U	17 U	14 U	15 U	
1,1,1-Trichloroethane	15 U	16 U	14 U	17 U	14 U	15 U	
Carbon tetrachloride	15 U	16 U	14 U	17 U	14 U	15 U	
Bromodichloromethane	15 U	16 U	14 U	17 U	14 U	15 U	
1,2-Dichloropropane	15 U	16 U	14 U	17 U	14 U	15 U	
cis-1,3-Dichloropropene	15 U	16 U	14 U	17 U	14 U	15 U	
Trichloroethene	15 U	16 U	14 U	17 U	14 U	15 U	
Dibromochloromethane	15 U	16 U	14 U	17 U	14 U	15 U	
1,1,2-Trichloroethane	15 U	16 U	14 U	17 U	14 U	15 U	
Benzene	15 U	16 U	14 U	17 U	14 U	15 U	
trans-1,3-Dichloropropene	15 U	16 U	14 U	17 U	14 U	15 U	
Bromoform	15 U	16 U	14 U	17 U	14 U	15 U	
4-Methyl-2-pentanone	15 U	16 U	14 U	17 U	14 U	15 U	
2-Hexanone	15 U	16 U	14 U	17 U	14 U	15 U	
Tetrachloroethene	15 U	16 U	14 U	17 U	14 U	15 U	
1,1,2,2-Tetrachloroethane	15 U	16 U	14 U	17 U	14 U	15 U	
Toluene	15 U	16 U	14 U	17 U	14 U	15 U	
Chlorobenzene	15 U	16 U	14 U	17 U	14 U	15 U	
Ethylbenzene	15 U	16 U	14 U	17 U	14 U	15 U	
Styrene	15 U	16 U	14 U	17 U	14 U	15 U	
Xylenes (total)	15 U	16 U	14 U	17 U	14 U	15 U	
Sample wt (g):	5	5	5	5	5	5	
%Moisture:	34	37	30	40	29	32	
Dilution Factor:	1	1	1	1	1	1	
Level:	LOW	LOW	LOW	LOW	LOW	LOW	
Number of TIC's:	0	0	0	0	0	0	

Note: For the results listed in the Data Summary Table, ESAT has replaced the laboratory assigned flags with ESAT Organic Data Qualifiers. The ESAT flags indicate the technical usability of the reported results.

ORGANIC DATA SUMMARY

Case No.: 25210 SDG: FEQ01 Reviewer: T. FAN

Laboratory: IEANJ Matrix: SOIL Units: ug/Kg

SEMIVOLATILES	FLAG	FLAG	FLAG	FLAG	FLAG	FLAG	FLAG
EPA SAMPLE NUMBER:	FE-Q01	FE-Q02	FE-Q03	FE-Q04	FE-Q05	FE-Q06	
Phenol	500 U	520 U	470 U	550 U	460 U	480 U	
bis(2-Chloroethyl)ether	500 U	520 U	470 U	550 U	460 U	480 U	
2-Chlorophenol	500 U	520 U	470 U	550 U	460 U	480 U	
1,3-Dichlorobenzene	500 U	520 U	470 U	550 U	460 U	480 U	
1,4-Dichlorobenzene	500 U	520 U	470 U	550 U	460 U	480 U	
1,2-Dichlorobenzene	500 U	520 U	470 U	550 U	460 U	480 U	
2-Methylphenol	500 U	520 U	470 U	550 U	460 U	480 U	
2,2'-Oxybis(1-chloropropane)	500 U	520 U	470 U	550 U	460 U	480 U	
4-Methylphenol	500 U	520 U	470 U	550 U	460 U	480 U	
N-Nitroso-di-n-propylamine	500 U	520 U	470 U	550 U	460 U	480 U	
Hexachloroethane	500 U	520 U	470 U	550 U	460 U	480 U	
Nitrobenzene	500 U	520 U	470 U	550 U	460 U	480 U	
Isophorone	500 U	520 U	470 U	550 U	460 U	480 U	
2-Nitrophenol	500 U	520 U	470 U	550 U	460 U	480 U	
2,4-Dimethylphenol	500 U	520 U	470 U	550 U	460 U	480 U	
bis(2-Chloroethoxy)methane	500 U	520 U	470 U	550 U	460 U	480 U	
2,4-Dichlorophenol	500 U	520 U	470 U	550 U	460 U	480 U	
1,2,4-Trichlorobenzene	500 U	520 U	470 U	550 U	460 U	480 U	
Naphthalene	500 U	520 U	470 U	550 U	460 U	480 U	
4-Chloroaniline	500 U	520 U	470 U	550 U	460 U	480 U	
Hexachlorobutadiene	500 U	520 U	470 U	550 U	460 U	480 U	
4-Chloro-3-methylphenol	500 U	520 U	470 U	550 U	460 U	480 U	
2-Methylnaphthalene	500 U	520 U	470 U	550 U	460 U	480 U	
Hexachlorocyclopentadiene	500 U	520 U	470 U	550 U	460 U	480 U	
2,4,6-Trichlorophenol	500 U	520 U	470 U	550 U	460 U	480 U	
2,4,5-Trichlorophenol	1200 U	1300 U	1200 U	1400 U	1200 U	1200 U	
2-Chloronaphthalene	500 U	520 U	470 U	550 U	460 U	480 U	
2-Nitroaniline	1200 U	1300 U	1200 U	1400 U	1200 U	1200 U	
Dimethylphthalate	500 U	520 U	470 U	550 U	460 U	480 U	
Acenaphthylene	500 U	520 U	470 U	550 U	460 U	480 U	
2,6-Dinitrotoluene	500 U	520 U	470 U	550 U	460 U	480 U	
3-Nitroaniline	1200 U	1300 U	1200 U	1400 U	1200 U	1200 U	
Acenaphthene	500 U	520 U	470 U	550 U	460 U	480 U	
2,4-Dinitrophenol	1200 U	1300 U	1200 U	1400 U	1200 U	1200 U	
4-Nitrophenol	1200 U	1300 U	1200 U	1400 U	1200 U	1200 U	
Dibenzofuran	500 U	520 U	470 U	550 U	460 U	480 U	
2,4-Dinitrotoluene	500 U	520 U	470 U	550 U	460 U	480 U	
Diethylphthalate	500 U	520 U	470 U	550 U	460 U	480 U	
4-Chlorophenyl-phenylether	500 U	520 U	470 U	550 U	460 U	480 U	
Fluorene	500 U	520 U	470 U	550 U	460 U	480 U	
4-Nitroaniline	1200 U	1300 U	1200 U	1400 U	1200 U	1200 U	
4,6-Dinitro-2-methylphenol	1200 U	1300 U	1200 U	1400 U	1200 U	1200 U	
N-Nitrosodiphenylamine	500 U	520 U	470 U	550 U	460 U	480 U	
4-Bromophenyl-phenylether	500 U	520 U	470 U	550 U	460 U	480 U	
Hexachlorobenzene	500 U	520 U	470 U	550 U	460 U	480 U	
Pentachlorophenol	1200 U	1300 U	1200 U	1400 U	1200 U	1200 U	
Phenanthrene	75 J	520 U	52 J	550 U	460 U	100 J	
Anthracene	500 U	520 U	470 U	550 U	460 U	480 U	

ORGANIC DATA SUMMARY

Case No.: 25210 SDG: FEQ01 Reviewer: T. FAN

Laboratory: IEANJ Matrix: SOIL Units: ug/Kg

SEMIVOLATILES	FLAG	FLAG	FLAG	FLAG	FLAG	FLAG	FLAG
EPA SAMPLE NUMBER:	FE-Q01	FE-Q02	FE-Q03	FE-Q04	FE-Q05	FE-Q06	
Carbazole	500 U	520 U	470 U	550 U	460 U	480 U	
Di-n-butylphthalate	500 U	520 U	470 U	550 U	460 U	480 U	
Fluoranthene	230 J	520 U	95 J	550 U	110 J	180 J	
Pyrene	190 J	520 U	93 J	550 U	89 J	160 J	
Butylbenzylphthalate	500 U	520 U	470 U	550 U	460 U	480 U	
3,3'-Dichlorobenzidine	500 U	520 U	470 U	550 U	460 U	480 U	
Benzo(a)anthracene	87 J	520 U	470 U	550 U	460 U	68 J	
Chrysene	120 J	520 U	49 J	550 U	68 J	95 J	
bis(2-Ethylhexyl)phthalate	67 J	520 U	230 J	550 U	84 J	190 J	
Di-n-octylphthalate	500 U	520 U	470 U	550 U	460 U	480 U	
Benzo(b)fluoranthene	500 U	520 U	49 J	550 U	99 J	480 U	
Benzo(k)fluoranthene	500 U	520 U	60 J	66 J	460 U	130 J	
Benzo(a)pyrene	98 J	520 U	470 U	550 U	57 J	72 J	
Indeno(1,2,3-cd)pyrene	500 U	520 U	470 U	550 U	460 U	480 U	
Dibenz(a,h)anthracene	500 U	520 U	470 U	550 U	460 U	480 U	
Benzo(g,h,i)perylene	500 U	520 U	470 U	550 U	460 U	480 U	
Sample wt (g):	30	30	30	30	30	30	
%Moisture:	34	37	30	40	29	32	
Dilution Factor:	1	1	1	1	1	1	
Level:	LOW	LOW	LOW	LOW	LOW	LOW	
Number of TIC's:	14	8	8	13	10	8	

Note: For the results listed in the Data Summary Table, ESAT has replaced the laboratory assigned flags with ESAT Organic Data Qualifiers. The ESAT flags indicate the technical usability of the reported results.

ORGANIC DATA SUMMARY

Case No.: 25210 SDG: FEQ01 Reviewer: T. FAN

Laboratory: IEANJ Matrix: SOIL Units: ug/Kg

PESTICIDES/PCBs	FLAG	FLAG	FLAG	FLAG	FLAG	FLAG	FLAG
EPA SAMPLE NUMBER:	FE-Q01	FE-Q02	FE-Q03	FE-Q04	FE-Q05	FE-Q06	
alpha-BHC	2.6 U	2.7 U	2.4 U	2.8 U	2.4 U	2.5 U	
beta-BHC	2.6 U	2.7 U	2.4 U	2.8 U	2.4 U	2.5 U	
delta-BHC	2.6 U	2.7 U	2.4 U	2.8 U	2.4 U	2.5 U	
gamma-BHC (lindane)	2.6 U	2.7 U	2.4 U	2.8 U	2.4 U	2.5 U	
Heptachlor	2.6 U	2.7 U	2.4 U	2.8 U	2.4 U	2.5 U	
Aldrin	2.6 U	2.7 U	2.4 U	2.8 U	2.4 U	2.5 U	
Heptachlor epoxide	2.6 U	2.7 U	2.4 U	2.8 U	2.4 U	2.5 U	
Endosulfan I	2.6 U	2.7 U	2.4 U	2.8 U	2.4 U	2.5 U	
Dieldrin	5 U	5.2 U	4.7 U	5.5 U	4.6 U	2.6 J	
4,4'-DDE	5 U	5.2 U	4.7 U	5.5 U	4.6 U	4.8 U	
Endrin	5 U	5.2 U	4.7 U	5.5 U	4.6 U	4.8 U	
Endosulfan II	5 U	5.2 U	4.7 U	5.5 U	4.6 U	4.8 U	
4,4'-DDD	5 U	5.2 U	4.7 U	5.5 U	4.6 U	4.8 U	
Endosulfan sulfate	5 U	5.2 U	4.7 U	5.5 U	4.6 U	4.8 U	
4,4'-DDT	5 U	5.2 U	4.7 U	5.5 U	4.6 U	4.8 U	
Methoxychlor	26 U	27 U	24 U	28 U	24 U	25 U	
Endrin ketone	5 U	5.2 U	4.7 U	5.5 U	4.6 U	4.8 U	
Endrin aldehyde	5 U	5.2 U	4.7 U	5.5 U	4.6 U	4.8 U	
alpha-Chlordane	1.7 J	1.5 J	1.2 J	2.8 U	2.4 U	1.8 J	
gamma-Chlordane	2.5 J	2 J	1.3 J	1.5 J	2.4 U	2.6	
Toxaphene	260 U	270 U	240 U	280 U	240 U	250 U	
Aroclor-1016	50 U	52 U	47 U	55 U	46 U	48 U	
Aroclor-1221	100 U	110 U	96 U	110 U	94 U	98 U	
Aroclor-1232	50 U	52 U	47 U	55 U	46 U	48 U	
Aroclor-1242	50 U	52 U	47 U	55 U	46 U	48 U	
Aroclor-1248	50 U	52 U	47 U	55 U	46 U	48 U	
Aroclor-1254	50 U	52 U	47 U	55 U	46 U	48 U	
Aroclor-1260	50 U	52 U	47 U	55 U	46 U	48 U	
Sample wt (g):	30	30	30	30	30	30	
%Moisture:	34	37	30	40	29	32	
Dilution Factor:	1	1	1	1	1	1	

Note: For the results listed in the Data Summary Table, ESAT has replaced the laboratory assigned flags with ESAT Organic Data Qualifiers. The ESAT flags indicate the technical usability of the reported results.

INORGANIC/ORGANIC COMPLETE SDG FILE (CSF) INVENTORY CHECKLIST

Case No. 25210 SDG No. FEQ01 SDG Nos. To Follow SAS No. Date Rec 12/30/96

EPA Lab ID: IEANJ

Lab Location: 628 Route 10, Whippany, NJ 07981

Region: 6 Audit No.: 25210/FEQ01

Re_Submitted CSF? Yes _____ No X

Box No(s): 1

COMMENTS:

Item	Description of Problem
8	The SDG Number was incorrect; the auditor made the necessary correction.
14,15	The Airbill did not have designated space for recipient signature and date.

Over for additional comments.

ORIGINALS	YES	NO	N/A
CUSTODY SEALS			
1. Present on package?	X		
2. Intact upon receipt?	X		
FORM DC-2			
3. Numbering scheme accurate?	X		
4. Are enclosed documents listed?	X		
5. Are listed documents enclosed?	X		
FORM DC-1			
6. Present?	X		
7. Complete?	X		
8. Accurate?		X	
CHAIN-OF-CUSTODY RECORD(s)			
9. Signed?	X		
10. Dated?	X		
TRAFFIC REPORT(s) PACKING LIST(s)			
11. Signed?	X		
12. Dated?	X		
AIRBILLS/AIRBILL STICKER			
13. Present?	X		
14. Signed?			X
15. Dated?			X
SAMPLE TAGS			
16. Does DC-1 list tags as being included?	X		
17. Present?	X		
OTHER DOCUMENTS			
18. Complete?	X		
19. Legible?	X		
20. Original?		X	
20a. If "NO", does the copy indicate where original documents are located?	X		

Audited by:	Tseng-Ying Fan/Data Reviewer	Date	1/10/97
Audited by:		Date	
Audited by:		Date	
Signature	Printed Name/Title		

TO BE COMPLETED BY CEAT

Date Recvd by CEAT: _____ Date Entered: _____ Date Reviewed: _____

Entered by: _____

Reviewed by: _____

Signature Printed Name/Title

In Reference to Case No(s):
25210 SDG: FEQ01 (O-1786)

Contract Laboratory Program
REGIONAL/LABORATORY COMMUNICATION SYSTEM
FAX Record Log

Date of FAX: January 14, 1997
Laboratory Name: IEANJ
Lab Contact: Brian Wood
Region: 6
Regional Contact: Terry Fan - ESAT
FAX initiated by: ____Laboratory ___X___Region

In reference to data for the following fractions:

VOA BNA Pest/PCB

Summary of Questions/Issues:

A. VOA

Form VIII (p. 17): The IS areas for the 12-hour standard did not agree with the raw data, p. 91. Please correct and resubmit this form.

B. BNA

1. Sample FE-Q01: The peak eluting at 30.25 minutes (TIC#6, spectrum on p. 155) appeared to meet the compound identification criteria for target compound benzo(b)fluoranthene. Please verify and resubmit the corrected quantitation report and Forms I and I-TIC.

2. Samples FE-Q03 and FE-Q04: Benzo(k)fluoranthene was not a positive hit according to the quantitation report but was reported otherwise on the Form I. Please make the necessary correction and resubmission.

3. The following TIC results were missing required flags. Please correct and resubmit the affected Form I-TIC's.

Sample	Page#	TIC#	Missing Flag
FE-Q01	141	1	A, B
FE-Q01	141	5	B
FE-Q01	141	13	B
FE-Q02	168	8	B
FE-Q05	250	9	B

Contract Laboratory Program
REGIONAL/LABORATORY COMMUNICATION SYSTEM
FAX Record Log

Continuation Page 2 of 2
Laboratory/Contact IEANJ/Brian Wood
In Reference to Case No. 25210 **SDG** FEQ01

B. BNA

4. Spectra were submitted but results were not reported in the SDG Narrative for the following alkane peaks.

Sample	Peak R.T. (Min)
FE-Q01	28.92, 30.63, 32,85, 35.94
FE-Q02	28.93, 30.63, 32.84, 35.93
FE-Q05	28.92, 30.62, 32.84, 35.93

Please correct these omissions and resubmit the alkane listing in the SDG Narrative.

5. SBLKD1: The result for TIC #1 does not require a "B" flag. Please revise and resubmit the Form I-TIC (p. 365).

C. Pest/PCB

1. Please comply with the contractual requirement (OLM03.0, p. B-26, 2.6.5.3.15) and submit a list containing the on-column amount (in ng) of each target compound for every calibration standard.

2. Incorrect surrogate retention times were reported on Form VIII's for PIBLKBC, INDAMBB, INDBMBB, PIBLKB3, INDAMB2, and INDBMB2. Please correct and resubmit pages 460 and 461.

NOTE: Any laboratory resubmission should be submitted either as an addendum to the original CSF with a revised Form DC-2 or submitted as a new CSF with a new Form DC-2 (OLM03.0, p. B-29), except those containing only replacement pages. Custody seals are required for all CSF resubmission shipments.

Please respond to the above items **within 7 days** to:

Mr. Mahmoud El-Feky
U.S. EPA Region 6 Laboratory
10625 Fallstone Road
Houston, TX 77099

If you have any questions, please contact me at (713) 988-2971.

Signature

January 14, 1997
Date

Distribution: (1) Lab Copy (2) Region Copy

EPA United States Environmental Protection Agency
Contract Laboratory Program

Organic Traffic Report & Chain of Custody Record
(For Organic CLP Analysis)

Case No. 25210

1. Project Code	Account Code	2. Region No.	Sampling Co.	4. Date Shipped	Carrier
—	—	6	WESTON	12/10/96	FED EX

Regional Information: —

Non-Superfund Program: —

Site Name: GARLAND CITY OF QUAIL CREEK

City, State: GARLAND, TX

Site Spill ID: ZZ

Sampler (Name): ROBERT BECK

Sampler Signature: [signature]

3. Purpose*
Lead: [X] SF, [ ] PRP, [ ] ST, [ ] FED
Early Action: [ ] CLEM, [ ] PA, [ ] REM, [ ] RI, [X] SI, [ ] ESI
Long-Term Action: [ ] FS, [ ] RD, [ ] RA, [ ] O&M, [ ] NPLD

Airbill Number: 9601648324

5. Ship To
INDUSTRIAL ENVIRONMENTAL ANALYSIS
628 ROUTE 10
WHIPPANY, NJ 07981
(201) 428-8181
ATTN: BRIAN WOOD

6. Matrix (Enter in Column A)
1. Surface Water
2. Ground Water
3. Leachate
4. Field QC
5. Soil/Sediment
6. Oil (High only)
7. Waste (High only)
8. Other (Specify in Column A)

7. Preservative (Enter in Column D)
1. HCl
2. HNO3
3. NaHSO4
4. H2SO4
5. Ice only
6. Other (Specify in Column D)
N. Not preserved

	CLP Sample Numbers (from labels)	A Matrix (from Box 6) Other:	B Conc.: Low Med High	C Sample Type: Comp./ Grab	D Preservative (from Box 7) Other:	E RAS Analysis VOA	BNA	Pest/PCB	High only ARO/TOX	F Regional Specific Tracking Number or Tag Numbers	G Station Location Identifier	H Mo/Day/ Year/Time Sample Collection	I Corresponding CLP Inorganic Sample No.	J Sampler Initials	K Field QC Qualifier (B = Blank S = Spike D = Duplicate R = Rinsate PE = Perform. Eval. — = Not a QC Sample)
***	FEQ01	5	L	G	5	X	X	X		6-012430 - 432	SED-01	12/10/96 1100	MFGX51	RB	
***	FEQ02	5	L	G	5	X	X	X		6-012434 - 436	SED-02	12/10/96 1330	MFGX52	RB	
***	FEQ03	5	L	G	5	X	X	X		6-012438 - 440	SED-03	12/10/96 1350	MFGX53	RB	
***	FEQ04	5	L	G	5	X	X	X		6-012446 - 448	SED-04	12/10/96 1250	MFGX54	RB	
***	FEQ05	5	L	G	5	X	X	X		6-012450 - 452	SED-05	12/10/96 1440	MFGX55	RB	
***	FEQ06	5	L	G	5	X	X	X		6-012454 - 456	SED-06	12/10/96 1445	MFGX56	RB	D(FEQ05)

Shipment for Case Complete? (Y/N): Y

Page 1 of 1

Sample(s) to be Used for Laboratory QC: FEQ05

Additional Sampler Signatures: Troy Hile

Chain of Custody Seal Number(s): —

CHAIN OF CUSTODY RECORD

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Troy Hile	12-10-96 1900	FED-EX			
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks Is custody seal intact? Y/N/none	

A21-012-15 REV.

DISTRIBUTION: Blue - Region Copy; White - Lab Copy for Return to Region; Pink - CLASS Copy; Yellow - Lab Copy for Return to CLASS

EPA Form 9110-2

SEE REVERSE FOR ADDITIONAL STANDARD INSTRUCTIONS
*SEE REVERSE FOR PURPOSE CODE DEFINITIONS

365635

MD

COVER SHEET

LABORATORY RESPONSE TO RESULTS OF CONTRACT COMPLIANCE SCREENING (CCS)

Response To: (Check One) _____ Organic CCS

✓ Inorganic CCS

Response materials should be sent to the attention of the CCS Coordinator.

Labcode: ICM

Response Date: 01/14/97

Date Screening Results Received at Laboratory: 01/02/97

EPA Contract No. 68-DS-0139

Case No. 25210

SDG No. MFGX51

Sample Nos.*

CCB	MFGX36	MFGX51	MFGX55
CCV			
CRI	MFGX36D	MFGX52	MFGX56
ICB			
ICSA	MFGX36L	MFGX53	MFGX58
ICSAB			
ICV	MFGX36S	MFGX54	MFGX59
LCSS			
LCSW	MFGX39	MFGX55	
PBS			
PBW		MFGX55D	

*Only list sample numbers that require reconciliation.

This form is used to identify materials sent in response to results of Contract Compliance Screening (CCS). A separate form must accompany the response for each SDG.

Please indicate (on the attached continuation form) which fractions and/or which criteria correspond with your resubmission. Response materials sent to CCS should also be copied to the Region with this blue Cover Sheet.

LABORATORY RESPONSE TO RESULTS OF CCS

CRITERION	COMMENTS
	The following is in response to the CCS report for
	SDG: MFGX51
	Case: 25210
	Lab: ICM
	Contract: 68-D5-0139
AA17.2	
AA25.1	
AA35.1	Laboratory is currently in the process of learning
AC03.2	how to use the newest version of its vendor's
AF03.2	report generation software. These defects should be
AH01	corrected with this new software.
AH02.1	
AH03.1	
AJ05.2	
AA32	
AA33	
AI05.2	
AL01	Serial dilution performed. on MFGX55D
MD1	Please see ammended hard copy pages.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 6
HOUSTON BRANCH
10625 FALLSTONE RD.
HOUSTON, TEXAS 77099

MEMORANDUM

Date: 1-22-1997

Subject: **Contract Laboratory Program Data Review**

From: M. Humphrey for Melvin L. Ritter, ESAT RPO, 6MD-HC

To: L. Biasco , 6SF-RA

Site: GC OF QUAIL CREEK

Case#: 25210

SDG#: MFG-X51

The EPA Region 6 Houston Branch ESAT data validation team has completed a review of the submitted Contract Laboratory Program (CLP) data package for the referenced site. The samples analyzed and reviewed are detailed in the attached Regional data review and assessment report for this case.

The data package was found to be:

( ) Acceptable: No major problems with data package.

(X) Provisional: Use of data requires caution.
Data is acceptable for Regional use. Problems are noted in the review report.

( ) Unacceptable: Some or all of data should not be used.
Problems are noted in the review report.

Questions regarding the data review report can be addressed to me.

Attachments

cc: R. Flores, Region 6 CLP/TPO
M. El-feky, Region 6 Data Coordinator

Files (2)

Recycled/Recyclable
Printed with Soy/Canola Ink on paper that contains at least 50% recycled fiber

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 6
HOUSTON BRANCH
10625 FALLSTONE RD.
HOUSTON, TEXAS 77099

RECEIPT OF PACKAGE FROM USEPA

I ACKNOWLEDGE RECEIPT OF THE FOLLOWING CONTRACT LABORATORY PROGRAM DATA PACKAGE FROM THE USEPA - HOUSTON:

SITE : GC OF QUAIL CREEK
CASE NO.: 25210
SDG NO. : MFG-X51

RECEIVED BY: [illegible] DATE: 1/23/97

REPRESENTING: ROY F. WESTON, INC.

ADDRESS/PHONE: 5599 SAN FELIPE # 700
HOUSTON, TEXAS 77056

CONCURRENCE BY EPA REPRESENTATIVE:

MAHMOUD ELFEKY [illegible] DATE: 1-24-1997

CC: USEPA PROJECT OFFICER
ESAT FILE

A COPY OF THIS RECEIPT SHALL BE SENT TO THE EPA PROGRAM OFFICE ALONG WITH A COPY OF THE ENCLOSED DATA REVIEW.

Recycled/Recyclable
Printed with Soy/Canola Ink on paper that contains at least 50% recycled fiber

LOCKHEED MARTIN SERVICES GROUP
10101 SOUTHWEST FREEWAY, SUITE 500
HOUSTON, TEXAS 77074

MEMORANDUM

DATE: January 16, 1997

TO: Dr. Melvin Ritter, ESAT RPO, Region VI

FROM: Dr. Tom C.H. Chiang, ESAT ETM, Region VI

SUBJECT: CLP Data Review

REF: TDF # 6-7117A ESAT File # I2074

Attached is the data review summary for Case #25210
SDG #MFGX51
Site GC OF QUAIL CREEK

COMMENTS:

I. CONTRACTUAL ASSESSMENT OF DATA PACKAGE:

The hard copy data review detected the following contractual noncompliance which was corrected by the laboratory through a resubmission. This noncompliance was not detected by CCS.

In the original data package, the laboratory failed to perform proper dilutions for calcium in samples MFG-X51, MFG-X55, MFG-X55D, and MFG-X56 (SOW ILM04.0, page E-27 and E-28, Section V.12). The diluted reanalyses for these four samples were acceptable.

II. TECHNICAL/USABILITY ASSESSMENT OF DATA PACKAGE:

A total of 240 results were reviewed for this data package. The data package is technically provisional because of the following problems.

A. Approximately ten percent of all results were qualified because of technical problems.

B. The cyanide matrix spike recovery was below the QC limit.

C. The difference between cyanide field duplicate results exceeded four times the contract required detection limit (CRDL).

D. ICP replicate readings were inconsistent for lead, selenium, and thallium.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 6 - HOUSTON BRANCH
10625 FALLSTONE ROAD
HOUSTON, TEXAS 77099

INORGANIC REGIONAL DATA ASSESSMENT

CASE NO. 25210
LABORATORY ICM
CONTRACT # 68-D5-0139
SDG # MFGX51
SOW# ILM04.0
ACCT # 7FAXJN29 SF # FAXUZZ

SITE GC OF QUAIL CREEK
NO. OF SAMPLES 10
MATRIX 4 WATER/6 SOIL
REVIEWER (IF NOT ESD) ESAT
REVIEWER'S NAME Mervin Doucet
COMPLETION DATE January 16, 1997

SAMPLE NO.: MFG-X36 MFG-X52 MFG-X55 MFG-X59
MFG-X39 MFG-X53 MFG-X56
MFG-X51 MFG-X54 MFG-X58

DATA ASSESSMENT SUMMARY

	ICP	HG	Cyanide
1. HOLDING TIMES	O	O	O
2. CALIBRATIONS	O	O	O
3. BLANKS	O	O	O
4. MATRIX SPIKES	O	O	M
5. DUPLICATE ANALYSIS	O	O	O
6. ICP QC	M		
7. FAA QC			
8. LCS	O	O	O
9. SAMPLE VERIFICATION	O	O	O
10. OTHER QC	O	O	M
11. OVERALL ASSESSMENT	M	O	M

O = Data had no problems.
M = Data qualified because of major or minor problems.
Z = Data unacceptable.
N/A = Not applicable

ACTION ITEMS:

AREAS OF CONCERN: The serial dilution differences exceeded the QC limits for nickel and zinc. The cyanide matrix spike recovery was below 75 percent. The cyanide field duplicate results were inconsistent. Some lead, selenium, and thallium analyses had inconsistent ICP replicate readings.

NOTABLE PERFORMANCE:

INORGANIC QA REVIEW
CONTINUATION PAGE
Case 25210 SDG MFGX51 Site GC OF QUAIL CREEK Lab ICM

COMMENTS: The package consisted of data for four water and six soil samples for total metals and cyanide analysis by ILM04.0. The sampler designated samples MFG-X36 and MFG-X55 as QC samples and samples MFG-X39/MFG-X59 and MFG-X55/MFG-X56 as field duplicate pairs. The laboratory performed the soil serial dilution analysis using sample MFG-X55D. The laboratory met the required 14-day data package turnaround time. Approximately 48 percent of the reported results are above the CRDL's.

In the original data package, the laboratory failed to perform proper dilution for calcium in four samples. The laboratory resubmitted the diluted reanalyses for these four samples at a later date.

This data package is technically provisional because of problems with serial dilution differences, a matrix spike recovery, inconsistent instruments readings, and a field duplicate difference. The technical usability of all reported sample results is appropriately indicated by ESAT's final data qualifiers in the attached Data Summary Sheet.

An Evidence Audit was conducted for the Complete Sample Delivery Group File (CSF), and the Evidence Inventory Checklist is attached to this report.

NOTE: THE FOLLOWING REVIEW NARRATIVE ADDRESSES BOTH CONTRACTUAL AND TECHNICAL ISSUES. THE ASSESSMENT MADE FOR EACH QC PARAMETER IS SOLELY BASED ON THE TECHNICAL DATA USABILITY, WHICH MAY NOT NECESSARILY BE AFFECTED BY CONTRACTUAL PROBLEMS.

1. **Holding Times:** Acceptable. All holding time and sample preservation criteria were met.

2. **Calibrations:** Acceptable. All calibrations were acceptable. Analysis of CRDL standards indicated that instrument performance near the CRDL's was acceptable.

3. **Blanks:** Acceptable. All preparation and calibration blanks met contractual requirements although concentrations for eight analytes were reported in the blanks. The lead results for samples MFG-X39, MFG-X58, and MFG-X59 were above the CRDL and considered undetected because of the calibration blank concentrations. The following analyte concentrations in the blanks affected sample results below the CRDL's:

   aluminum, antimony, beryllium, cadmium, lead, and nickel.

4. **Pre-digestion/Pre-distillation Matrix Spike Recovery:** Provisional. The cyanide soil results were qualified as estimated with a low bias because the cyanide soil matrix spike recovery failed QC criteria. The selenium soil matrix spike recovery was only marginally above the QC limit, so no selenium soil results were qualified. All other matrix spike recoveries were acceptable.

5. **Duplicate Analysis:** Acceptable. All laboratory duplicate results demonstrated acceptable precision.

6. **ICP Quality Control:**

   Serial Dilution: Acceptable. The soil serial dilution differences for nickel and zinc exceeded QC limits. Because of the high differences, the reviewer qualified the nickel soil results as estimated with a high bias and the zinc soil results as estimated with a low bias. All other serial dilution differences were acceptable.

   Interference Check Sample: Acceptable. All ICS results were acceptable indicating correct interelement and background correction.

   ICP Coefficient of Variation: Acceptable. The following sample results were qualified as estimated because the ICP replicate readings were inconsistent:

   lead results for samples MFG-X36, MFG-X39, and MFG-X59;

   the selenium result for sample MFG-X58; and

   the thallium result for sample MFG-X51.

7. **Furnace Atomic Absorption Quality Control:** Not applicable.

8. **Laboratory Control Sample:** Acceptable. All LCS recoveries were within the QC limits.

9. **Sample Verification:** In the original data package, the laboratory failed to perform the proper dilutions for calcium in samples MFG-X51, MFG-X55, MFG-X55D, and MFG-X56. At a later date, the laboratory resubmitted the forms and raw data associated with the diluted reanalyses. The reviewer corrected the Data Summary Table and placed the resubmitted documents in the appropriate sections of the data package.

9. **Sample Verification, continued:**

The reviewer could not verify all CCS findings. However, the reviewer detected some reporting errors not found by CCS and contacted the laboratory concerning these issues (see attached Telephone and FAX Record Log).

10. **Other QC:**

Field Duplicate: Provisional. All cyanide soil results were qualified as estimated because the soil field duplicate results were inconsistent. All other field duplicate results demonstrated acceptable precision.

11. **Overall Assessment:** The data package is technically provisional because of the following problems.

The cyanide soil results were qualified because the matrix spike recovery was below the QC limit.

The cyanide soil results were further qualified because the difference between field duplicate results exceeded four times the CRDL.

The nickel and zinc soil results were qualified because of high serial dilution differences.

One thallium soil result, one selenium water result, and three lead water results were qualified because of inconsistent instrument readings.

INORGANIC DATA QUALIFIER DEFINITIONS

The following definitions provide brief explanations of the ESAT-Region 6 qualifiers assigned to results in the inorganic data review process.

U Undetected at the laboratory reported detection limit (IDL).

L Reported concentration is between the IDL and the CRDL.

J Result is estimated because of outlying quality control parameters such as matrix spike, serial dilution, FAA spike recovery, etc.

R Result is unusable.

F A possibility of a false negative exists.

UC Reported concentration should be used as a raised detection limit because of apparent blank contamination.

^ High bias. Actual concentration may be lower than the concentration reported.

v Low bias. Actual concentration may be higher than the concentration reported.

DATA SUMMARY

Case No.: 25210 SDG. No.: MFGX51 Reviewer: M. Doucet

Laboratory: ICM Matrix: SOIL Units: mg/Kg

EPA TR #=>	MFG-X51	FLAG	MFG-X52	FLAG	MFG-X53	FLAG	MFG-X54	FLAG	MFG-X55	FLAG	COMMENTS
ALUMINUM	9180		18600		10800		18200		12200		
ANTIMONY	0.57	UC	0.65	U	0.84	LUC	0.69	LUC	0.8	LUC	
ARSENIC	6.1		9.6		4.4		8		6.2		
BARIUM	92.7		120		126		120		107		
BERYLLIUM	0.61	LJv	0.95	L	0.64	LJv	0.98	L	0.78	L	
CADMIUM	0.38	L	0.49	L	0.42	L	0.29	L	0.22	L	
CALCIUM	207000		122000		117000		121000		166000		
CHROMIUM	23.2		22.2		16.9		22.8		25.3		
COBALT	7.2	L	7.7	L	5.3	L	9.7	L	10.5	L	
COPPER	14		19.1		14		19.4		12.5		
IRON	13300		16300		13000		20700		17300		
LEAD	39.4		41.4		32.4		30.1		24.2		
MAGNESIUM	2340		3140		2710		3540		2880		
MANGANESE	508		422		369		685		645		
MERCURY	0.07	U	0.08	U	0.08	U	0.08	U	0.07	U	
NICKEL	11.9	J^	16.6	J^	11.2	LJ^	16.5	J^	14.7	J^	
POTASSIUM	1460		2830		1480	L	2820		1670		
SELENIUM	0.89	L	0.77	U	0.76	U	1.4	L	0.68	U	
SILVER	0.13	U	0.16	U	0.16	U	0.16	U	0.14	U	
SODIUM	347	L	216	L	240	L	180	L	306	L	
THALLIUM	1.7	LJ	0.97	U	0.95	U	1.2	L	0.85	U	
VANADIUM	35.6		46.7		28.9		50.9		43.8		
ZINC	81	Jv	94.7	Jv	108	Jv	93.7	Jv	69.4	Jv	
CYANIDE	0.41	LJv	0.49	UJv	0.55	LJv	1.4	Jv	5.6	Jv	
% SOLIDS	76.3		62		63		60.7		71		

DATA SUMMARY

Case No.: 25210 SDG. No.: MFGX51 Reviewer: M. Doucet

Laboratory: ICM Matrix: WATER Units: ug/L

EPA TR #=>	MFG-X36	FLAG	MFG-X39	FLAG	MFG-X58	FLAG	MFG-X59	FLAG	FLAG	COMMENTS
ALUMINUM	114	LJv	89.2	LJv	578		32.4	LJv		
ANTIMONY	2	U	4	LUC	3	LUC	3.4	LUC		
ARSENIC	2	U	2	U	2	U	2	U		
BARIUM	75.9	L	86.9	L	153	L	93.8	L		
BERYLLIUM	0.3	U	0.3	U	0.3	U	0.3	U		
CADMIUM	1.8	LUC	3.1	L	0.45	LUC	3.4	L		
CALCIUM	86600		79100		132000		84500			
CHROMIUM	0.65	L	1.2	L	1.2	L	0.79	L		
COBALT	0.7	U	0.7	U	1.6	L	0.7	U		
COPPER	5.5	L	9.3	L	4.7	L	8.9	L		
IRON	335		139		2210		216			
LEAD	2.5	LUCJ	3.1	UCJ	4.7	UC	4	UCJ		
MAGNESIUM	3610	L	3930	L	7750		4190	L		
MANGANESE	84.6		142		830		153			
MERCURY	0.1	U	0.1	U	0.1	U	0.1	U		
NICKEL	0.8	U	6	LJv	0.8	U	5.4	LJv		
POTASSIUM	3700	L	5940		2620	L	6370			
SELENIUM	2.4	U	2.4	U	4.1	LJ	2.4	U		
SILVER	0.5	U	0.5	U	0.5	U	0.5	U		
SODIUM	35900		50400		14700		54600			
THALLIUM	3	U	3	U	3	U	3	U		
VANADIUM	0.85	L	1.2	L	1.8	L	1.5	L		
ZINC	46.1		69.7		54.7		71.3			
CYANIDE	11		13		3	U	7.9			

DATA SUMMARY

Case No.: 25210 SDG. No.: MFGX51 Reviewer: M. Doucet

Laboratory: ICM Matrix: SOIL Units: mg/Kg

EPA TR #=>	MFG-X56	FLAG	FLAG	FLAG	FLAG	FLAG	COMMENTS
ALUMINUM	10400						
ANTIMONY	0.6	U					
ARSENIC	6.4						
BARIUM	119						
BERYLLIUM	0.78	LJv					
CADMIUM	0.36	L					
CALCIUM	182000						
CHROMIUM	24.6						
COBALT	10.5	L					
COPPER	15.7						
IRON	16700						
LEAD	27						
MAGNESIUM	2740						
MANGANESE	665						
MERCURY	0.07	U					
NICKEL	15.3	J^					
POTASSIUM	1730						
SELENIUM	0.72	U					
SILVER	0.15	U					
SODIUM	311	L					
THALLIUM	0.89	U					
VANADIUM	40.9						
ZINC	91.3	Jv					
CYANIDE	2.6	Jv					
% SOLIDS	67.1						

INORGANIC/ORGANIC COMPLETE SDG FILE (CSF) INVENTORY CHECKLIST

Case No.	25210	SDG No.	MFGX51	SDG Nos. To Follow		SAS No.		Date Rec	12/27/96

EPA Lab ID: ICM

Lab Location: RANDOLPH, NJ

Region: 6 Audit No.: 25210/MFGX51

Re_Submitted CSF? Yes _____ No X

Box No(s): 1

COMMENTS:

3. The numbering scheme was inaccurate for one listing on the Form DC-2. The reviewer made the necessary changes.

20a. The laboratory did not indicate where the original cyanide raw data was located. The reviewer contacted the laboratory for resubmission.

Over for additional comments.

ORIGINALS	YES	NO	N/A
CUSTODY SEALS 1. Present on package?	X		
2. Intact upon receipt?	X		
FORM DC-2 3. Numbering scheme accurate?		X	
4. Are enclosed documents listed?	X		
5. Are listed documents enclosed?	X		
FORM DC-1 6. Present?	X		
7. Complete?	X		
8. Accurate?	X		
CHAIN-OF-CUSTODY RECORD(s) 9. Signed?	X		
10. Dated?	X		
TRAFFIC REPORT(s) PACKING LIST(s) 11. Signed?	X		
12. Dated?	X		
AIRBILLS/AIRBILL STICKER 13. Present?	X		
14. Signed?	X		
15. Dated?	X		
SAMPLE TAGS 16. Does DC-1 list tags as being included?	X		
17. Present?	X		
OTHER DOCUMENTS 18. Complete?	X		
19. Legible?	X		
20. Original?		X	
20a. If "NO", does the copy indicate where original documents are located?		X	

Audited by: Mervin Doucet — MERVIN DOUCET/ESAT DATA REVIEWER — Date 1/6/96

Audited by: _____ — _____ — Date _____

Audited by: _____ — _____ — Date _____

Signature — Printed Name/Title

TO BE COMPLETED BY CEAT

Date Recvd by CEAT: _____ Date Entered: _____ Date Reviewed: _____

Entered by: _____ _____

Reviewed by: _____ _____

Signature — Printed Name/Title

In Reference to
Case 25210/SDG MFGX51
Page 1 of 1 page
ESAT File No: I2074

Contract Laboratory Program
REGIONAL/LABORATORY COMMUNICATION SYSTEM

Telephone Record Log

Date of Call: January 7, 1997

Laboratory Name: ICM

Lab Contact: Paula Blaze

Region: 6

Regional Contact: Merv Doucet (ESAT)

Call Initiated by: Region

In reference to data for the following sample number(s):

MFG-X51 MFG-X55 MFG-X55D MFG-X56

Summary of Questions/Issues Discussed:

1. The calcium results for the above mentioned samples were reported above the linear range. These samples would require dilutions and reanalysis. Please acknowledge if reanalysis is possible.

2. According to the raw data, the duplicate results for sample MFG-X55 were reported as the initial sample results on Form 9 (page 34). Please explain.

Summary of Resolutions:

Ms. Blaze will review and comment on these issues by tomorrow morning, January 8, 1997.

Merv Doucet
Signature

1/7/97
Date

Distribution: (1) Lab Copy (2) Region Copy

Lockheed Martin Services Group
ESAT Region 6

10101 S. W. Freeway, Suite 500, Houston, TX 77074
TEL: (713) 988-2959

FACSIMILE COVER SHEET

Please deliver the following pages to:

Name Paula Blaze

Firm ICM

City Randolph **State** NJ

Telephone 201-584-0330 **Ext.** _____

FAX Telephone No. 201-584-0515 **Ext.** _____

Sender:

Name Merv Doucet ESAT

Date 1/13/97 **Time** _____

Total Number of pages including this Cover Sheet 2

If you do not receive all the pages or if any pages are unclear, please call: (713) 988-2959.

MESSAGES: _____

FAX No. (713) 988-2994

Case 25210 SDG MFGX51
Page 1 of 1
ESAT FILE NO.: I2074

Contract Laboratory Program
REGIONAL/LABORATORY COMMUNICATION SYSTEM
FAX Record Log

Date of FAX: January 13, 1997

Laboratory Name: ICM

Lab Contact: Paula Blaze

Region: 6

Regional Contact: Mervin Doucet (ESAT)

FAX Initiated by: Region

In reference to data for the following sample number:

All samples in this SDG.

Summary of Questions/Issues:

1. The sample custodian did not record the SDG on the Traffic Reports (SOW ILM04.0, page B-6, fifth paragraph). Please note for future reference.

2. The cyanide raw data were copies and the analyst did not indicate the location of the original cyanide raw data (SOW ILM04.0, page F-7, 2.7.9). Please resubmit the first page of the cyanide raw data indicating where the original documents are located.

3. According to the Form 14 (page 47), sample MFG-X55A is incorrectly reported in the raw data (page 112). Please make the necessary corrections and resubmit.

4. The cyanide instrument ID was not recorded in the raw data. Please resubmit the first page of the raw data indicating the instrument ID's as reported on Form 14's.

EPA expects the laboratory to look into items and submit data within seven days to Mahmoud El-Feky, U.S. EPA, 10625 Fallstone Road, Houston TX 77099.

Mervin Doucet
Signature

1/13/97
Date

Distribution: (1) Lab Copy (2) Region Copy

In Reference to
Case 25210/SDG MFGX51
Page 1 of 1 page
ESAT File No: I2074

Contract Laboratory Program
REGIONAL/LABORATORY COMMUNICATION SYSTEM

Telephone Record Log

Date of Call: January 8, 1997

Laboratory Name: ICM

Lab Contact: Paula Blaze

Region: 6

Regional Contact: Merv Doucet (ESAT)

Call Initiated by: Region

In reference to data for the following sample number(s):

MFG-X51 MFG-X55 MFG-X55D MFG-X56

Summary of Questions/Issues Discussed:

1. The calcium results for the above mentioned samples were reported above the linear range. These samples would require dilutions and reanalysis. Please acknowledge if reanalysis is possible.

2. According to the raw data, the duplicate results for sample MFG-X55 were reported as the initial sample results on Form 9 (page 34). Please explain.

Summary of Resolutions:

1. Ms. Blaze called back and stated the laboratory will dilute and reanalyze the above mentioned samples for calcium and resubmit all associated forms and raw data by January 15, 1997.

2. Ms. Blaze also verified that the duplicate results for sample MFG-X55 were reported on Form 9.

Merv L Doucet
Signature

1/8/97
Date

Distribution: (1) Lab Copy (2) Region Copy

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 6
HOUSTON BRANCH
10625 FALLSTONE RD.
HOUSTON, TEXAS 77099

MEMORANDUM

Date: 1-22-1997

Subject: **Contract Laboratory Program Data Review**

From: M. Humphrey for Melvin L. Ritter, ESAT RPO, 6MD-HC

To: L. Biasco , 6SF-RA

Site: GC OF QUAIL CREEK

Case#: 25210

SDG#: MFG-X51

The EPA Region 6 Houston Branch ESAT data validation team has completed a review of the submitted Contract Laboratory Program (CLP) data package for the referenced site. The samples analyzed and reviewed are detailed in the attached Regional data review and assessment report for this case.

The data package was found to be:

( ) Acceptable: No major problems with data package.

(X) Provisional: Use of data requires caution.
Data is acceptable for Regional use. Problems are noted in the review report.

( ) Unacceptable: Some or all of data should not be used.
Problems are noted in the review report.

Questions regarding the data review report can be addressed to me.

Attachments

cc: R. Flores, Region 6 CLP/TPO
M. El-feky, Region 6 Data Coordinator

Files (2)

Recycled/Recyclable
Printed with Soy/Canola Ink on paper that contains at least 50% recycled fiber

In Reference to
Case 25210/SDG MFGX51
Page 1 of 1 page
ESAT File No: I2074

Contract Laboratory Program
REGIONAL/LABORATORY COMMUNICATION SYSTEM

Telephone Record Log

Date of Call: January 7, 1997

Laboratory Name: ICM

Lab Contact: Paula Blaze

Region: 6

Regional Contact: Merv Doucet (ESAT)

Call Initiated by: Region

In reference to data for the following sample number(s):

MFG-X51 MFG-X55 MFG-X55D MFG-X56

Summary of Questions/Issues Discussed:

1. The calcium results for the above mentioned samples were reported above the linear range. These samples would require dilutions and reanalysis. Please acknowledge if reanalysis is possible.

2. According to the raw data, the duplicate results for sample MFG-X55 were reported as the initial sample results on Form 9 (page 34). Please explain.

Summary of Resolutions:

Ms. Blaze will review and comment on these issues by tomorrow morning, January 8, 1997.

Merv Doucet
Signature

1/7/97
Date

Distribution: (1) Lab Copy (2) Region Copy

LOCKHEED MARTIN SERVICES GROUP
10101 SOUTHWEST FREEWAY, SUITE 500
HOUSTON, TEXAS 77074

MEMORANDUM

DATE: January 16, 1997

TO: Dr. Melvin Ritter, ESAT RPO, Region VI

FROM: Dr. Tom C.H. Chiang, ESAT ETM, Region VI

SUBJECT: CLP Data Review

REF: TDF # 6-7117A ESAT File # I2074

Attached is the data review summary for Case #25210
SDG #MFGX51
Site GC OF QUAIL CREEK

COMMENTS:

I. CONTRACTUAL ASSESSMENT OF DATA PACKAGE:

The hard copy data review detected the following contractual noncompliance which was corrected by the laboratory through a resubmission. This noncompliance was not detected by CCS.

In the original data package, the laboratory failed to perform proper dilutions for calcium in samples MFG-X51, MFG-X55, MFG-X55D, and MFG-X56 (SOW ILM04.0, page E-27 and E-28, Section V.12). The diluted reanalyses for these four samples were acceptable.

II. TECHNICAL/USABILITY ASSESSMENT OF DATA PACKAGE:

A total of 240 results were reviewed for this data package. The data package is technically provisional because of the following problems.

A. Approximately ten percent of all results were qualified because of technical problems.

B. The cyanide matrix spike recovery was below the QC limit.

C. The difference between cyanide field duplicate results exceeded four times the contract required detection limit (CRDL).

D. ICP replicate readings were inconsistent for lead, selenium, and thallium.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 6 - HOUSTON BRANCH
10625 FALLSTONE ROAD
HOUSTON, TEXAS 77099

INORGANIC REGIONAL DATA ASSESSMENT

CASE NO. 25210
LABORATORY ICM
CONTRACT # 68-D5-0139
SDG # MFGX51
SOW# ILM04.0
ACCT # 7FAXJN29 SF # FAXUZZ

SITE GC OF QUAIL CREEK
NO. OF SAMPLES 10
MATRIX 4 WATER/6 SOIL
REVIEWER (IF NOT ESD) ESAT
REVIEWER'S NAME Mervin Doucet
COMPLETION DATE January 16, 1997

SAMPLE NO.: MFG-X36 MFG-X39 MFG-X51 MFG-X52 MFG-X53 MFG-X54 MFG-X55 MFG-X56 MFG-X58 MFG-X59

DATA ASSESSMENT SUMMARY

	ICP	HG	Cyanide
1. HOLDING TIMES	O	O	O
2. CALIBRATIONS	O	O	O
3. BLANKS	O	O	O
4. MATRIX SPIKES	O	O	M
5. DUPLICATE ANALYSIS	O	O	O
6. ICP QC	M		
7. FAA QC			
8. LCS	O	O	O
9. SAMPLE VERIFICATION	O	O	O
10. OTHER QC	O	O	M
11. OVERALL ASSESSMENT	M	O	M

O = Data had no problems.
M = Data qualified because of major or minor problems.
Z = Data unacceptable.
N/A = Not applicable

ACTION ITEMS:

AREAS OF CONCERN: The serial dilution differences exceeded the QC limits for nickel and zinc. The cyanide matrix spike recovery was below 75 percent. The cyanide field duplicate results were inconsistent. Some lead, selenium, and thallium analyses had inconsistent ICP replicate readings.

NOTABLE PERFORMANCE:

INORGANIC QA REVIEW
CONTINUATION PAGE
Case 25210 SDG MFGX51 Site GC OF QUAIL CREEK Lab ICM

COMMENTS: The package consisted of data for four water and six soil samples for total metals and cyanide analysis by ILM04.0. The sampler designated samples MFG-X36 and MFG-X55 as QC samples and samples MFG-X39/MFG-X59 and MFG-X55/MFG-X56 as field duplicate pairs. The laboratory performed the soil serial dilution analysis using sample MFG-X55D. The laboratory met the required 14-day data package turnaround time. Approximately 48 percent of the reported results are above the CRDL's.

In the original data package, the laboratory failed to perform proper dilution for calcium in four samples. The laboratory resubmitted the diluted reanalyses for these four samples at a later date.

This data package is technically provisional because of problems with serial dilution differences, a matrix spike recovery, inconsistent instruments readings, and a field duplicate difference. The technical usability of all reported sample results is appropriately indicated by ESAT's final data qualifiers in the attached Data Summary Sheet.

An Evidence Audit was conducted for the Complete Sample Delivery Group File (CSF), and the Evidence Inventory Checklist is attached to this report.

NOTE: THE FOLLOWING REVIEW NARRATIVE ADDRESSES BOTH CONTRACTUAL AND TECHNICAL ISSUES. THE ASSESSMENT MADE FOR EACH QC PARAMETER IS SOLELY BASED ON THE TECHNICAL DATA USABILITY, WHICH MAY NOT NECESSARILY BE AFFECTED BY CONTRACTUAL PROBLEMS.

1. **Holding Times:** Acceptable. All holding time and sample preservation criteria were met.

2. **Calibrations:** Acceptable. All calibrations were acceptable. Analysis of CRDL standards indicated that instrument performance near the CRDL's was acceptable.

3. **Blanks:** Acceptable. All preparation and calibration blanks met contractual requirements although concentrations for eight analytes were reported in the blanks. The lead results for samples MFG-X39, MFG-X58, and MFG-X59 were above the CRDL and considered undetected because of the calibration blank concentrations. The following analyte concentrations in the blanks affected sample results below the CRDL's:

   aluminum, antimony, beryllium, cadmium, lead, and nickel.

4. **Pre-digestion/Pre-distillation Matrix Spike Recovery:** Provisional. The cyanide soil results were qualified as estimated with a low bias because the cyanide soil matrix spike recovery failed QC criteria. The selenium soil matrix spike recovery was only marginally above the QC limit, so no selenium soil results were qualified. All other matrix spike recoveries were acceptable.

5. **Duplicate Analysis:** Acceptable. All laboratory duplicate results demonstrated acceptable precision.

6. **ICP Quality Control:**

   Serial Dilution: Acceptable. The soil serial dilution differences for nickel and zinc exceeded QC limits. Because of the high differences, the reviewer qualified the nickel soil results as estimated with a high bias and the zinc soil results as estimated with a low bias. All other serial dilution differences were acceptable.

   Interference Check Sample: Acceptable. All ICS results were acceptable indicating correct interelement and background correction.

   ICP Coefficient of Variation: Acceptable. The following sample results were qualified as estimated because the ICP replicate readings were inconsistent:

   lead results for samples MFG-X36, MFG-X39, and MFG-X59;

   the selenium result for sample MFG-X58; and

   the thallium result for sample MFG-X51.

7. **Furnace Atomic Absorption Quality Control:** Not applicable.

8. **Laboratory Control Sample:** Acceptable. All LCS recoveries were within the QC limits.

9. **Sample Verification:** In the original data package, the laboratory failed to perform the proper dilutions for calcium in samples MFG-X51, MFG-X55, MFG-X55D, and MFG-X56. At a later date, the laboratory resubmitted the forms and raw data associated with the diluted reanalyses. The reviewer corrected the Data Summary Table and placed the resubmitted documents in the appropriate sections of the data package.

9. **Sample Verification, continued:**

The reviewer could not verify all CCS findings. However, the reviewer detected some reporting errors not found by CCS and contacted the laboratory concerning these issues (see attached Telephone and FAX Record Log).

10. **Other QC:**

Field Duplicate: Provisional. All cyanide soil results were qualified as estimated because the soil field duplicate results were inconsistent. All other field duplicate results demonstrated acceptable precision.

11. **Overall Assessment:** The data package is technically provisional because of the following problems.

The cyanide soil results were qualified because the matrix spike recovery was below the QC limit.

The cyanide soil results were further qualified because the difference between field duplicate results exceeded four times the CRDL.

The nickel and zinc soil results were qualified because of high serial dilution differences.

One thallium soil result, one selenium water result, and three lead water results were qualified because of inconsistent instrument readings.

INORGANIC DATA QUALIFIER DEFINITIONS

The following definitions provide brief explanations of the ESAT-Region 6 qualifiers assigned to results in the inorganic data review process.

U Undetected at the laboratory reported detection limit (IDL).

L Reported concentration is between the IDL and the CRDL.

J Result is estimated because of outlying quality control parameters such as matrix spike, serial dilution, FAA spike recovery, etc.

R Result is unusable.

F A possibility of a false negative exists.

UC Reported concentration should be used as a raised detection limit because of apparent blank contamination.

^ High bias. Actual concentration may be lower than the concentration reported.

v Low bias. Actual concentration may be higher than the concentration reported.

DATA SUMMARY

Case No.: 25210 SDG. No.: MFGX51 Reviewer: M. Doucet

Laboratory: ICM Matrix: SOIL Units: mg/Kg

EPA TR #=>	MFG-X51	FLAG	MFG-X52	FLAG	MFG-X53	FLAG	MFG-X54	FLAG	MFG-X55	FLAG	COMMENTS
ALUMINUM	9180		18600		10800		18200		12200		
ANTIMONY	0.57	UC	0.65	U	0.84	LUC	0.69	LUC	0.8	LUC	
ARSENIC	6.1		9.6		4.4		8		6.2		
BARIUM	92.7		120		126		120		107		
BERYLLIUM	0.61	LJv	0.95	L	0.64	LJv	0.98	L	0.78	L	
CADMIUM	0.38	L	0.49	L	0.42	L	0.29	L	0.22	L	
CALCIUM	207000		122000		117000		121000		166000		
CHROMIUM	23.2		22.2		16.9		22.8		25.3		
COBALT	7.2	L	7.7	L	5.3	L	9.7	L	10.5	L	
COPPER	14		19.1		14		19.4		12.5		
IRON	13300		16300		13000		20700		17300		
LEAD	39.4		41.4		32.4		30.1		24.2		
MAGNESIUM	2340		3140		2710		3540		2880		
MANGANESE	508		422		369		685		645		
MERCURY	0.07	U	0.08	U	0.08	U	0.08	U	0.07	U	
NICKEL	11.9	J^	16.6	J^	11.2	LJ^	16.5	J^	14.7	J^	
POTASSIUM	1460		2830		1480	L	2820		1670		
SELENIUM	0.89	L	0.77	U	0.76	U	1.4	L	0.68	U	
SILVER	0.13	U	0.16	U	0.16	U	0.16	U	0.14	U	
SODIUM	347	L	216	L	240	L	180	L	306	L	
THALLIUM	1.7	LJ	0.97	U	0.95	U	1.2	L	0.85	U	
VANADIUM	35.6		46.7		28.9		50.9		43.8		
ZINC	81	Jv	94.7	Jv	108	Jv	93.7	Jv	69.4	Jv	
CYANIDE	0.41	LJv	0.49	UJv	0.55	LJv	1.4	Jv	5.6	Jv	
% SOLIDS	76.3		62		63		60.7		71		

DATA SUMMARY

Case No.: 25210 SDG. No.: MFGX51 Reviewer: M. Doucet

Laboratory: ICM Matrix: WATER Units: ug/L

EPA TR #=>	MFG-X36	FLAG	MFG-X39	FLAG	MFG-X58	FLAG	MFG-X59	FLAG		FLAG		COMMENTS
ALUMINUM	114	LJv	89.2	LJv	578		32.4	LJv				
ANTIMONY	2	U	4	LUC	3	LUC	3.4	LUC				
ARSENIC	2	U	2	U	2	U	2	U				
BARIUM	75.9	L	86.9	L	153	L	93.8	L				
BERYLLIUM	0.3	U	0.3	U	0.3	U	0.3	U				
CADMIUM	1.8	LUC	3.1	L	0.45	LUC	3.4	L				
CALCIUM	86600		79100		132000		84500					
CHROMIUM	0.65	L	1.2	L	1.2	L	0.79	L				
COBALT	0.7	U	0.7	U	1.6	L	0.7	U				
COPPER	5.5	L	9.3	L	4.7	L	8.9	L				
IRON	335		139		2210		216					
LEAD	2.5	LUCJ	3.1	UCJ	4.7	UC	4	UCJ				
MAGNESIUM	3610	L	3930	L	7750		4190	L				
MANGANESE	84.6		142		830		153					
MERCURY	0.1	U	0.1	U	0.1	U	0.1	U				
NICKEL	0.8	U	6	LJv	0.8	U	5.4	LJv				
POTASSIUM	3700	L	5940		2620	L	6370					
SELENIUM	2.4	U	2.4	U	4.1	LJ	2.4	U				
SILVER	0.5	U	0.5	U	0.5	U	0.5	U				
SODIUM	35900		50400		14700		54600					
THALLIUM	3	U	3	U	3	U	3	U				
VANADIUM	0.85	L	1.2	L	1.8	L	1.5	L				
ZINC	46.1		69.7		54.7		71.3					
CYANIDE	11		13		3	U	7.9					

DATA SUMMARY

Case No.: 25210 SDG. No.: MFGX51 Reviewer: M. Doucet

Laboratory: ICM Matrix: SOIL Units: mg/Kg

EPA TR #=>	MFG-X56	FLAG		FLAG		FLAG		FLAG		FLAG		COMMENTS
ALUMINUM	10400											
ANTIMONY	0.6	U										
ARSENIC	6.4											
BARIUM	119											
BERYLLIUM	0.78	LJv										
CADMIUM	0.36	L										
CALCIUM	182000											
CHROMIUM	24.6											
COBALT	10.5	L										
COPPER	15.7											
IRON	16700											
LEAD	27											
MAGNESIUM	2740											
MANGANESE	665											
MERCURY	0.07	U										
NICKEL	15.3	J^										
POTASSIUM	1730											
SELENIUM	0.72	U										
SILVER	0.15	U										
SODIUM	311	L										
THALLIUM	0.89	U										
VANADIUM	40.9											
ZINC	91.3	Jv										
CYANIDE	2.6	Jv										
% SOLIDS	67.1											

INORGANIC/ORGANIC COMPLETE SDG FILE (CSF) INVENTORY CHECKLIST

Case No.	25210	SDG No.	MFGX51	SDG Nos. To Follow		SAS No.		Date Rec	12/27/96

EPA Lab ID: ICM

Lab Location: RANDOLPH, NJ

Region: 6 Audit No.: 25210/MFGX51

Re_Submitted CSF? Yes _____ No X

Box No(s): 1

COMMENTS:

3. The numbering scheme was inaccurate for one listing on the Form DC-2. The reviewer made the necessary changes.

20a. The laboratory did not indicate where the original cyanide raw data was located. The reviewer contacted the laboratory for resubmission.

Over for additional comments.

ORIGINALS	YES	NO	N/A
CUSTODY SEALS 1. Present on package?	X		
2. Intact upon receipt?	X		
FORM DC-2 3. Numbering scheme accurate?		X	
4. Are enclosed documents listed?	X		
5. Are listed documents enclosed?	X		
FORM DC-1 6. Present?	X		
7. Complete?	X		
8. Accurate?	X		
CHAIN-OF-CUSTODY RECORD(s) 9. Signed?	X		
10. Dated?	X		
TRAFFIC REPORT(s) PACKING LIST(s) 11. Signed?	X		
12. Dated?	X		
AIRBILLS/AIRBILL STICKER 13. Present?	X		
14. Signed?	X		
15. Dated?	X		
SAMPLE TAGS 16. Does DC-1 list tags as being included?	X		
17. Present?	X		
OTHER DOCUMENTS 18. Complete?	X		
19. Legible?	X		
20. Original?		X	
20a. If "NO", does the copy indicate where original documents are located?		X	

Audited by: Mervin Doucet — MERVIN DOUCET/ESAT DATA REVIEWER — Date 1/6/96

Audited by: _____ — _____ — Date _____

Audited by: _____ — _____ — Date _____

Signature — Printed Name/Title

TO BE COMPLETED BY CEAT

Date Recvd by CEAT: _____ Date Entered: _____ Date Reviewed: _____

Entered by: _____ _____

Reviewed by: _____ _____

Signature — Printed Name/Title

EPA United States Environmental Protection Agency
Contract Laboratory Program

Inorganic Traffic Report & Chain of Custody Record
(For Inorganic CLP Analysis)

Case No. 25210

1. Project Code	Account Code	2. Region No.	Sampling Co.	4. Date Shipped	Carrier
—	—	6	WESTON	12/10/96	FED-EX

Regional Information: —

Sampler (Name): ROBERT BECK

Airbill Number: 9601648313

Non-Superfund Program: —

Sampler Signature: [signature]

Site Name: GARLAND CITY OF QUAIL CREEK

City, State: GARLAND, TX

Site Spill ID: ZZ

3. Purpose*
Lead: [X] SF [ ] PRP [ ] ST [ ] FED
Early Action: [ ] CLEM [ ] PA [ ] REM [ ] RI [X] SI [ ] ESI
Long-Term Action: [ ] FS [ ] RD [ ] RA [ ] O&M [ ] NPLD

5. Ship To
INDUSTRIAL CORROSION MGMT.
1152 ROUTE 10
RANDOLPH, NJ 07869
(201) 584-0330
ATTN: RICHARD LEVINE

6. Matrix (Enter in Column A)
1. Surface Water
2. Ground Water
3. Leachate
4. Field QC
5. Soil/Sediment
6. Oil (High only)
7. Waste (High only)
8. Other (specify in Column A)

7. Preservative (Enter in Column D)
1. HCl
2. HNO3
3. NaOH
4. H_2SO_4
5. $K_2CR_2O_7$
6. Ice only
7. Other (specify in Column D)
N. Not preserved

CLP Sample Numbers (from labels)	A Matrix (from Box 6) Other:	B Conc. Low Med High	C Sample Type: Comp./ Grab	D Preservative (from Box 7) Other:	E – RAS Analysis: Diss. Metals	Total Metals	Cyanide	Low only: NO_2/NO_3	Fluoride	High only: pH	Conduct.	F Regional Specific Tracking Number or Tag Numbers	G Station Location Identifier	H Mo/Day/ Year/Time Sample Collection	I Corresponding CLP Organic Sample No.	J Sampler Initials	K Field QC Qualifier (B = Blank S = Spike D = Duplicate R = Rinsate PE = Perform. Eval. — = Not a QC Sample)
MFGX36	1	L	G	2,3,6		X	X					6-012283-286	SW-01	12/10/96 1100	FEP50	RB	
MFGX58	1	L	G	2,3,6		X	X					6-012463-464	SW-02	12/10/96 1340	FEQ07	RB	
MFGX39	1	L	G	2,3,6		X	X					6-012287-288	SW-03	12/10/96 1430	FEQ09	RB	
MFGX59	1	L	G	2,3,6		X	X					6-012467-468	SW-04	12/10/96 1445	FEQ08	RB	D (MFGX39)

Shipment for Case Complete? (Y/N)	Page	Sample(s) to be Used for Laboratory QC	Additional Sampler Signatures	Chain of Custody Seal Number(s)
Y	1 of 1	MFGX36	Troy Hile	—

CHAIN OF CUSTODY RECORD

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Troy Hile	12-10-96 1900	FED-EX			
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks Is custody seal intact? Y/N/none	

A21-012-13 REV.

DISTRIBUTION: Green - Region Copy; White - Lab Copy for Return to Region; Pink - CLASS Copy; Yellow - Lab Copy for Return to CLASS

EPA Form 9110-1

SEE REVERSE FOR ADDITIONAL STANDARD INSTRUCTIONS
*SEE REVERSE FOR PURPOSE CODE DEFINITIONS

365275

EPA United States Environmental Protection Agency Contract Laboratory Program

Inorganic Traffic Report & Chain of Custody Record
(For Inorganic CLP Analysis)

Case No. 25210

1. Project Code —
Account Code —
2. Region No. 6
Sampling Co. WESTON
4. Date Shipped 12/10/96
Carrier FED EX

Regional Information —
Sampler (Name) ROBERT BECK
Airbill Number 9601648291

Non-Superfund Program —
Sampler Signature [signature]
5. Ship To INDUSTRIAL CORROSION MGMT. 1152 ROUTE 10 RANDOLPH, NJ 07869 (201) 584-0330 ATTN: RICHARD LEVINE

Site Name GARLAND CITY OF QUAIL CREEK
City, State GARLAND, TX
Site Spill ID ZZ

3. Purpose*
Lead: [X] SF [ ] PRP [ ] ST [ ] FED
Early Action: [ ] CLEM [ ] PA [ ] REM [ ] RI [X] SI [ ] ESI
Long-Term Action: [ ] FS [ ] RD [ ] RA [ ] O&M [ ] NPLD

6. Matrix (Enter in Column A)
1. Surface Water
2. Ground Water
3. Leachate
4. Field QC
5. Soil/Sediment
6. Oil (High only)
7. Waste (High only)
8. Other (specify in Column A)

7. Preservative (Enter in Column D)
1. HCl
2. HNO3
3. NaOH
4. H_2SO_4
5. $K_2CR_2O_7$
6. Ice only
7. Other (specify in Column D)
N. Not preserved

CLP Sample Numbers (from labels)	A Matrix (from Box 6) / Other:	B Conc.: Low Med High	C Sample Type: Comp./ Grab	D Preservative (from Box 7) / Other:	E – RAS Analysis: Diss. Metals	Total Metals	Cyanide	Low only: NO_2/NO_3	Fluoride	High only: pH	Conduct.	F Regional Specific Tracking Number or Tag Numbers	G Station Location Identifier	H Mo/Day/ Year/Time Sample Collection	I Corresponding CLP Organic Sample No.	J Sampler Initials	K Field QC Qualifier (B = Blank S = Spike D = Duplicate R = Rinsate PE = Perform. Eval. — = Not a QC Sample)
MFGX 51	5	L	G	~~6~~ 6		X	X					6-012433	SED-01	12/10/96 1100	FEQ 01	RB	
MFGX 52	5	L	G	6		X	X					6-012437	SED-02	12/10/96 1330	FEQ 02	RB	
MFGX 53	5	L	G	6		X	X					6-012441	SED-03	12/10/96 1350	FEQ 03	RB	
MFGX 54	5	L	G	6		X	X					6-012449	SED-04	12/10/96 1250	FEQ 04	RB	
MFGX 55	5	L	G	6		X	X					6-012453	SED-05	12/10/96 1440	FEQ 05	RB	
MFGX 56	5	L	G	6		X	X					6-012457	SED-06	12/10/96 1445	FEQ 06	RB	D (MFGX55)

Shipment for Case Complete? (Y/N) Y
Page 1 of 1
Sample(s) to be Used for Laboratory QC: MFGX55
Additional Sampler Signatures: Troy Hile
Chain of Custody Seal Number(s): —

CHAIN OF CUSTODY RECORD

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Troy Hile	12·10·96 1900	FED-EX			
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks Is custody seal intact? Y/N/none	

A21-012-13 REV.

DISTRIBUTION: Green - Region Copy; White - Lab Copy for Return to Region; Pink - CLASS Copy; Yellow - Lab Copy for Return to CLASS

EPA Form 9110-1

SEE REVERSE FOR ADDITIONAL STANDARD INSTRUCTIONS
*SEE REVERSE FOR PURPOSE CODE DEFINITIONS

365277

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 6
EPA HOUSTON LABORATORY
10625 FALLSTONE ROAD
HOUSTON, TX 77099

RESUBMITTED DATA REVIEW REPORT

DATE: January 27, 1997

CASE #: 25210

TO: L. Biasco, 6SF-RA

USEPA Region 6

SDG #: MFGX51

Site Name: GC OF QUAIL CREEK

Lab Name: ICM

From: Mervin Doucet

ESAT

TDF #: 6-7117A

EFFECTS OF RESUBMITTED INFORMATION ON THE ORIGINAL DATA:

Response to CCS Request (Received 1/22/97):

The resubmitted information does not affect the original data review. The laboratory resubmitted explanations and material requested by CCS. Please place the resubmitted material in the data package.

I2074

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 6
HOUSTON BRANCH
10625 FALLSTONE RD.
HOUSTON, TEXAS 77099

MEMORANDUM

Date: 1-16-1997

Subject: **Contract Laboratory Program Data Review**

From: Melvin L. Ritter / M. Humphrey for ESAT RPO, 6MD-HC

To: L. Biasco , 6SF-RA

Site: GC OF QUAIL CREEK

Case#: 25210

SDG#: FE-P50

The EPA Region 6 Houston Branch ESAT data validation team has completed a review of the submitted Contract Laboratory Program (CLP) data package for the referenced site. The samples analyzed and reviewed are detailed in the attached Regional data review and assessment report for this case.

The data package was found to be:

(X) Acceptable: No major problems with data package.

( ) Provisional: Use of data requires caution.
Data is acceptable for Regional use. Problems are noted in the review report.

( ) Unacceptable: Some or all of data should not be used.
Problems are noted in the review report.

Questions regarding the data review report can be addressed to me.

Attachments

cc: R. Flores, Region 6 CLP/TPO
M. El-feky, Region 6 Data Coordinator

Files (2)

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LOCKHEED MARTIN SERVICES GROUP
ONE STERLING PLAZA
10101 SOUTHWEST FREEWAY, SUITE 500
HOUSTON, TX 77074

MEMORANDUM

DATE: January 3, 1996

TO: Dr. Melvin Ritter, ESAT RPO, Region VI

FROM: Dr. Tom C. H. Chiang, ESAT TM, Region VI Tom Chiang by JT

SUBJECT: CLP Data Review

REF: TDF # 6-7112A ESAT File # O-1779

Attached is the data review summary for Case # 25210
SDG # FEP50
Site GC of Quail Creek

COMMENTS:

I. CONTRACTUAL ASSESSMENT OF DATA PACKAGE

The CCS report was not available at the time of this report preparation. The hardcopy data review detected the following contractual noncompliances.

The laboratory reported acceptable resolution results, but the raw data did not support some reported results. The laboratory measured peak and valley heights based on creative baseline settings solely to meet the resolution criteria. The chromatograms showed that the resolution between peaks in the following listed compound pairs failed contractual requirements:

DDE/dieldrin and methoxychlor/endrin ketone in RESCO9A (OLM03.0, p. D-27/PEST, 9.2.5.2) and

DDD/DDT in INDAM91 (OLM03.0, p. D-28/PEST, 9.2.5.8) and INDAMB1 (OLM03.0, p. D-32/PEST, 9.3.5.2).

These problems did not cause data qualification.

II. TECHNICAL ASSESSMENT OF DATA PACKAGE

A total of 500 results were reviewed for this data package. The data package is technically acceptable although several contractual noncompliances were reported above.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 6
HOUSTON BRANCH
10625 FALLSTONE ROAD
HOUSTON, TEXAS 77099

ORGANIC REGIONAL DATA ASSESSMENT

CASE NO. 25210
LABORATORY IEANJ
CONTRACT# 68-D5-0011
SDG# FEP50
SOW# CLP SOW OLM03.2
ACCT# 7FAXJN29 SF# FAXUZZ

SITE GC of Quail Creek
NO. OF SAMPLES 4
MATRIX Water
REVIEWER (IF NOT ESD) ESAT
REVIEWER'S NAME T. Y. Fan
COMPLETION DATE January 3, 1997

SAMPLE NO. FE-P50
FE-O07
FE-O08
FE-O09

DATA ASSESSMENT SUMMARY

	VOA	BNA	PEST
1. HOLDING TIMES	O	O	O
2. GC/MS TUNE/INSTR. PERFORM.	O	O	O
3. CALIBRATIONS	M	O	O
4. BLANKS	O	O	O
5. SMCS/SURROGATES	O	O	O
6. MATRIX SPIKE/DUPLICATE	O	O	O
7. OTHER QC	O	O	O
8. INTERNAL STANDARDS	O	O	N/A
9. COMPOUND ID/QUANTITATION	O	O	O
10. PERFORMANCE/COMPLETENESS	O	O	O
11. OVERALL ASSESSMENT	M	O	O

O = Data had no problems.
M = Data qualified due to major or minor problems.
Z = Data unacceptable.
N/A = Not applicable.

ACTION ITEMS: One resolution check and two individual A standards failed contractual resolution criteria for the Pest/PCB fraction.

AREA OF CONCERN: Acetone failed technical calibration criteria. All VOA sample analyses exceeded the technical holding time limits.

NOTABLE PERFORMANCE: None.

COMMENTS/CLARIFICATIONS
REGION VI CLP QA REVIEW

CASE 25210 **SDG** FEP50 **SITE** GC of Quail Creek **LAB** IEANJ

The following is a summary of sample qualifiers used by Region 6 in reporting this CLP data:

No.	Acceptable	Provisional	Unacceptable
VOA	2	2	
BNA	4		
PEST	4		

COMMENTS: The case consisted of four water samples for complete RAS organics analysis. According to the OTR/COC records, samples FE-Q08 and FE-Q09 were field duplicates. The data package arrived on time for the 14-day turnaround time.

Three Pest/PCB calibration analyses failed the contractual resolution criteria, but sample data were not affected. Only the laboratory contaminant methylene chloride was detected in the samples above the CRQL.

The acetone results are provisional for two VOA samples because of calibration deficiencies. The technical usability of all reported sample results is appropriately indicated by ESAT's final data qualifiers in the attached Data Summary Table.

NOTE: THE FOLLOWING REVIEW NARRATIVE ADDRESSES BOTH CONTRACTUAL AND TECHNICAL ISSUES. THE ASSESSMENT MADE FOR EACH QC PARAMETER IS SOLELY BASED ON THE TECHNICAL DATA USABILITY, WHICH MAY NOT NECESSARILY BE AFFECTED BY CONTRACTUAL PROBLEMS.

1. **Holding Times:** Acceptable. All samples met contractual holding time criteria. The analysis of all VOA samples exceeded the technical holding time limit by one to three days. Since no VOA aromatics were reported for the samples, no data were qualified, per Region 6 guidelines.

2. **Tuning/Performance:** Acceptable. BFB and DFTPP analyses met GC/MS tuning criteria. Several pesticides failed the contractual resolution criteria for one resolution check and two individual A calibration standards. Endosulfan II and DDT coeluted on the DB-1701 column. Since the analytes with resolution problems were not detected in the samples, result qualification was unnecessary. Other Pest/PCB performance was acceptable.

ORGANIC QA REVIEW
CONTINUATION PAGE

CASE 25210 **SDG** FEP50 **SITE** GC of Quail Creek **LAB** IEANJ

3. **Calibrations:** Provisional. The target analytes met contractual calibration criteria. The reviewer qualified the acetone results for VOA samples FE-P50 and FE-Q07 as estimated because the compound failed technical %RSD criteria. Two BNA analytes failed technical minimum RRF criteria for some low level initial calibrations. Since the daily calibrations had acceptable RRF's for these compounds, no results were qualified.

4. **Blanks:** Acceptable. The method, storage, and instrument blanks met QC guidelines. Some VOA method blanks contained methylene chloride and acetone below CRQL's. The acetone results "B"-flagged by the laboratory should be considered as undetected because of laboratory contamination. Acetone was detected in the storage blank and the associated method blank at similar concentrations. In the reviewer's opinion, acetone was introduced into the storage blank during the analysis rather than storage.

5. **System Monitoring Compounds/Surrogates:** Acceptable. SMC and surrogate recoveries were acceptable with the exceptions addressed below.

Pest/PCB TCX recoveries exceeded the advisory QC limit for samples FD-Q07, FE-P50, and FE-P50MSD on one column because of coeluting matrix interferences. In the reviewer's opinion, data qualification was unnecessary.

6. **Matrix Spike/Matrix Spike Duplicate:** Acceptable. MS/MSD results were within QC limits with the following exceptions.

Pest/PCB The laboratory reported incorrect spiking concentrations for the MSD sample on the Form III but calculated the recoveries based on the correct values. MS/MSD recoveries exceeded QC limits for γ-BHC, dieldrin, endrin, and DDT. Since these analytes were not detected in the unspiked sample, no results were qualified.

7. **Other QC:**

Field Duplicates: Acceptable. Field duplicate results were consistent.

8. **Internal Standards (IS):** Acceptable. IS performance was acceptable for all VOA and BNA samples.

ORGANIC QA REVIEW
CONTINUATION PAGE

CASE 25210 **SDG** FEP50 **SITE** GC of Quail Creek **LAB** IEANJ

9. **Compound Identity/Quantitation:** Acceptable. The only TCL analyte detected in the samples above the CRQL was the laboratory contaminant methylene chloride. The BNA samples contained phthalate esters at concentrations below CRQL's. The reported VOA and BNA compounds had acceptable spectra.

10. **Performance/Completeness:** Acceptable. The data package was complete with minor reporting errors. The laboratory was contacted for resubmission (see attached FAX Logs).

11. **Overall Assessment:** Data are acceptable for two VOA, all BNA, and all Pest/PCB samples. The acetone results are provisional for VOA samples FE-P50 and FE-Q07 because of calibration deficiencies.

ORGANIC DATA QUALIFIER DEFINITIONS

The following definitions provide brief explanations of the ESAT-Region 6 qualifiers assigned to results in the Data Summary Table.

U	Not detected at reported quantitation limit.
N	Identification is tentative.
J	Estimated value.
R	Unusable.
^	High biased. Actual concentration may be lower than the concentration reported.
v	Low biased. Actual concentration may be higher than the concentration reported.
F+	A false positive exists.
F-	A false negative exists.
B	This result may be high biased because of laboratory/field contamination. The reported concentration is above 5X or 10X the concentration reported in the method/field blank.
UJ	Estimated quantitation limit.
T	Identification is questionable because of absence of other commonly coexisting pesticides.
*	Result not recommended for use because of associated QA/QC performance inferior to that from other analysis.

ORGANIC DATA SUMMARY

Case No.: 25210 SDG: FEP50 Reviewer: T. FAN

Laboratory: IEANJ Matrix: WATER Units: ug/L

VOLATILES	FLAG	FLAG	FLAG	FLAG	FLAG	FLAG	FLAG
EPA SAMPLE NUMBER:	FE-P50	FE-Q07	FE-Q08	FE-Q09			
Chloromethane	10 U	10 U	10 U	10 U			
Bromomethane	10 U	10 U	10 U	10 U			
Vinyl chloride	10 U	10 U	10 U	10 U			
Chloroethane	10 U	10 U	10 U	10 U			
Methylene chloride	10 U	10 U	10 U	10 U			
Acetone	13 UJ	15 UJ	10 U	10 U			
Carbon disulfide	10 U	10 U	10 U	10 U			
1,1-Dichloroethene	10 U	10 U	10 U	10 U			
1,1-Dichloroethane	10 U	10 U	10 U	10 U			
1,2-Dichloroethene (total)	10 U	10 U	10 U	10 U			
Chloroform	10 U	10 U	10 U	10 U			
1,2-Dichloroethane	10 U	10 U	10 U	10 U			
2-Butanone	10 U	10 U	10 U	10 U			
1,1,1-Trichloroethane	10 U	10 U	10 U	10 U			
Carbon tetrachloride	10 U	10 U	10 U	10 U			
Bromodichloromethane	10 U	10 U	10 U	10 U			
1,2-Dichloropropane	10 U	10 U	10 U	10 U			
cis-1,3-Dichloropropene	10 U	10 U	10 U	10 U			
Trichloroethene	10 U	10 U	10 U	10 U			
Dibromochloromethane	10 U	10 U	10 U	10 U			
1,1,2-Trichloroethane	10 U	10 U	10 U	10 U			
Benzene	10 U	10 U	10 U	10 U			
trans-1,3-Dichloropropene	10 U	10 U	10 U	10 U			
Bromoform	10 U	10 U	10 U	10 U			
4-Methyl-2-pentanone	10 U	10 U	10 U	10 U			
2-Hexanone	10 U	10 U	10 U	10 U			
Tetrachloroethene	10 U	10 U	10 U	10 U			
1,1,2,2-Tetrachloroethane	10 U	10 U	10 U	10 U			
Toluene	10 U	10 U	10 U	10 U			
Chlorobenzene	10 U	10 U	10 U	10 U			
Ethylbenzene	10 U	10 U	10 U	10 U			
Styrene	10 U	10 U	10 U	10 U			
Xylenes (total)	10 U	10 U	10 U	10 U			
Sample Volume (mL):	5	5	5	5			
Dilution Factor:	1	1	1	1			
Number of TIC's:	1	0	1	1			

Note: For the results listed in the Data Summary Table, ESAT has replaced the laboratory assigned flags with ESAT Organic Data Qualifiers. The ESAT flags indicate the technical usability of the reported results.

ORGANIC DATA SUMMARY

Case No.: 25210 SDG: FEP50 Reviewer: T. FAN

Laboratory: IEANJ Matrix: WATER Units: ug/L

SEMIVOLATILES	FLAG	FLAG	FLAG	FLAG	FLAG	FLAG	FLAG
EPA SAMPLE NUMBER:	FE-P50	FE-Q07	FE-Q08	FE-Q09			
Phenol	10 U	10 U	10 U	10 U			
bis(2-Chloroethyl)ether	10 U	10 U	10 U	10 U			
2-Chlorophenol	10 U	10 U	10 U	10 U			
1,3-Dichlorobenzene	10 U	10 U	10 U	10 U			
1,4-Dichlorobenzene	10 U	10 U	10 U	10 U			
1,2-Dichlorobenzene	10 U	10 U	10 U	10 U			
2-Methylphenol	10 U	10 U	10 U	10 U			
2,2'-Oxybis(1-chloropropane)	10 U	10 U	10 U	10 U			
4-Methylphenol	10 U	10 U	10 U	10 U			
N-Nitroso-di-n-propylamine	10 U	10 U	10 U	10 U			
Hexachloroethane	10 U	10 U	10 U	10 U			
Nitrobenzene	10 U	10 U	10 U	10 U			
Isophorone	10 U	10 U	10 U	10 U			
2-Nitrophenol	10 U	10 U	10 U	10 U			
2,4-Dimethylphenol	10 U	10 U	10 U	2 J			
bis(2-Chloroethoxy)methane	10 U	10 U	10 U	10 U			
2,4-Dichlorophenol	10 U	10 U	10 U	10 U			
1,2,4-Trichlorobenzene	10 U	10 U	10 U	10 U			
Naphthalene	10 U	10 U	10 U	10 U			
4-Chloroaniline	10 U	10 U	10 U	10 U			
Hexachlorobutadiene	10 U	10 U	10 U	10 U			
4-Chloro-3-methylphenol	10 U	10 U	10 U	10 U			
2-Methylnaphthalene	10 U	10 U	10 U	10 U			
Hexachlorocyclopentadiene	10 U	10 U	10 U	10 U			
2,4,6-Trichlorophenol	10 U	10 U	10 U	10 U			
2,4,5-Trichlorophenol	25 U	26 U	25 U	26 U			
2-Chloronaphthalene	10 U	10 U	10 U	10 U			
2-Nitroaniline	25 U	26 U	25 U	26 U			
Dimethylphthalate	10 U	10 U	10 U	10 U			
Acenaphthylene	10 U	10 U	10 U	10 U			
2,6-Dinitrotoluene	10 U	10 U	10 U	10 U			
3-Nitroaniline	25 U	26 U	25 U	26 U			
Acenaphthene	10 U	10 U	10 U	10 U			
2,4-Dinitrophenol	25 U	26 U	25 U	26 U			
4-Nitrophenol	25 U	26 U	25 U	26 U			
Dibenzofuran	10 U	10 U	10 U	10 U			
2,4-Dinitrotoluene	10 U	10 U	10 U	10 U			
Diethylphthalate	10 U	10 U	1 J	1 J			
4-Chlorophenyl-phenylether	10 U	10 U	10 U	10 U			
Fluorene	10 U	10 U	10 U	10 U			
4-Nitroaniline	25 U	26 U	25 U	26 U			
4,6-Dinitro-2-methylphenol	25 U	26 U	25 U	26 U			
N-Nitrosodiphenylamine	10 U	10 U	10 U	10 U			
4-Bromophenyl-phenylether	10 U	10 U	10 U	10 U			
Hexachlorobenzene	10 U	10 U	10 U	10 U			
Pentachlorophenol	25 U	26 U	25 U	26 U			
Phenanthrene	10 U	10 U	10 U	10 U			
Anthracene	10 U	10 U	10 U	10 U			

ORGANIC DATA SUMMARY

Case No.: 25210 SDG: FEP50 Reviewer: T. FAN

Laboratory: IEANJ Matrix: WATER Units: ug/L

SEMIVOLATILES	FLAG	FLAG	FLAG	FLAG	FLAG	FLAG	FLAG
EPA SAMPLE NUMBER:	FE-P50	FE-Q07	FE-Q08	FE-Q09			
Carbazole	10 U	10 U	10 U	10 U			
Di-n-butylphthalate	10 U	10 U	10 U	10 U			
Fluoranthene	10 U	10 U	10 U	10 U			
Pyrene	10 U	10 U	10 U	10 U			
Butylbenzylphthalate	10 U	10 U	1 J	10 U			
3,3'-Dichlorobenzidine	10 U	10 U	10 U	10 U			
Benzo(a)anthracene	10 U	10 U	10 U	10 U			
Chrysene	10 U	10 U	10 U	10 U			
bis(2-Ethylhexyl)phthalate	2 J	2 J	10 U	10 U			
Di-n-octylphthalate	10 U	10 U	5 J	5 J			
Benzo(b)fluoranthene	10 U	10 U	10 U	10 U			
Benzo(k)fluoranthene	10 U	10 U	10 U	10 U			
Benzo(a)pyrene	10 U	10 U	10 U	10 U			
Indeno(1,2,3-cd)pyrene	10 U	10 U	10 U	10 U			
Dibenz(a,h)anthracene	10 U	10 U	10 U	10 U			
Benzo(g,h,i)perylene	10 U	10 U	10 U	10 U			
Sample Volume (mL):	1000	970	1000	950			
Dilution Factor:	1	1	1	1			
Number of TIC's:	13	22	30	30			

Note: For the results listed in the Data Summary Table, ESAT has replaced the laboratory assigned flags with ESAT Organic Data Qualifiers. The ESAT flags indicate the technical usability of the reported results.

ORGANIC DATA SUMMARY

Case No.: 25210 SDG: FEP50 Reviewer: T. FAN

Laboratory: IEANJ Matrix: WATER Units: ug/L

PESTICIDES/PCBs	FLAG	FLAG	FLAG	FLAG	FLAG	FLAG	FLAG
EPA SAMPLE NUMBER:	FE-P50	FE-Q07	FE-Q08	FE-Q09			
alpha-BHC	0.06 U	0.05 U	0.05 U	0.05 U			
beta-BHC	0.06 U	0.05 U	0.05 U	0.05 U			
delta-BHC	0.06 U	0.05 U	0.05 U	0.05 U			
gamma-BHC (lindane)	0.06 U	0.05 U	0.05 U	0.05 U			
Heptachlor	0.06 U	0.05 U	0.05 U	0.05 U			
Aldrin	0.06 U	0.05 U	0.05 U	0.05 U			
Heptachlor epoxide	0.06 U	0.05 U	0.05 U	0.05 U			
Endosulfan I	0.06 U	0.05 U	0.05 U	0.05 U			
Dieldrin	0.11 U	0.11 U	0.11 U	0.10 U			
4,4'-DDE	0.11 U	0.11 U	0.11 U	0.10 U			
Endrin	0.11 U	0.11 U	0.11 U	0.10 U			
Endosulfan II	0.11 U	0.11 U	0.11 U	0.10 U			
4,4'-DDD	0.11 U	0.11 U	0.11 U	0.10 U			
Endosulfan sulfate	0.11 U	0.11 U	0.11 U	0.10 U			
4,4'-DDT	0.11 U	0.11 U	0.11 U	0.10 U			
Methoxychlor	0.55 U	0.53 U	0.54 U	0.50 U			
Endrin ketone	0.11 U	0.11 U	0.11 U	0.10 U			
Endrin aldehyde	0.11 U	0.11 U	0.11 U	0.10 U			
alpha-Chlordane	0.06 U	0.05 U	0.05 U	0.05 U			
gamma-Chlordane	0.06 U	0.05 U	0.05 U	0.05 U			
Toxaphene	5.5 U	5.3 U	5.4 U	5.0 U			
Aroclor-1016	1.1 U	1.1 U	1.1 U	1.0 U			
Aroclor-1221	2.2 U	2.1 U	2.2 U	2.0 U			
Aroclor-1232	1.1 U	1.1 U	1.1 U	1.0 U			
Aroclor-1242	1.1 U	1.1 U	1.1 U	1.0 U			
Aroclor-1248	1.1 U	1.1 U	1.1 U	1.0 U			
Aroclor-1254	1.1 U	1.1 U	1.1 U	1.0 U			
Aroclor-1260	1.1 U	1.1 U	1.1 U	1.0 U			
Sample Volume (mL):	910	940	930	1000			
Dilution Factor:	1	1	1	1			

Note: For the results listed in the Data Summary Table, ESAT has replaced the laboratory assigned flags with ESAT Organic Data Qualifiers. The ESAT flags indicate the technical usability of the reported results.

INORGANIC/ORGANIC COMPLETE SDG FILE (CSF) INVENTORY CHECKLIST

Case No. 25210 SDG No. FEP50 SDG Nos. To Follow SAS No. Date Rec 12/26/96

EPA Lab ID: IEANJ

Lab Location: 628 Route 10, Whippany, NJ 07981

Region: 6 Audit No.: 25210/FEP50

Re_Submitted CSF? Yes _____ No X

Box No(s): 1

COMMENTS:

Item	Description of Problem
3	VOA standard data should end with page 70 VOA BFB data should start with page 71 The auditor made the appropriate corrections.
4	Title pages 8, 98, 374, and 578 were not listed on Form DC-2.
14,15	The Airbills did not have designated space for recipient signature and date.

Over for additional comments.

ORIGINALS	YES	NO	N/A
CUSTODY SEALS			
1. Present on package?	X		
2. Intact upon receipt?	X		
FORM DC-2			
3. Numbering scheme accurate?		X	
4. Are enclosed documents listed?		X	
5. Are listed documents enclosed?	X		
FORM DC-1			
6. Present?	X		
7. Complete?	X		
8. Accurate?	X		
CHAIN-OF-CUSTODY RECORD(s)			
9. Signed?	X		
10. Dated?	X		
TRAFFIC REPORT(s) PACKING LIST(s)			
11. Signed?	X		
12. Dated?	X		
AIRBILLS/AIRBILL STICKER			
13. Present?	X		
14. Signed?			X
15. Dated?			X
SAMPLE TAGS			
16. Does DC-1 list tags as being included?	X		
17. Present?	X		
OTHER DOCUMENTS			
18. Complete?	X		
19. Legible?	X		
20. Original?		X	
20a. If "NO", does the copy indicate where original documents are located?	X		

Audited by: [signature] Tseng-Ying Fan/Data Reviewer Date 1/1/97

Audited by: _____ _____ Date _____

Audited by: _____ _____ Date _____

Signature Printed Name/Title

TO BE COMPLETED BY CEAT

Date Recvd by CEAT: _____ Date Entered: _____ Date Reviewed: _____

Entered by: _____ _____

Reviewed by: _____ _____

Signature Printed Name/Title

DC-2___

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 6
HOUSTON BRANCH
10625 FALLSTONE RD.
HOUSTON, TEXAS 77099

RECEIPT OF PACKAGE FROM USEPA

I ACKNOWLEDGE RECEIPT OF THE FOLLOWING CONTRACT LABORATORY PROGRAM DATA PACKAGE FROM THE USEPA - HOUSTON:

SITE : GC OF QUAIL CREEK
CASE NO.: 25210
SDG NO. : FE-P50

RECEIVED BY: P. [illegible] DATE: 1/16/97

REPRESENTING: ROY F. WESTON, INC.

ADDRESS/PHONE: 5599 SAN FELIPE # 700
HOUSTON, TEXAS 77056

CONCURRENCE BY EPA REPRESENTATIVE:

MAHMOUD ELFEKY M. Elfeky DATE: 1-17-1997

CC: USEPA PROJECT OFFICER
ESAT FILE

A COPY OF THIS RECEIPT SHALL BE SENT TO THE EPA PROGRAM OFFICE ALONG WITH A COPY OF THE ENCLOSED DATA REVIEW.

Recycled/Recyclable
Printed with Soy/Canola Ink on paper that contains at least 50% recycled fiber

EPA United States Environmental Protection Agency
Contract Laboratory Program

Organic Traffic Report & Chain of Custody Record
(For Organic CLP Analysis)

Case No. 25210

1. Project Code: —
Account Code: —
2. Region No.: 6
Sampling Co.: WESTON
4. Date Shipped: 12/10/96
Carrier: FED EX

Regional Information: —
Sampler (Name): ROBERT BECK
Airbill Number: 9601648346

Non-Superfund Program: —
Sampler Signature: [signature]
5. Ship To: INDUSTRIAL ENVIRONMENTAL ANALYSTS, 628 ROUTE 10, WHIPPANY, NJ 07981, (201) 428-8181, ATTN: BRIAN WOOD

Site Name: GARLAND CITY OF QUAIL CREEK
City, State: GARLAND, TX
Site Spill ID: ZZ

3. Purpose*
Lead: [X] SF, [ ] PRP, [ ] ST, [ ] FED
Early Action: [ ] CLEM, [ ] PA, [ ] REM, [ ] RI, [X] SI, [ ] ESI
Long-Term Action: [ ] FS, [ ] RD, [ ] RA, [ ] O&M, [ ] NPLD

6. Matrix (Enter in Column A)
1. Surface Water
2. Ground Water
3. Leachate
4. Field QC
5. Soil/Sediment
6. Oil (High only)
7. Waste (High only)
8. Other (Specify in Column A)

7. Preservative (Enter in Column D)
1. HCl
2. HNO3
3. NaHSO4
4. H2SO4
5. Ice only
6. Other (Specify in Column D)
N. Not preserved

CLP Sample Numbers (from labels)	A Matrix (from Box 6) / Other:	B Conc.: Low Med High	C Sample Type: Comp./ Grab	D Preservative (from Box 7) / Other:	E RAS Analysis: VOA	BNA	Pest/PCB	High only ARO/TOX	F Regional Specific Tracking Number or Tag Numbers	G Station Location Identifier	H Mo/Day/ Year/Time Sample Collection	I Corresponding CLP Inorganic Sample No.	J Sampler Initials	K Field QC Qualifier (B = Blank S = Spike D = Duplicate R = Rinsate PE = Perform. Eval. — = Not a QC Sample)
FEP50	1	L	G	5	X	X	X		6-012265-282	SW-01	12/10/96 1100	MFGX 36	RB	

Shipment for Case Complete? (Y/N): Y
Page 1 of 1
Sample(s) to be Used for Laboratory QC: FEP50
Additional Sampler Signatures: Troy Hile
Chain of Custody Seal Number(s): —

CHAIN OF CUSTODY RECORD

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Troy Hile	12.10.96 1900	FED-EX			
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks Is custody seal intact? Y/N/none	

A21-012-15 REV.

DISTRIBUTION: Blue - Region Copy; White - Lab Copy for Return to Region; Pink - CLASS Copy; Yellow - Lab Copy for Return to CLASS

EPA Form 9110-2

SEE REVERSE FOR ADDITIONAL STANDARD INSTRUCTIONS
*SEE REVERSE FOR PURPOSE CODE DEFINITIONS

365633

EPA United States Environmental Protection Agency
Contract Laboratory Program

Organic Traffic Report & Chain of Custody Record
(For Organic CLP Analysis)

Case No. 25210

1. Project Code	Account Code	2. Region No.	Sampling Co.	4. Date Shipped	Carrier
—	—	6	WESTON	12/10/96	FED-EX

Regional Information: —

Sampler (Name): ROBERT BECK

Airbill Number: 9601648335

Non-Superfund Program: —

Sampler Signature: [signature]

5. Ship To: INDUSTRIAL ENVIRONMENTAL ANALYSTS, 628 ROUTE 10, WHIPPANY, NJ 07981, (201) 428-8181, ATTN: BRIAN WOOD

Site Name: GARLAND CITY OF QUAIL CREEK

City, State: GARLAND, TX

Site Spill ID: ZZ

3. Purpose*: Lead [X] SF [ ] PRP [ ] ST [ ] FED; Early Action [ ] CLEM [ ] PA [ ] REM [ ] RI [X] SI [ ] ESI; Long-Term Action [ ] FS [ ] RD [ ] RA [ ] O&M [ ] NPLD

6. Matrix (Enter in Column A): 1. Surface Water 2. Ground Water 3. Leachate 4. Field QC 5. Soil/Sediment 6. Oil (High only) 7. Waste (High only) 8. Other (Specify in Column A)

7. Preservative (Enter in Column D): 1. HCl 2. HNO3 3. NaHSO4 4. H2SO4 5. Ice only 6. Other (Specify in Column D) N. Not preserved

CLP Sample Numbers (from labels)	A Matrix (from Box 6) Other:	B Conc.: Low Med High	C Sample Type: Comp./ Grab	D Preservative (from Box 7) Other:	E RAS Analysis VOA	BNA	Pest/PCB	High only ARO/TOX	F Regional Specific Tracking Number or Tag Numbers	G Station Location Identifier	H Mo/Day/ Year/Time Sample Collection	I Corresponding CLP Inorganic Sample No.	J Sampler Initials	K Field QC Qualifier (B = Blank S = Spike D = Duplicate R = Rinsate PE = Perform. Eval. — = Not a QC Sample)
FEQ 07	1	L	G	5	X	X	X		6-012458-461, 465, 466	SW-02	12/10/96 1340	MFGX58	RB	
FEQ 09	1	L	G	5	X	X	X		6-012295-300	SW-03	12/10/96 1430	MFGX39	RB	
FEQ 08	1	L	G	5	X	X	X		6-012469-474	SW-04	12/10/96 1445	MFGX59	RB	D(FEQ09)

Shipment for Case Complete? (Y/N): (Y)

Page 1 of 1

Sample(s) to be Used for Laboratory QC: —

Additional Sampler Signatures: [signature]

Chain of Custody Seal Number(s): —

CHAIN OF CUSTODY RECORD

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks Is custody seal intact? Y/N/none	

A21-012-15 REV.

DISTRIBUTION: Blue - Region Copy; White - Lab Copy for Return to Region; Pink - CLASS Copy; Yellow - Lab Copy for Return to CLASS

EPA Form 9110-2

SEE REVERSE FOR ADDITIONAL STANDARD INSTRUCTIONS
*SEE REVERSE FOR PURPOSE CODE DEFINITIONS

365634

In Reference to Case No(s):
25210 SDG: FEP50 (O-1779)

Contract Laboratory Program
REGIONAL/LABORATORY COMMUNICATION SYSTEM
FAX Record Log

Date of FAX:	January 3, 1997
Laboratory Name:	IEANJ
Lab Contact:	Brian Wood
Region:	6
Regional Contact:	Terry Fan - ESAT
FAX initiated by:	Laboratory X Region

In reference to data for the following fractions:

VOA BNA Pest/PCB

Summary of Questions/Issues:

A. VOA

1. Please comply with the contract and report the pH for each VOA water sample (OLM03.1, p. B-13, 2.6.1.2).

2. The last three VOA alkane results reported in the SDG Narrative belonged to sample FE-Q09 but were not properly identified. Please resubmit page 5 with this omission corrected.

B. BNA

1. Sample FE-Q07: Seven non-target alkanes that were reported on the Alkane form were also reported as TIC's. Please delete these alkanes from the Form I-TIC (p. 149) and resubmit this form.

2. Sample FE-Q08: Five non-target alkanes that were reported on the Alkane form were also reported as TIC's. Please delete these alkanes from the Form I-TIC (p. 177) and resubmit this form.

3. Sample FE-Q09: The raw data indicated that the identification for 2,2'-oxybis(1-chloropropane) was rejected. However, this analyte was reported as a positive hit on the Form I (p. 218). Please correct this error and resubmit page 218.

Contract Laboratory Program
REGIONAL/LABORATORY COMMUNICATION SYSTEM
FAX Record Log

Continuation Page 2 of 3
Laboratory/Contact IEANJ/Brian Wood
In Reference to Case No. 25210 SDG FEP50

C. Pest/PCB

1. The negative sign was omitted for several reported %D results on the Form VII's. Please note that %D is not an absolute value according to Eq. 9 of sec. 9.2.4.9 on page D-26/PEST, OLM03.0. No resubmission is necessary for this case, but please correct for future cases.

2. Please comply with the contractual requirement (OLM03.0, p. B-26, 2.6.5.3.15) and submit a list containing the on-column amount (in ng) of each target compound for every calibration standard.

3. Incorrect surrogate retention times were reported on Form VIII's for PIBLKB1, INDAMBA, INDBMBA, PIBLKB1, INDAMB1, and INDBMB1. Please correct and resubmit pages 428 and 429.

4. RESCO9A:
   a) The reviewer could not reproduce the 71.4% resolution reported for DDE in RESCO9A based on the expanded chromatogram on p. 433. The reviewer calculated a resolution of 56% for this compound. Please verify or demonstrate your calculation.

   b) The baseline used for the resolution calculation for methoxychlor on the expanded chromatogram (p.434) was significantly different from the baseline shown on the original chromatogram (p. 432). Please explain this inconsistency and comment on the validity of the baseline on the expanded chromatogram. Based on the original chromatogram, methoxychlor had a resolution of 47%.

NOTE: Any laboratory resubmission should be submitted either as an addendum to the original CSF with a revised Form DC-2 or submitted as a new CSF with a new Form DC-2 (OLM03.0, p. B-22), except those containing only replacement pages. Custody seals are required for all CSF resubmission shipments.

Contract Laboratory Program
REGIONAL/LABORATORY COMMUNICATION SYSTEM
FAX Record Log

Continuation Page 3 of 3
Laboratory/Contact IEANJ/Brian Wood
In Reference to Case No. 25210 SDG FEP50

Please respond to the above items within 7 days to:

Mr. Mahmoud El-Feky
U.S. EPA Region 6 Laboratory
10625 Fallstone Road
Houston, TX 77099

If you have any questions, please contact me at (713) 988-2971.

Signature

January 3, 1997
Date

Distribution: (1) Lab Copy (2) Region Copy

LOCKHEED MARTIN SERVICES GROUP
ESAT Region 6

10101 Southwest Freeway, Suite 500, Houston, TX 77074

FACSIMILE COVER SHEET

Please deliver the following pages to:

Name Brian Wood

Firm IEANJ

Address 628 Route 10

City Whippany State NJ 07981

Telephone (201) 428-8181 Ext.

Fax Telephone No. (201) 428-5222 Ext.

Sender:

Name Terry Fan

Date January 3, 1997 Time

Total Number of pages including this Cover Sheet 3

If you do not receive all the pages or if any pages are unclear, please call: (713) 988-2971.

MESSAGES: Resubmission request for Case 25210 SDG: FEP50 (O-1779)

Fax Model No. Brother IntelliFAX 3500ML, Fax No. (713) 988-2994

WESTON
MANAGERS DESIGNERS/CONSULTANTS

To: Myra Perez, EPA RSCC

cc: Robert Beck,
Roy F. Weston, Inc.

From: Troy Hile, Roy F. Weston, Inc.

Date: 12 December 1996

Subject: Case Number 25210

Action:

On the evening of 10 December 1996, I contacted Myra Perez, EPA RSCC regarding a particular shipment of surface water samples for Case No. 25210. These samples were sent on 10 December 1996 to the Industrial Environmental Analysts laboratory located in Whippany, New Jersey.

Upon reviewing the chains of custody/traffic reports of this shipment later that same evening, an error was identified. The "relinquished by signature" was inadvertently omitted on traffic report #365634. All other CLP sample shipment protocol was used. Each of the drinking water sample jars were individually labeled, custody sealed, and bagged separately. In addition, the cooler containing the surface water samples was custody sealed and taped. Once the error was identified, I left a telephone voice mail message for Ms. Perez.

I, as a representative of Roy F. Weston, Inc., certify that the aforementioned samples were collected by WESTON team members on 10 December 1996. I also certify that the "relinquished by" signature was inadvertently omitted on traffic report (#365634). A copy of this memorandum will be placed in the project file. If there are any questions regarding this matter, please contact me at (210) 342-7810.

Very truly yours,

ROY F. WESTON, INC.

Troy Hile

Troy D. Hile
Project Team Leader

U.S. EPA - CLP

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

MFGX36

Lab Name: ICM_LABS_____ Contract: 68-D5-0139

Lab Code: ICM___ Case No.: 25210_ SAS No.: _____ SDG No.: MFGX51

Matrix (soil/water): WATER Lab Sample ID: 251593

Level (low/med): LOW__ Date Received: 12/13/96

% Solids: __0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum_	114	B		P
7440-36-0	Antimony_	2.0	U		P
7440-38-2	Arsenic__	2.0	U		P
7440-39-3	Barium__	75.9	B		P
7440-41-7	Beryllium	0.30	U		P
7440-43-9	Cadmium__	1.8	B		P
7440-70-2	Calcium__	86600			P
7440-47-3	Chromium_	0.65	B		P
7440-48-4	Cobalt___	0.70	U		P
7440-50-8	Copper___	5.5	B		P
7439-89-6	Iron____	335			P
7439-92-1	Lead____	2.5	B		P
7439-95-4	Magnesium	3610	B		P
7439-96-5	Manganese	84.6			P
7439-97-6	Mercury__	0.10	U		CV
7440-02-0	Nickel___	0.80	U		P
7440-09-7	Potassium	3700	B		P
7782-49-2	Selenium_	2.4	U		P
7440-22-4	Silver___	0.50	U		P
7440-23-5	Sodium___	35900			P
7440-28-0	Thallium_	3.0	U		P
7440-62-2	Vanadium_	0.85	B		P
7440-66-6	Zinc____	46.1			P
	Cyanide__	11.0			AS

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

FORM I - IN ILM04.0

U.S. EPA - CLP

1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

MFGX39

Lab Name: ICM_LABS_____ Contract: 68-D5-0139

Lab Code: ICM___ Case No.: 25210_ SAS No.: _____ SDG No.: MFGX51

Matrix (soil/water): WATER Lab Sample ID: 251595

Level (low/med): LOW__ Date Received: 12/13/96

% Solids: __0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	89.2	B		P
7440-36-0	Antimony	4.0	B		P
7440-38-2	Arsenic	2.0	U		P
7440-39-3	Barium	86.9	B		P
7440-41-7	Beryllium	0.30	U		P
7440-43-9	Cadmium	3.1	B		P
7440-70-2	Calcium	79100			P
7440-47-3	Chromium	1.2	B		P
7440-48-4	Cobalt	0.70	U		P
7440-50-8	Copper	9.3	B		P
7439-89-6	Iron	139			P
7439-92-1	Lead	3.1			P
7439-95-4	Magnesium	3930	B		P
7439-96-5	Manganese	142			P
7439-97-6	Mercury	0.10	U		CV
7440-02-0	Nickel	6.0	B		P
7440-09-7	Potassium	5940			P
7782-49-2	Selenium	2.4	U		P
7440-22-4	Silver	0.50	U		P
7440-23-5	Sodium	50400			P
7440-28-0	Thallium	3.0	U		P
7440-62-2	Vanadium	1.2	B		P
7440-66-6	Zinc	69.7			P
	Cyanide	13.0			AS

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

FORM I - IN ILM04.0

ADDITIONAL DATA

AMENDED REPORT JAN 0 8 1997

U.S. EPA - CLP

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

MFGX51

Lab Name: ICM_LABS Contract: 68-D5-0139

Lab Code: ICM Case No.: 25210 SAS No.: SDG No.: MFGX51

Matrix (soil/water): SOIL Lab Sample ID: 251587

Level (low/med): LOW Date Received: 12/11/96

% Solids: 76.3

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	9180			P
7440-36-0	Antimony	0.57	B		P
7440-38-2	Arsenic	6.1			P
7440-39-3	Barium	92.7			P
7440-41-7	Beryllium	0.61	B		P
7440-43-9	Cadmium	0.38	B		P
7440-70-2	Calcium	207000			P
7440-47-3	Chromium	23.2			P
7440-48-4	Cobalt	7.2	B		P
7440-50-8	Copper	14.0			P
7439-89-6	Iron	13300			P
7439-92-1	Lead	39.4			P
7439-95-4	Magnesium	2340			P
7439-96-5	Manganese	508			P
7439-97-6	Mercury	0.07	U		CV
7440-02-0	Nickel	11.9		E	P
7440-09-7	Potassium	1460			P
7782-49-2	Selenium	0.89	B	N	P
7440-22-4	Silver	0.13	U		P
7440-23-5	Sodium	347	B		P
7440-28-0	Thallium	1.7	B		P
7440-62-2	Vanadium	35.6			P
7440-66-6	Zinc	81.0		E	P
	Cyanide	0.41	B	N	AS

Color Before: BROWN Clarity Before: OPAQUE Texture: MED

Color After: YELLOW Clarity After: CLEAR Artifacts: YES

Comments:
ARTIFACTS: STONES

FORM I - IN ILM04.0

04

U.S. EPA - CLP

14

ANALYSIS RUN LOG

Lab Name: ICM_LABS_____ Contract: 68-D5-0139

Lab Code: ICM___ Case No.: 25210_ SAS No.: _____ SDG No.:MFGX51

Instrument ID Number: TJA TRACE____ Method: P_

Start Date: 12/16/96 End Date: 12/16/96

EPA Sample No.	D/F	Time	% R	Analytes																								
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
MFGX54	1.00	1915		X	X	X	X	X	X	X	X	X	X	X	X	X	X	—	X	X	X	X	X	X	X	X	—
MFGX55D	1.00	1920		X	X	X	X	X	X	X	X	X	X	X	X	X	X	—	X	X	X	X	X	X	X	X	—
MFGX55DL	5.00	1924		X	X	X	X	X	X	X	X	X	X	X	X	X	X	—	X	X	X	X	X	X	X	X	—
MFGX55	1.00	1929		X	X	X	X	X	X	X	X	X	X	X	X	X	X	—	X	X	X	X	X	X	X	X	—
MFGX55S	1.00	1934			X	X	X	X	X		X	X	X		X		X	—	X		X	X		X	X	X	—
MFGX56	1.00	1939		X	X	X	X	X	X	X	X	X	X	X	X	X	X	—	X	X	X	X	X	X	X	X	—
CRI	1.00	1943			X	X		X	X		X	X	X		X		X	—	X		X	X		X	X	X	—
ICSA	1.00	1948		X	X	X	X	X	X	X	X	X	X	X	X	X	X	—	X	X	X	X	X	X	X	X	—
ICSAB	1.00	1953		X	X	X	X	X	X	X	X	X	X	X	X	X	X	—	X	X	X	X	X	X	X	X	—
CCV	1.00	1958		X	X	X	X	X	X	X	X	X	X	X	X	X	X	—	X	X	X	X	X	X	X	X	—
CCB	1.00	2003		X	X	X	X	X	X	X	X	X	X	X	X	X	X	—	X	X	X	X	X	X	X	X	—

FORM XIV - IN ILM04.0

U.S. EPA - CLP

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

MFGX52

Lab Name: ICM_LABS Contract: 68-D5-0139

Lab Code: ICM Case No.: 25210 SAS No.: SDG No.: MFGX51

Matrix (soil/water): SOIL Lab Sample ID: 251588

Level (low/med): LOW Date Received: 12/11/96

% Solids: 62.0

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	18600			P
7440-36-0	Antimony	0.65	U		P
7440-38-2	Arsenic	9.6			P
7440-39-3	Barium	120			P
7440-41-7	Beryllium	0.95	B		P
7440-43-9	Cadmium	0.49	B		P
7440-70-2	Calcium	12000			P
7440-47-3	Chromium	22.2			P
7440-48-4	Cobalt	7.7	B		P
7440-50-8	Copper	19.1			P
7439-89-6	Iron	16300			P
7439-92-1	Lead	41.4			P
7439-95-4	Magnesium	3140			P
7439-96-5	Manganese	422			P
7439-97-6	Mercury	0.08	U		CV
7440-02-0	Nickel	16.6		E	P
7440-09-7	Potassium	2830			P
7782-49-2	Selenium	0.77	U	N	P
7440-22-4	Silver	0.16	U		P
7440-23-5	Sodium	216	B		P
7440-28-0	Thallium	0.97	U		P
7440-62-2	Vanadium	46.7			P
7440-66-6	Zinc	94.7		E	P
	Cyanide	0.49	U	N	AS

Color Before: BROWN Clarity Before: OPAQUE Texture: MED

Color After: YELLOW Clarity After: CLEAR Artifacts: YES

Comments:
ARTIFACTS: STICKS

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

MFGX53

Lab Name: ICM_LABS_____ Contract: 68-D5-0139

Lab Code: ICM___ Case No.: 25210_ SAS No.: _____ SDG No.: MFGX51

Matrix (soil/water): SOIL_ Lab Sample ID: 251589

Level (low/med): LOW__ Date Received: 12/11/96

% Solids: _63.0

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum_	10800			P
7440-36-0	Antimony_	0.84	B		P
7440-38-2	Arsenic__	4.4			P
7440-39-3	Barium__	126			P
7440-41-7	Beryllium	0.64	B		P
7440-43-9	Cadmium__	0.42	B		P
7440-70-2	Calcium__	117000			P
7440-47-3	Chromium_	16.9			P
7440-48-4	Cobalt___	5.3	B		P
7440-50-8	Copper___	14.0			P
7439-89-6	Iron____	13000			P
7439-92-1	Lead____	32.4			P
7439-95-4	Magnesium	2710			P
7439-96-5	Manganese	369			P
7439-97-6	Mercury__	0.08	U		CV
7440-02-0	Nickel___	11.2	B	E	P
7440-09-7	Potassium	1480	B		P
7782-49-2	Selenium_	0.76	U	N	P
7440-22-4	Silver___	0.16	U		P
7440-23-5	Sodium___	240	B		P
7440-28-0	Thallium_	0.95	U		P
7440-62-2	Vanadium_	28.9			P
7440-66-6	Zinc____	108		E	P
	Cyanide__	0.55	B	N	AS

Color Before: BROWN____ Clarity Before: OPAQUE Texture: MED___

Color After: YELLOW___ Clarity After: CLEAR_ Artifacts: YES___

Comments:
ARTIFACTS:__STICKS/STONES_____

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

MFGX54

Lab Name: ICM_LABS Contract: 68-D5-0139

Lab Code: ICM Case No.: 25210 SAS No.: SDG No.: MFGX51

Matrix (soil/water): SOIL Lab Sample ID: 251590

Level (low/med): LOW Date Received: 12/11/96

% Solids: 60.7

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	18200			P
7440-36-0	Antimony	0.69	B		P
7440-38-2	Arsenic	8.0			P
7440-39-3	Barium	120			P
7440-41-7	Beryllium	0.98	B		P
7440-43-9	Cadmium	0.29	B		P
7440-70-2	Calcium	121000			P
7440-47-3	Chromium	22.8			P
7440-48-4	Cobalt	9.7	B		P
7440-50-8	Copper	19.4			P
7439-89-6	Iron	20700			P
7439-92-1	Lead	30.1			P
7439-95-4	Magnesium	3540			P
7439-96-5	Manganese	685			P
7439-97-6	Mercury	0.08	U		CV
7440-02-0	Nickel	16.5		E	P
7440-09-7	Potassium	2820			P
7782-49-2	Selenium	1.4	B	N	P
7440-22-4	Silver	0.16	U		P
7440-23-5	Sodium	180	B		P
7440-28-0	Thallium	1.2	B		P
7440-62-2	Vanadium	50.9			P
7440-66-6	Zinc	93.7		E	P
	Cyanide	1.4		N	AS

Color Before: BROWN Clarity Before: OPAQUE Texture: MED

Color After: YELLOW Clarity After: CLEAR Artifacts: YES

Comments:
ARTIFACTS: STICKS/STONES

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ADDITIONAL DATA

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

MFGX55

Lab Name: ICM_LABS Contract: 68-D5-0139

Lab Code: ICM Case No.: 25210 SAS No.: SDG No.: MFGX51

Matrix (soil/water): SOIL Lab Sample ID: 251591

Level (low/med): LOW Date Received: 12/11/96

% Solids: 71.0

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	12200			P
7440-36-0	Antimony	0.80	B		P
7440-38-2	Arsenic	6.2			P
7440-39-3	Barium	107			P
7440-41-7	Beryllium	0.78	B		P
7440-43-9	Cadmium	0.22	B		P
7440-70-2	Calcium	166000			P
7440-47-3	Chromium	25.3			P
7440-48-4	Cobalt	10.5	B		P
7440-50-8	Copper	12.5			P
7439-89-6	Iron	17300			P
7439-92-1	Lead	24.2			P
7439-95-4	Magnesium	2880			P
7439-96-5	Manganese	645			P
7439-97-6	Mercury	0.07	U		CV
7440-02-0	Nickel	14.7		E	P
7440-09-7	Potassium	1670			P
7782-49-2	Selenium	0.68	U	N	P
7440-22-4	Silver	0.14	U		P
7440-23-5	Sodium	306	B		P
7440-28-0	Thallium	0.85	U		P
7440-62-2	Vanadium	43.8			P
7440-66-6	Zinc	69.4		E	P
	Cyanide	5.6		N	AS

Color Before: BROWN Clarity Before: OPAQUE Texture: MED

Color After: YELLOW Clarity After: CLEAR Artifacts: YES

Comments:
ARTIFACTS: STONES

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ADDITIONAL DATA

AMENDED REPORT JAN 0 8 1997

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

MFGX56

Lab Name: ICM_LABS Contract: 68-D5-0139

Lab Code: ICM Case No.: 25210 SAS No.: SDG No.: MFGX51

Matrix (soil/water): SOIL Lab Sample ID: 251592

Level (low/med): LOW Date Received: 12/11/96

% Solids: 67.1

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	10400			P
7440-36-0	Antimony	0.60	U		P
7440-38-2	Arsenic	6.4			P
7440-39-3	Barium	119			P
7440-41-7	Beryllium	0.78	B		P
7440-43-9	Cadmium	0.36	B		P
7440-70-2	Calcium	182000			P
7440-47-3	Chromium	24.6			P
7440-48-4	Cobalt	10.5	B		P
7440-50-8	Copper	15.7			P
7439-89-6	Iron	16700			P
7439-92-1	Lead	27.0			P
7439-95-4	Magnesium	2740			P
7439-96-5	Manganese	665			P
7439-97-6	Mercury	0.07	U		CV
7440-02-0	Nickel	15.3		E	P
7440-09-7	Potassium	1730			P
7782-49-2	Selenium	0.72	U	N	P
7440-22-4	Silver	0.15	U		P
7440-23-5	Sodium	311	B		P
7440-28-0	Thallium	0.89	U		P
7440-62-2	Vanadium	40.9			P
7440-66-6	Zinc	91.3		E	P
	Cyanide	2.6		N	AS

Color Before: BROWN Clarity Before: OPAQUE Texture: MED

Color After: YELLOW Clarity After: CLEAR Artifacts: YES

Comments:
ARTIFACTS: STONES

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

MFGX58

Lab Name: ICM_LABS_____ Contract: 68-D5-0139

Lab Code: ICM___ Case No.: 25210_ SAS No.: _____ SDG No.: MFGX51

Matrix (soil/water): WATER Lab Sample ID: 251594

Level (low/med): LOW__ Date Received: 12/13/96

% Solids: __0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	578			P
7440-36-0	Antimony	3.0	B		P
7440-38-2	Arsenic	2.0	U		P
7440-39-3	Barium	153	B		P
7440-41-7	Beryllium	0.30	U		P
7440-43-9	Cadmium	0.45	B		P
7440-70-2	Calcium	132000			P
7440-47-3	Chromium	1.2	B		P
7440-48-4	Cobalt	1.6	B		P
7440-50-8	Copper	4.7	B		P
7439-89-6	Iron	2210			P
7439-92-1	Lead	4.7			P
7439-95-4	Magnesium	7750			P
7439-96-5	Manganese	830			P
7439-97-6	Mercury	0.10	U		CV
7440-02-0	Nickel	0.80	U		P
7440-09-7	Potassium	2620	B		P
7782-49-2	Selenium	4.1	B		P
7440-22-4	Silver	0.50	U		P
7440-23-5	Sodium	14700			P
7440-28-0	Thallium	3.0	U		P
7440-62-2	Vanadium	1.8	B		P
7440-66-6	Zinc	54.7			P
	Cyanide	3.0	U		AS

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

MFGX59

Lab Name: ICM_LABS_____ Contract: 68-D5-0139

Lab Code: ICM___ Case No.: 25210_ SAS No.: _____ SDG No.: MFGX51

Matrix (soil/water): WATER Lab Sample ID: 251596

Level (low/med): LOW__ Date Received: 12/13/96

% Solids: __0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	32.4	B		P
7440-36-0	Antimony	3.4	B		P
7440-38-2	Arsenic	2.0	U		P
7440-39-3	Barium	93.8	B		P
7440-41-7	Beryllium	0.30	U		P
7440-43-9	Cadmium	3.4	B		P
7440-70-2	Calcium	84500			P
7440-47-3	Chromium	0.79	B		P
7440-48-4	Cobalt	0.70	U		P
7440-50-8	Copper	8.9	B		P
7439-89-6	Iron	216			P
7439-92-1	Lead	4.0			P
7439-95-4	Magnesium	4190	B		P
7439-96-5	Manganese	153			P
7439-97-6	Mercury	0.10	U		CV
7440-02-0	Nickel	5.4	B		P
7440-09-7	Potassium	6370			P
7782-49-2	Selenium	2.4	U		P
7440-22-4	Silver	0.50	U		P
7440-23-5	Sodium	54600			P
7440-28-0	Thallium	3.0	U		P
7440-62-2	Vanadium	1.5	B		P
7440-66-6	Zinc	71.3			P
	Cyanide	7.9			AS

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

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1A

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

FEP50

Lab Name: IEA-NJ Contract: 68D50011

Lab Code: IEANJ Case No.: 25210 SAS No : _____ SDG No.: FEP50

Matrix: (soil/water) Water Lab Sample ID: 65790001

Sample wt/vol: 5 (g/mL) ml Lab File ID: A4728

Level: (low/med) LOW Date Received: 12/11/96

% Moisture: not dec. _____ Date Analyzed: 12/20/96

GC Column: RTX-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS: (ug/L or ug/Kg) ug/l

CAS NO.	COMPOUND		Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	10	U
67-64-1	Acetone	13	B
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene(total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	Trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
108-88-3	Toluene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Total Xylenes	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

FEP50

Lab Name: IEA-NJ Contract: 68D50011

Lab Code: IEANJ Case No.: 25210 SAS No.: _____ SDG No.: FEP50

Matrix: (soil/water) Water Lab Sample ID: 65790001

Sample wt/vol: 5 (g/mL) ml Lab File ID: A4728

Level: (low/med) LOW Date Received: 12/11/96

% Moisture: not dec. _____ Date Analyzed: 12/20/96

GC Column: RTX-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Number TICs Found: 1

CONCENTRATION UNITS: (ug/L or ug/Kg) ug/l

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
01.1634044	Propane, 2-methoxy-2-methyl-	3.93	14	JN
02.				
03.				
04.				
05.				
06.				
07.				
08.				
09.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
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26.				
27.				
28.				
29.				
30.				

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

FEQ07

Lab Name: IEA-NJ Contract: 68D50011

Lab Code: IEANJ Case No.: 25210 SAS No.: _____ SDG No.: FEP50

Matrix: (soil/water) Water Lab Sample ID: 65788001

Sample wt/vol: 5 (g/mL) ml Lab File ID: A4687

Level: (low/med) LOW Date Received: 12/11/96

% Moisture: not dec. _____ Date Analyzed: 12/18/96

GC Column: RTX-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS: (ug/L or ug/Kg) ug/l

CAS NO.	COMPOUND		Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	10	U
67-64-1	Acetone	15	B
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene(total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	Trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
108-88-3	Toluene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Total Xylenes	10	U

1E

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

FEQ07

Lab Name: IEA-NJ Contract: 68D50011

Lab Code: IEANJ Case No.: 25210 SAS No.: _____ SDG No.: FEP50

Matrix: (soil/water) Water Lab Sample ID: 65788001

Sample wt/vol: 5 (g/mL) ml Lab File ID: A4687

Level: (low/med) LOW Date Received: 12/11/96

% Moisture: not dec. _____ Date Analyzed: 12/18/96

GC Column: RTX-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Number TICs Found: 0

CONCENTRATION UNITS: (ug/L or ug/Kg) ug/l

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
01.				
02.				
03.				
04.				
05.				
06.				
07.				
08.				
09.				
10.				
11.				
12.				
13.				
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23.				
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30.				

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

FEQ08

Lab Name: IEA-NJ Contract: 68D50011

Lab Code: IEANJ Case No.: 25210 SAS No.: _____ SDG No.: FEP50

Matrix: (soil/water) Water Lab Sample ID: 65788002

Sample wt/vol: 5 (g/mL) ml Lab File ID: A4688

Level: (low/med) LOW Date Received: 12/11/96

% Moisture: not dec. _____ Date Analyzed: 12/18/96

GC Column: RTX-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS: (ug/L or ug/Kg) ug/l

CAS NO.	COMPOUND		Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	3	JB
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene(total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	Trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
108-88-3	Toluene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Total Xylenes	10	U

1E

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

FEQ08

Lab Name: IEA-NJ Contract: 68D50011

Lab Code: IEANJ Case No.: 25210 SAS No.: _____ SDG No.: FEP50

Matrix: (soil/water) Water Lab Sample ID: 65788002

Sample wt/vol: 5 (g/mL) ml Lab File ID: A4688

Level: (low/med) LOW Date Received: 12/11/96

% Moisture: not dec. _____ Date Analyzed: 12/18/96

GC Column: RTX-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Number TICs Found: 1

CONCENTRATION UNITS: (ug/L or ug/Kg) ug/l

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
01.1634044	Propane, 2-methoxy-2-methyl-	3.93	150	JN
02.				
03.				
04.				
05.				
06.				
07.				
08.				
09.				
10.				
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1A

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

FEQ09

Lab Name: IEA-NJ Contract: 68D50011

Lab Code: IEANJ Case No.: 25210 SAS No.: _____ SDG No.: FEP50

Matrix: (soil/water) Water Lab Sample ID: 65788003

Sample wt/vol: 5 (g/mL) ml Lab File ID: A4689

Level: (low/med) LOW Date Received: 12/11/96

% Moisture: not dec. _____ Date Analyzed: 12/18/96

GC Column: RTX-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS: (ug/L or ug/Kg) ug/l

CAS NO.	COMPOUND		Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	10	U
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene(total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	Trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
108-88-3	Toluene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Total Xylenes	10	U

1E

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

FEQ09

Lab Name: IEA-NJ Contract: 68D50011

Lab Code: IEANJ Case No.: 25210 SAS No.: _____ SDG No.: FEP50

Matrix: (soil/water) Water Lab Sample ID: 65788003

Sample wt/vol: 5 (g/mL) ml Lab File ID: A4689

Level: (low/med) LOW Date Received: 12/11/96

% Moisture: not dec. _____ Date Analyzed: 12/18/96

GC Column: RTX-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Number TICs Found: 1

CONCENTRATION UNITS: (ug/L or ug/Kg) ug/l

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
01.1634044	Propane, 2-methoxy-2-methyl-	3.94	150	JN
02.				
03.				
04.				
05.				
06.				
07.				
08.				
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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLKA2

Lab Name: IEA-NJ Contract: 68D50011

Lab Code: IEANJ Case No.: 25210 SAS No.: _____ SDG No.: FEP50

Matrix: (soil/water) Water Lab Sample ID: VBLKA2

Sample wt/vol: 5 (g/mL) ml Lab File ID: A4683

Level: (low/med) LOW Date Received: _____

% Moisture: not dec. _____ Date Analyzed: 12/18/96

GC Column: RTX-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS: (ug/L or ug/Kg) ug/l

CAS NO.	COMPOUND		Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	3	J
67-64-1	Acetone	4	J
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene(total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	Trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Total Xylenes	10	U

000078

1E

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

VBLKA2

Lab Name: IEA-NJ Contract: 68D50011

Lab Code: IEANJ Case No.: 25210 SAS No.: _____ SDG No.: FEP50

Matrix: (soil/water) Water Lab Sample ID: VBLKA2

Sample wt/vol: 5 (g/mL) ml Lab File ID: A4683

Level: (low/med) LOW Date Received: _____

% Moisture: not dec. _____ Date Analyzed: 12/18/96

GC Column: RTX-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Number TICs Found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/l

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
01.				
02.				
03.				
04.				
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1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLKA3

Lab Name: IEA-NJ Contract: 68D50011

Lab Code: IEANJ Case No.: 25210 SAS No.: _____ SDG No.: FEP50

Matrix: (soil/water) Water Lab Sample ID: VBLKA3

Sample wt/vol: 5 (g/mL) ml Lab File ID: A4727

Level: (low/med) LOW Date Received: _____

% Moisture: not dec. _____ Date Analyzed: 12/20/96

GC Column: RTX-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS: (ug/L or ug/Kg) ug/l

CAS NO.	COMPOUND		Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	10	U
67-64-1	Acetone	2	J
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene(total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	Trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Total Xylenes	10	U

1E

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

VBLKA3

Lab Name: IEA-NJ Contract: 68D50011

Lab Code: IEANJ Case No.: 25210 SAS No.: _____ SDG No.: FEP50

Matrix: (soil/water) Water Lab Sample ID: VBLKA3

Sample wt/vol: 5 (g/mL) ml Lab File ID: A4727

Level: (low/med) LOW Date Received: _____

% Moisture: not dec. _____ Date Analyzed: 12/20/96

GC Column: RTX-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Number TICs Found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/l

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
01.				
02.				
03.				
04.				
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1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VHBLKA1

Lab Name: IEA-NJ Contract: 68D50011

Lab Code: IEANJ Case No.: 25210 SAS No.: _____ SDG No.: FEP50

Matrix: (soil/water) Water Lab Sample ID: VHBLKA1

Sample wt/vol: 5 (g/mL) ml Lab File ID: A4731

Level: (low/med) LOW Date Received: _____

% Moisture: not dec. _____ Date Analyzed: 12/20/96

GC Column: RTX-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/l	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	10	U
67-64-1	Acetone	7	JB
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene(total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	Trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Total Xylenes	10	U

1E

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

VHBLKA1

Lab Name: IEA-NJ Contract: 68D50011

Lab Code: IEANJ Case No.: 25210 SAS No.: _____ SDG No.: FEP50

Matrix: (soil/water) Water Lab Sample ID: VHBLKA1

Sample wt/vol: 5 (g/mL) ml Lab File ID: A4731

Level: (low/med) LOW Date Received: _____

% Moisture: not dec. _____ Date Analyzed: 12/20/96

GC Column: RTX-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Number TICs Found: 0

CONCENTRATION UNITS: (ug/L or ug/Kg) ug/l

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
01.				
02.				
03.				
04.				
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1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

FEP50MS

Lab Name: IEA-NJ Contract: 68D50011

Lab Code: IEANJ Case No.: 25210 SAS No.: _____ SDG No.: FEP50

Matrix: (soil/water) Water Lab Sample ID: 65790002MS

Sample wt/vol: 5 (g/mL) ml Lab File ID: A4691

Level: (low/med) LOW Date Received: 12/11/96

% Moisture: not dec. _____ Date Analyzed: 12/18/96

GC Column: RTX-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS: (ug/L or ug/Kg) ug/l

CAS NO.	COMPOUND		Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	10	U
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	43	
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene(total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	51	
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	52	
10061-02-6	Trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
108-88-3	Toluene	50	
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-90-7	Chlorobenzene	50	
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Total Xylenes	10	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

FEP50MSD

Lab Name: IEA-NJ Contract: 68D50011

Lab Code: IEANJ Case No.: 25210 SAS No.: _____ SDG No.: FEP50

Matrix: (soil/water) Water Lab Sample ID: 65790003MSD

Sample wt/vol: 5 (g/mL) ml Lab File ID: A4692

Level: (low/med) LOW Date Received: 12/11/96

% Moisture: not dec. _____ Date Analyzed: 12/18/96

GC Column: RTX-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS: (ug/L or ug/Kg) ug/l

CAS NO.	COMPOUND		Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	10	U
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	44	
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene(total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	52	
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	52	
10061-02-6	Trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
108-88-3	Toluene	51	
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-90-7	Chlorobenzene	52	
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Total Xylenes	10	U

1B

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

FEP50

Lab Name: IEA-NJ Contract: 68D50011

Lab Code: IEANJ Case No.: 25210 SAS No.: _____ SDG No.: FEP50

Matrix: (soil/water) Water Lab Sample ID: 65790001

Sample wt/vol: 1000 (g/mL) ml Lab File ID: G8394

Level: (low/med) LOW Date Received: 12/11/96

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 12/12/96

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 12/19/96

Injection Volume: 2 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: _____

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/l	Q
108-95-2	Phenol	10	U
111-44-4	Bis(2-Chloroethyl)Ether	10	U
95-57-8	2-Chlorophenol	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-Oxybis(1-Chloropropane)	10	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitrosodi-N-Propylamine	10	U
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	Bis(2-Chloroethoxy) Methane	10	U
120-83-2	2,4-Dichlorophenol	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
91-20-3	Naphthalene	10	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	10	U
59-50-7	4-Chloro-3-Methylphenol	10	U
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	25	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	25	U
131-11-3	Dimethylphthalate	10	U
208-96-8	Acenaphthylene	10	U
606-20-2	2,6-Dinitrotoluene	10	U
99-09-2	3-Nitroaniline	25	U
83-32-9	Acenaphthene	10	U

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

FEP50

Lab Name: IEA-NJ Contract: 68D50011

Lab Code: IEANJ Case No.: 25210 SAS No.: _____ SDG No.: FEP50

Matrix: (soil/water) Water Lab Sample ID: 65790001

Sample wt/vol: 1000 (g/mL) ml Lab File ID: G8394

Level: (low/med) LOW Date Received: 12/11/96

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 12/12/96

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 12/19/96

Injection Volume: 2 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: _____

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/l	Q
51-28-5	2,4-Dinitrophenol	25	U
100-02-7	4-Nitrophenol	25	U
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-Dinitrotoluene	10	U
84-66-2	Diethylphthalate	10	U
7005-72-3	4-Chlorophenyl-Phenyl Ether	10	U
86-73-7	Fluorene	10	U
100-01-6	4-Nitroaniline	25	U
534-52-1	4,6-Dinitro-2-Methylphenol	25	U
86-30-6	N-Nitrosodiphenylamine (1)	10	U
101-55-3	4-Bromophenyl-Phenylether	10	U
118-74-1	Hexachlorobenzene	10	U
87-86-5	Pentachlorophenol	25	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
86-74-8	Carbazole	10	U
84-74-2	Di-N-Butylphthalate	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
85-68-7	Butylbenzylphthalate	10	U
91-94-1	3,3'-Dichlorobenzidine	10	U
56-55-3	Benzo(A)Anthracene	10	U
218-01-9	Chrysene	10	U
117-81-7	Bis(2-Ethylhexyl)Phthalate	2	J
117-84-0	Di-N-Octylphthalate	10	U
205-99-2	Benzo(B)Fluoranthene	10	U
207-08-9	Benzo(K)Fluoranthene	10	U
50-32-8	Benzo(A)Pyrene	10	U
193-39-5	Indeno(1,2,3-Cd)Pyrene	10	U
53-70-3	Dibenz(A,H)Anthracene	10	U
191-24-2	Benzo(G,H,I)Perylene	10	U

1F

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

FEP50

Lab Name: IEA-NJ Contract: 68D50011

Lab Code: IEANJ Case No.: 25210 SAS No.: _____ SDG No.: FEP50

Matrix: (soil/water) Water Lab Sample ID: 65790001

Sample wt/vol: 1000 (g/mL) ml Lab File ID: G8394

Level: (low/med) LOW Date Received: 12/11/96

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 12/12/96

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 12/19/96

Injection Volume: 2 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: _____

Number TICs Found: 13

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/l

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
01.	Unknown	24.61	24	JB
02.	Unknown	26.51	22	J
03.	Unknown Acid	18.09	7	JB
04.	Unknown	34.34	5	J
05.	Unknown Alcohol	6.67	4	JB
06.	Unknown PAH	24.34	4	J
07.149304	2-Mercaptobenzothiazole	22.86	4	JN
08.	Unknown	6.00	4	JB
09.	Unknown	26.00	4	JB
10.	Unknown	12.99	3	J
11.	Unknown Alcohol	17.53	3	J
12.	Unknown Alkene	11.73	2	J
13.	Unknown	26.69	2	J
14.				
15.				
16.				
17.				
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1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

FEQ07

Lab Name: IEA-NJ Contract: 68D50011

Lab Code: IEANJ Case No.: 25210 SAS No.: _____ SDG No.: FEP50

Matrix: (soil/water) Water Lab Sample ID: 65788001

Sample wt/vol: 970 (g/mL) ml Lab File ID: D0643

Level: (low/med) LOW Date Received: 12/11/96

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 12/12/96

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 12/16/96

Injection Volume: 2 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ____

CONCENTRATION UNITS: (ug/L or ug/Kg) ug/l

CAS NO.	COMPOUND		Q
108-95-2	Phenol	10	U
111-44-4	Bis(2-Chloroethyl)Ether	10	U
95-57-8	2-Chlorophenol	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-Oxybis(1-Chloropropane)	10	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitrosodi-N-Propylamine	10	U
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	Bis(2-Chloroethoxy) Methane	10	U
120-83-2	2,4-Dichlorophenol	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
91-20-3	Naphthalene	10	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	10	U
59-50-7	4-Chloro-3-Methylphenol	10	U
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	26	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	26	U
131-11-3	Dimethylphthalate	10	U
208-96-8	Acenaphthylene	10	U
606-20-2	2,6-Dinitrotoluene	10	U
99-09-2	3-Nitroaniline	26	U
83-32-9	Acenaphthene	10	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

FEQ07

Lab Name: IEA-NJ Contract: 68D50011

Lab Code: IEANJ Case No.: 25210 SAS No.: _____ SDG No.: FEP50

Matrix: (soil/water) Water Lab Sample ID: 65788001

Sample wt/vol: 970 (g/mL) ml Lab File ID: D0643

Level: (low/med) LOW Date Received: 12/11/96

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 12/12/96

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 12/16/96

Injection Volume: 2 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ____

CONCENTRATION UNITS: (ug/L or ug/Kg) ug/l

CAS NO.	COMPOUND		Q
51-28-5	2,4-Dinitrophenol	26	U
100-02-7	4-Nitrophenol	26	U
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-Dinitrotoluene	10	U
84-66-2	Diethylphthalate	10	U
7005-72-3	4-Chlorophenyl-Phenyl Ether	10	U
86-73-7	Fluorene	10	U
100-01-6	4-Nitroaniline	26	U
534-52-1	4,6-Dinitro-2-Methylphenol	26	U
86-30-6	N-Nitrosodiphenylamine (1)	10	U
101-55-3	4-Bromophenyl-Phenylether	10	U
118-74-1	Hexachlorobenzene	10	U
87-86-5	Pentachlorophenol	26	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
86-74-8	Carbazole	10	U
84-74-2	Di-N-Butylphthalate	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
85-68-7	Butylbenzylphthalate	10	U
91-94-1	3,3'-Dichlorobenzidine	10	U
56-55-3	Benzo(A)Anthracene	10	U
218-01-9	Chrysene	10	U
117-81-7	Bis(2-Ethylhexyl)Phthalate	2	J
117-84-0	Di-N-Octylphthalate	10	U
205-99-2	Benzo(B)Fluoranthene	10	U
207-08-9	Benzo(K)Fluoranthene	10	U
50-32-8	Benzo(A)Pyrene	10	U
193-39-5	Indeno(1,2,3-Cd)Pyrene	10	U
53-70-3	Dibenz(A,H)Anthracene	10	U
191-24-2	Benzo(G,H,I)Perylene	10	U

1F

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

FEQ07

Lab Name: IEA-NJ Contract: 68D50011

Lab Code: IEANJ Case No.: 25210 SAS No.: _____ SDG No.: FEP50

Matrix: (soil/water) Water Lab Sample ID: 65788001

Sample wt/vol: 970 (g/mL) ml Lab File ID: D0643

Level: (low/med) LOW Date Received: 12/11/96

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 12/12/96

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 12/16/96

Injection Volume: 2 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: _____

Number TICs Found: 22

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/l

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
01.	Unknown Acid	14.39	56	J
02.	Unknown Alkene	24.49	19	J
03.	Unknown	26.33	18	J
04.	Unknown	5.82	12	J
05.	Unknown	20.19	9	J
06.	Unknown Alcohol	6.51	6	J
07.	Unknown Acid	22.24	6	J
08.	Unknown Alcohol	17.94	5	J
09.	Unknown	12.78	5	J
10.	Unknown	9.18	5	J
11.594047	Dichloroiodomethane	5.28	5	JN
12.	Unknown Alkane	27.30	4	J
13.149304	2-Mercaptobenzothiazole	22.64	4	JN
14.	Unknown Alkane	28.13	4	J
15.	Unknown Alkane	26.44	4	J
16.	Unknown Alkane	28.92	3	J
17.	Unknown	19.44	3	J
18.	Unknown Alkane	30.63	3	J
19.	Unknown Acid	5.59	3	J
20.	Unknown Alkane	29.73	2	J
21.	Unknown Alkane	31.64	2	J
22.	Unknown Acid	13.83	2	J
23.				
24.				
25.				
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27.				
28.				
29.				
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1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

FEQ08

Lab Name: IEA-NJ Contract: 68D50011

Lab Code: IEANJ Case No.: 25210 SAS No.: _____ SDG No.: FEP50

Matrix: (soil/water) Water Lab Sample ID: 65788002

Sample wt/vol: 1000 (g/mL) ml Lab File ID: D0644

Level: (low/med) LOW Date Received: 12/11/96

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 12/12/96

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 12/16/96

Injection Volume: 2 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ____

CONCENTRATION UNITS: (ug/L or ug/Kg) ug/l

CAS NO.	COMPOUND		Q
108-95-2	Phenol	10	U
111-44-4	Bis(2-Chloroethyl)Ether	10	U
95-57-8	2-Chlorophenol	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-Oxybis(1-Chloropropane)	10	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitrosodi-N-Propylamine	10	U
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	Bis(2-Chloroethoxy) Methane	10	U
120-83-2	2,4-Dichlorophenol	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
91-20-3	Naphthalene	10	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	10	U
59-50-7	4-Chloro-3-Methylphenol	10	U
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	25	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	25	U
131-11-3	Dimethylphthalate	10	U
208-96-8	Acenaphthylene	10	U
606-20-2	2,6-Dinitrotoluene	10	U
99-09-2	3-Nitroaniline	25	U
83-32-9	Acenaphthene	10	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

FEQ08

Lab Name: IEA-NJ Contract: 68D50011

Lab Code: IEANJ Case No.: 25210 SAS No.: _____ SDG No.: FEP50

Matrix: (soil/water) Water Lab Sample ID: 65788002

Sample wt/vol: 1000 (g/mL) ml Lab File ID: D0644

Level: (low/med) LOW Date Received: 12/11/96

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 12/12/96

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 12/16/96

Injection Volume: 2 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: _____

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/l	Q
51-28-5	2,4-Dinitrophenol	25	U
100-02-7	4-Nitrophenol	25	U
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-Dinitrotoluene	10	U
84-66-2	Diethylphthalate	1	J
7005-72-3	4-Chlorophenyl-Phenyl Ether	10	U
86-73-7	Fluorene	10	U
100-01-6	4-Nitroaniline	25	U
534-52-1	4,6-Dinitro-2-Methylphenol	25	U
86-30-6	N-Nitrosodiphenylamine (1)	10	U
101-55-3	4-Bromophenyl-Phenylether	10	U
118-74-1	Hexachlorobenzene	10	U
87-86-5	Pentachlorophenol	25	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
86-74-8	Carbazole	10	U
84-74-2	Di-N-Butylphthalate	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
85-68-7	Butylbenzylphthalate	1	J
91-94-1	3,3'-Dichlorobenzidine	10	U
56-55-3	Benzo(A)Anthracene	10	U
218-01-9	Chrysene	10	U
117-81-7	Bis(2-Ethylhexyl)Phthalate	10	U
117-84-0	Di-N-Octylphthalate	5	J
205-99-2	Benzo(B)Fluoranthene	10	U
207-08-9	Benzo(K)Fluoranthene	10	U
50-32-8	Benzo(A)Pyrene	10	U
193-39-5	Indeno(1,2,3-Cd)Pyrene	10	U
53-70-3	Dibenz(A,H)Anthracene	10	U
191-24-2	Benzo(G,H,I)Perylene	10	U

1F

EPA SAMPLE NO.

FEQ08

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: IEA-NJ Contract: 68D50011

Lab Code: IEANJ Case No.: 25210 SAS No.: _____ SDG No.: FEP50

Matrix: (soil/water) Water Lab Sample ID: 65788002

Sample wt/vol: 1000 (g/mL) ml Lab File ID: D0644

Level: (low/med) LOW Date Received: 12/11/96

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 12/12/96

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 12/16/96

Injection Volume: 2 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: _____

Number TICs Found: 30

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/l

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
01.	Unknown	13.70	36	J
02.	Unknown	13.94	30	J
03.	Unknown	14.01	20	J
04.	Unknown	13.63	17	J
05.	Unknown Acid	24.49	16	J
06.123955	Octadecanoic acid, butyl est	26.34	16	JN
07.	Unknown	8.96	13	J
08.	Unknown Alcohol	13.76	11	J
09.	Unknown	8.67	8	J
10.	Unknown	8.74	8	J
11.	Unknown	14.21	7	J
12.58082	Caffeine	21.20	6	JN
13.	Unknown Phthalate Ester	29.25	6	J
14.	Unknown	17.94	5	J
15.	Unknown Aromatic	17.30	5	J
16.	Unknown	13.47	5	J
17.	Unknown Alkane	26.45	5	J
18.	Unknown Alkane	28.13	4	J
19.	Unknown Alkane	27.29	4	J
20.	Unknown	19.36	4	J
21.	Unknown Phthalate Ester	27.66	4	J
22.	Unknown Phthalate Ester	33.29	4	J
23.	Unknown Phthalate Ester	28.61	3	J
24.58559	1H-Purine-2,6-dione, 3,7-dih	22.79	3	JN
25.	Unknown	21.66	3	J
26.	Unknown Alkane	28.92	3	J
27.	Unknown Phthalate Ester	30.99	3	J
28.149304	2-Mercaptobenzothiazole	22.62	3	JN
29.	Unknown Phthalate Ester	31.02	3	J
30.	Unknown Alkane	29.72	3	J

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

FEQ09

Lab Name: IEA-NJ Contract: 68D50011

Lab Code: IEANJ Case No.: 25210 SAS No.: _____ SDG No.: FEP50

Matrix: (soil/water) Water Lab Sample ID: 65788003

Sample wt/vol: 950 (g/mL) ml Lab File ID: D0645

Level: (low/med) LOW Date Received: 12/11/96

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 12/12/96

Concentrated Extract Volume: 1000 (µL) Date Analyzed: 12/16/96

Injection Volume: 2 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: _____

CONCENTRATION UNITS: (ug/L or ug/Kg) ug/l

CAS NO.	COMPOUND		Q
108-95-2	Phenol	10	U
111-44-4	Bis(2-Chloroethyl)Ether	10	U
95-57-8	2-Chlorophenol	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-Oxybis(1-Chloropropane)	2	J
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitrosodi-N-Propylamine	10	U
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	2	J
111-91-1	Bis(2-Chloroethoxy) Methane	10	U
120-83-2	2,4-Dichlorophenol	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
91-20-3	Naphthalene	10	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	10	U
59-50-7	4-Chloro-3-Methylphenol	10	U
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	26	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	26	U
131-11-3	Dimethylphthalate	10	U
208-96-8	Acenaphthylene	10	U
606-20-2	2,6-Dinitrotoluene	10	U
99-09-2	3-Nitroaniline	26	U
83-32-9	Acenaphthene	10	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

FEQ09

Lab Name: IEA-NJ Contract: 68D50011

Lab Code: IEANJ Case No.: 25210 SAS No.: _____ SDG No.: FEP50

Matrix: (soil/water) Water Lab Sample ID: 65788003

Sample wt/vol: 950 (g/mL) ml Lab File ID: D0645

Level: (low/med) LOW Date Received: 12/11/96

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 12/12/96

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 12/16/96

Injection Volume: 2 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: _____

CONCENTRATION UNITS: (ug/L or ug/Kg) ug/l

CAS NO.	COMPOUND		Q
51-28-5	2,4-Dinitrophenol	26	U
100-02-7	4-Nitrophenol	26	U
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-Dinitrotoluene	10	U
84-66-2	Diethylphthalate	1	J
7005-72-3	4-Chlorophenyl-Phenyl Ether	10	U
86-73-7	Fluorene	10	U
100-01-6	4-Nitroaniline	26	U
534-52-1	4,6-Dinitro-2-Methylphenol	26	U
86-30-6	N-Nitrosodiphenylamine (1)	10	U
101-55-3	4-Bromophenyl-Phenylether	10	U
118-74-1	Hexachlorobenzene	10	U
87-86-5	Pentachlorophenol	26	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
86-74-8	Carbazole	10	U
84-74-2	Di-N-Butylphthalate	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
85-68-7	Butylbenzylphthalate	10	U
91-94-1	3,3'-Dichlorobenzidine	10	U
56-55-3	Benzo(A)Anthracene	10	U
218-01-9	Chrysene	10	U
117-81-7	Bis(2-Ethylhexyl)Phthalate	10	U
117-84-0	Di-N-Octylphthalate	5	J
205-99-2	Benzo(B)Fluoranthene	10	U
207-08-9	Benzo(K)Fluoranthene	10	U
50-32-8	Benzo(A)Pyrene	10	U
193-39-5	Indeno(1,2,3-Cd)Pyrene	10	U
53-70-3	Dibenz(A,H)Anthracene	10	U
191-24-2	Benzo(G,H,I)Perylene	10	U

1F

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

FEQ09

Lab Name: IEA-NJ Contract: 68D50011

Lab Code: IEANJ Case No.: 25210 SAS No.: _____ SDG No.: FEP50

Matrix: (soil/water) Water Lab Sample ID: 65788003

Sample wt/vol: 950 (g/mL) ml Lab File ID: D0645

Level: (low/med) LOW Date Received: 12/11/96

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 12/12/96

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 12/16/96

Injection Volume: 2 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ____

Number TICs Found: 30

CONCENTRATION UNITS: (ug/L or ug/Kg) ug/l

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
01.	Unknown	13.70	32	J
02.	Unknown	13.94	30	J
03.	Unknown	14.01	20	J
04.	Unknown	24.49	19	J
05.123955	Octadecanoic acid, butyl est	26.34	18	JN
06.	Unknown	13.63	18	J
07.	Unknown	13.76	16	J
08.	Unknown Alcohol	8.96	13	J
09.	Unknown Alcohol	8.67	8	J
10.	Unknown	14.21	8	J
11.	Unknown	8.75	8	J
12.58082	Caffeine	21.20	7	JN
13.	Unknown	17.94	7	J
14.	Unknown Phthalate Ester	29.25	6	J
15.	Unknown	13.47	5	J
16.	Unknown Aromatic	17.30	5	J
17.	Unknown PAH	22.79	4	J
18.	Unknown Phthalate Ester	33.29	4	J
19.	Unknown Phthalate Ester	27.65	4	J
20.103902	Acetaminophen	19.33	4	JN
21.	Unknown	21.66	4	J
22.	Unknown Phthalate Ester	28.61	4	J
23.57103	Hexadecanoic acid	22.22	3	JN
24.	Unknown PAH	33.76	3	J
25.	Unknown	35.83	3	J
26.	Unknown	19.36	3	J
27.	Unknown Phthalate Ester	30.99	3	J
28.	Unknown PAH	22.15	3	J
29.	Unknown Phthalate Ester	30.20	3	J
30.	Unknown Phthalate Ester	31.02	3	J

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SBLK1

Lab Name: IEA-NJ Contract: 68D50011

Lab Code: IEANJ Case No.: 25210 SAS No.: _____ SDG No.: FEP50

Matrix: (soil/water) Water Lab Sample ID: SBLK1

Sample wt/vol: 1000 (g/mL) ml Lab File ID: D0640

Level: (low/med) LOW Date Received: _____

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 12/12/96

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 12/14/96

Injection Volume: 2 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: _____

CONCENTRATION UNITS: (ug/L or ug/Kg) ug/l

CAS NO.	COMPOUND		Q
108-95-2	Phenol	10	U
111-44-4	Bis(2-Chloroethyl)Ether	10	U
95-57-8	2-Chlorophenol	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-Oxybis(1-Chloropropane)	10	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitrosodi-N-Propylamine	10	U
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	Bis(2-Chloroethoxy) Methane	10	U
120-83-2	2,4-Dichlorophenol	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
91-20-3	Naphthalene	10	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	10	U
59-50-7	4-Chloro-3-Methylphenol	10	U
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	25	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	25	U
131-11-3	Dimethylphthalate	10	U
208-96-8	Acenaphthylene	10	U
606-20-2	2,6-Dinitrotoluene	10	U
99-09-2	3-Nitroaniline	25	U
83-32-9	Acenaphthene	10	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SBLK1

Lab Name: IEA-NJ Contract: 68D50011

Lab Code: IEANJ Case No.: 25210 SAS No.: _____ SDG No.: FEP50

Matrix: (soil/water) Water Lab Sample ID: SBLK1

Sample wt/vol: 1000 (g/mL) ml Lab File ID: D0640

Level: (low/med) LOW Date Received: _____

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 12/12/96

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 12/14/96

Injection Volume: 2 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: _____

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/l	Q
51-28-5	2,4-Dinitrophenol	25	U
100-02-7	4-Nitrophenol	25	U
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-Dinitrotoluene	10	U
84-66-2	Diethylphthalate	10	U
7005-72-3	4-Chlorophenyl-Phenyl Ether	10	U
86-73-7	Fluorene	10	U
100-01-6	4-Nitroaniline	25	U
534-52-1	4,6-Dinitro-2-Methylphenol	25	U
86-30-6	N-Nitrosodiphenylamine (1)	10	U
101-55-3	4-Bromophenyl-Phenylether	10	U
118-74-1	Hexachlorobenzene	10	U
87-86-5	Pentachlorophenol	25	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
86-74-8	Carbazole	10	U
84-74-2	Di-N-Butylphthalate	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
85-68-7	Butylbenzylphthalate	10	U
91-94-1	3,3'-Dichlorobenzidine	10	U
56-55-3	Benzo(A)Anthracene	10	U
218-01-9	Chrysene	10	U
117-81-7	Bis(2-Ethylhexyl)Phthalate	10	U
117-84-0	Di-N-Octylphthalate	10	U
205-99-2	Benzo(B)Fluoranthene	10	U
207-08-9	Benzo(K)Fluoranthene	10	U
50-32-8	Benzo(A)Pyrene	10	U
193-39-5	Indeno(1,2,3-Cd)Pyrene	10	U
53-70-3	Dibenz(A,H)Anthracene	10	U
191-24-2	Benzo(G,H,I)Perylene	10	U

1F

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SBLK1

Lab Name: IEA-NJ Contract: 68D50011

Lab Code: IEANJ Case No.: 25210 SAS No.: _____ SDG No.: FEP50

Matrix: (soil/water) Water Lab Sample ID: SBLK1

Sample wt/vol: 1000 (g/mL) ml Lab File ID: D0640

Level: (low/med) LOW Date Received: _____

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 12/12/96

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 12/14/96

Injection Volume: 2 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: _____

Number TICs Found: 6

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/l

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
01.	Unknown Alcohol	6.47	24	J
02.	Unknown Acid	17.94	8	J
03.	Unknown Alcohol	10.05	4	J
04.	Unknown	24.13	4	J
05.	Unknown PAH	25.78	4	J
06.	Unknown	11.54	2	J
07.				
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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SBLKG1

Lab Name: IEA-NJ Contract: 68D50011

Lab Code: IEANJ Case No.: 25210 SAS No.: _____ SDG No.: FEP50

Matrix: (soil/water) Water Lab Sample ID: SBLKG1

Sample wt/vol: 1000 (g/mL) ml Lab File ID: G8393

Level: (low/med) LOW Date Received: _____

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 12/12/96

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 12/19/96

Injection Volume: 2 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: _____

CONCENTRATION UNITS: (ug/L or ug/Kg) ug/l

CAS NO.	COMPOUND		Q
108-95-2	Phenol	10	U
111-44-4	Bis(2-Chloroethyl)Ether	10	U
95-57-8	2-Chlorophenol	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-Oxybis(1-Chloropropane)	10	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitrosodi-N-Propylamine	10	U
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	Bis(2-Chloroethoxy) Methane	10	U
120-83-2	2,4-Dichlorophenol	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
91-20-3	Naphthalene	10	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	10	U
59-50-7	4-Chloro-3-Methylphenol	10	U
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	25	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	25	U
131-11-3	Dimethylphthalate	10	U
208-96-8	Acenaphthylene	10	U
606-20-2	2,6-Dinitrotoluene	10	U
99-09-2	3-Nitroaniline	25	U
83-32-9	Acenaphthene	10	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SBLKG1

Lab Name: IEA-NJ Contract: 68D50011

Lab Code: IEANJ Case No.: 25210 SAS No.: _____ SDG No.: FEP50

Matrix: (soil/water) Water Lab Sample ID: SBLKG1

Sample wt/vol: 1000 (g/mL) ml Lab File ID: G8393

Level: (low/med) LOW Date Received: _____

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 12/12/96

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 12/19/96

Injection Volume: 2 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: _____

CONCENTRATION UNITS: (ug/L or ug/Kg) ug/l

CAS NO.	COMPOUND		Q
51-28-5	2,4-Dinitrophenol	25	U
100-02-7	4-Nitrophenol	25	U
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-Dinitrotoluene	10	U
84-66-2	Diethylphthalate	10	U
7005-72-3	4-Chlorophenyl-Phenyl Ether	10	U
86-73-7	Fluorene	10	U
100-01-6	4-Nitroaniline	25	U
534-52-1	4,6-Dinitro-2-Methylphenol	25	U
86-30-6	N-Nitrosodiphenylamine (1)	10	U
101-55-3	4-Bromophenyl-Phenylether	10	U
118-74-1	Hexachlorobenzene	10	U
87-86-5	Pentachlorophenol	25	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
86-74-8	Carbazole	10	U
84-74-2	Di-N-Butylphthalate	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
85-68-7	Butylbenzylphthalate	10	U
91-94-1	3,3'-Dichlorobenzidine	10	U
56-55-3	Benzo(A)Anthracene	10	U
218-01-9	Chrysene	10	U
117-81-7	Bis(2-Ethylhexyl)Phthalate	10	U
117-84-0	Di-N-Octylphthalate	10	U
205-99-2	Benzo(B)Fluoranthene	10	U
207-08-9	Benzo(K)Fluoranthene	10	U
50-32-8	Benzo(A)Pyrene	10	U
193-39-5	Indeno(1,2,3-Cd)Pyrene	10	U
53-70-3	Dibenz(A,H)Anthracene	10	U
191-24-2	Benzo(G,H,I)Perylene	10	U

1F

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SBLKG1

Lab Name: IEA-NJ Contract: 68D50011

Lab Code: IEANJ Case No.: 25210 SAS No.: _____ SDG No.: FEP50

Matrix: (soil/water) Water Lab Sample ID: SBLKG1

Sample wt/vol: 1000 (g/mL) ml Lab File ID: G8393

Level: (low/med) LOW Date Received: _____

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 12/12/96

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 12/19/96

Injection Volume: 2 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: _____

Number TICs Found: 6

CONCENTRATION UNITS: (ug/L or ug/Kg) ug/l

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
01.	Unknown	6.67	25	J
02.	Unknown Alcohol	18.10	8	J
03.	Unknown Aromatic	24.33	5	J
04.	Unknown	26.04	4	J
05.	Unknown	10.28	4	J
06.	Unknown Alcohol	11.73	2	J
07.				
08.				
09.				
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1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

FEP50MS

Lab Name: IEA-NJ Contract: 68D50011

Lab Code: IEANJ Case No.: 25210 SAS No.: _____ SDG No.: FEP50

Matrix: (soil/water) Water Lab Sample ID: 65790002MS

Sample wt/vol: 1000 (g/mL) ml Lab File ID: G8395

Level: (low/med) LOW Date Received: 12/11/96

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 12/12/96

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 12/19/96

Injection Volume: 2 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: _____

CONCENTRATION UNITS: (ug/L or ug/Kg) ug/l

CAS NO.	COMPOUND		Q
108-95-2	Phenol	45	
111-44-4	Bis(2-Chloroethyl)Ether	10	U
95-57-8	2-Chlorophenol	42	
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	28	
95-50-1	1,2-Dichlorobenzene	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-Oxybis(1-Chloropropane)	10	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitrosodi-N-Propylamine	31	
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	Bis(2-Chloroethoxy) Methane	10	U
120-83-2	2,4-Dichlorophenol	10	U
120-82-1	1,2,4-Trichlorobenzene	30	
91-20-3	Naphthalene	10	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	10	U
59-50-7	4-Chloro-3-Methylphenol	47	
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	25	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	25	U
131-11-3	Dimethylphthalate	10	U
208-96-8	Acenaphthylene	10	U
606-20-2	2,6-Dinitrotoluene	10	U
99-09-2	3-Nitroaniline	25	U
83-32-9	Acenaphthene	31	

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

FEP50MS

Lab Name: IEA-NJ Contract: 68D50011

Lab Code: IEANJ Case No.: 25210 SAS No.: _____ SDG No.: FEP50

Matrix: (soil/water) Water Lab Sample ID: 65790002MS

Sample wt/vol: 1000 (g/mL) ml Lab File ID: G8395

Level: (low/med) LOW Date Received: 12/11/96

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 12/12/96

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 12/19/96

Injection Volume: 2 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: _____

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/l	Q
51-28-5	2,4-Dinitrophenol	25	U
100-02-7	4-Nitrophenol	55	
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-Dinitrotoluene	38	
84-66-2	Diethylphthalate	10	U
7005-72-3	4-Chlorophenyl-Phenyl Ether	10	U
86-73-7	Fluorene	10	U
100-01-6	4-Nitroaniline	25	U
534-52-1	4,6-Dinitro-2-Methylphenol	25	U
86-30-6	N-Nitrosodiphenylamine (1)	10	U
101-55-3	4-Bromophenyl-Phenylether	10	U
118-74-1	Hexachlorobenzene	10	U
87-86-5	Pentachlorophenol	64	
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
86-74-8	Carbazole	10	U
84-74-2	Di-N-Butylphthalate	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	32	
85-68-7	Butylbenzylphthalate	10	U
91-94-1	3,3'-Dichlorobenzidine	10	U
56-55-3	Benzo(A)Anthracene	10	U
218-01-9	Chrysene	10	U
117-81-7	Bis(2-Ethylhexyl)Phthalate	10	U
117-84-0	Di-N-Octylphthalate	10	U
205-99-2	Benzo(B)Fluoranthene	10	U
207-08-9	Benzo(K)Fluoranthene	10	U
50-32-8	Benzo(A)Pyrene	10	U
193-39-5	Indeno(1,2,3-Cd)Pyrene	10	U
53-70-3	Dibenz(A,H)Anthracene	10	U
191-24-2	Benzo(G,H,I)Perylene	10	U

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

FEP50MSD

Lab Name: IEA-NJ Contract: 68D50011

Lab Code: IEANJ Case No.: 25210 SAS No.: _____ SDG No.: FEP50

Matrix: (soil/water) Water Lab Sample ID: 65790003MSD

Sample wt/vol: 970 (g/mL) ml Lab File ID: G8398

Level: (low/med) LOW Date Received: 12/11/96

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 12/12/96

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 12/20/96

Injection Volume: 2 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: _____

CONCENTRATION UNITS: (ug/L or ug/Kg) ug/l

CAS NO.	COMPOUND		Q
108-95-2	Phenol	45	
111-44-4	Bis(2-Chloroethyl)Ether	10	U
95-57-8	2-Chlorophenol	45	
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	32	
95-50-1	1,2-Dichlorobenzene	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-Oxybis(1-Chloropropane)	10	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitrosodi-N-Propylamine	39	
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	Bis(2-Chloroethoxy) Methane	10	U
120-83-2	2,4-Dichlorophenol	10	U
120-82-1	1,2,4-Trichlorobenzene	38	
91-20-3	Naphthalene	10	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	10	U
59-50-7	4-Chloro-3-Methylphenol	55	
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	26	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	26	U
131-11-3	Dimethylphthalate	10	U
208-96-8	Acenaphthylene	1	J
606-20-2	2,6-Dinitrotoluene	10	U
99-09-2	3-Nitroaniline	26	U
83-32-9	Acenaphthene	35	

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

FEP50MSD

Lab Name: IEA-NJ Contract: 68D50011

Lab Code: IEANJ Case No.: 25210 SAS No.: _____ SDG No.: FEP50

Matrix: (soil/water) Water Lab Sample ID: 65790003MSD

Sample wt/vol: 970 (g/mL) ml Lab File ID: G8398

Level: (low/med) LOW Date Received: 12/11/96

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 12/12/96

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 12/20/96

Injection Volume: 2 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: _____

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/l	Q
51-28-5	2,4-Dinitrophenol	26	U
100-02-7	4-Nitrophenol	63	
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-Dinitrotoluene	41	
84-66-2	Diethylphthalate	10	U
7005-72-3	4-Chlorophenyl-Phenyl Ether	10	U
86-73-7	Fluorene	10	U
100-01-6	4-Nitroaniline	26	U
534-52-1	4,6-Dinitro-2-Methylphenol	26	U
86-30-6	N-Nitrosodiphenylamine (1)	10	U
101-55-3	4-Bromophenyl-Phenylether	10	U
118-74-1	Hexachlorobenzene	10	U
87-86-5	Pentachlorophenol	84	E
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
86-74-8	Carbazole	10	U
84-74-2	Di-N-Butylphthalate	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	33	
85-68-7	Butylbenzylphthalate	10	U
91-94-1	3,3'-Dichlorobenzidine	10	U
56-55-3	Benzo(A)Anthracene	10	U
218-01-9	Chrysene	10	U
117-81-7	Bis(2-Ethylhexyl)Phthalate	10	U
117-84-0	Di-N-Octylphthalate	10	U
205-99-2	Benzo(B)Fluoranthene	10	U
207-08-9	Benzo(K)Fluoranthene	10	U
50-32-8	Benzo(A)Pyrene	10	U
193-39-5	Indeno(1,2,3-Cd)Pyrene	10	U
53-70-3	Dibenz(A,H)Anthracene	10	U
191-24-2	Benzo(G,H,I)Perylene	10	U

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
FEQ07

Lab Name: IEA-NJ Contract: 68D50011

Lab Code: IEANJ Case No.: 25210 SAS No.: _____ SDG No.: FEP50

Matrix: (soil/water): WATER Lab Sample ID: 65788001

Sample wt/vol: 940 (g/ml) ml Lab File ID: D4BCLP99B_007

Moisture: _____ decanted: __ Date Received: 12/11/96

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 12/13/96

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 12/19/96

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ____ Sulfur Cleanup: Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.05	U
319-85-7	Beta-BHC	0.05	U
319-86-8	delta-BHC	0.05	U
58-89-9	gamma-BHC (Lindane)	0.05	U
76-44-8	Heptachlor	0.05	U
309-00-2	Aldrin	0.05	U
1024-57-3	Heptachlor Epoxide	0.05	U
959-98-8	Endosulfan I	0.05	U
60-57-1	Dieldrin	0.11	U
72-55-9	4,4'-DDE	0.11	U
72-20-8	Endrin	0.11	U
33213-65-9	Endosulfan II	0.11	U
72-54-8	4,4'-DDD	0.11	U
1031-07-8	Endosulfan Sulfate	0.11	U
50-29-3	4,4'-DDT	0.11	U
72-43-5	Methoxychlor	0.53	U
53494-70-5	Endrin Ketone	0.11	U
7421-93-4	Endrin Aldehyde	0.11	U
5103-71-9	alpha-Chlordane	0.05	U
5103-74-2	gamma-Chlordane	0.05	U
8001-35-2	Toxaphene	5.3	U
12674-11-2	Aroclor-1016	1.1	U
11104-28-2	Aroclor-1221	2.1	U
11141-16-5	Aroclor-1232	1.1	U
53469-21-9	Aroclor-1242	1.1	U
12672-29-6	Aroclor-1248	1.1	U
11097-69-1	Aroclor-1254	1.1	U
11096-82-5	Aroclor-1260	1.1	U

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
FEQ08

Lab Name: IEA-NJ Contract: 68D50011

Lab Code: IEANJ Case No.: 25210 SAS No.: _____ SDG No.: FEP50

Matrix: (soil/water): WATER Lab Sample ID: 65788002

Sample wt/vol: 930 (g/ml) ml Lab File ID: D4BCLP99B_008

Moisture: _____ decanted: __ Date Received: 12/11/96

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 12/13/96

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 12/19/96

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ____ Sulfur Cleanup: Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.05	U
319-85-7	Beta-BHC	0.05	U
319-86-8	delta-BHC	0.05	U
58-89-9	gamma-BHC (Lindane)	0.05	U
76-44-8	Heptachlor	0.05	U
309-00-2	Aldrin	0.05	U
1024-57-3	Heptachlor Epoxide	0.05	U
959-98-8	Endosulfan I	0.05	U
60-57-1	Dieldrin	0.11	U
72-55-9	4,4'-DDE	0.11	U
72-20-8	Endrin	0.11	U
33213-65-9	Endosulfan II	0.11	U
72-54-8	4,4'-DDD	0.11	U
1031-07-8	Endosulfan Sulfate	0.11	U
50-29-3	4,4'-DDT	0.11	U
72-43-5	Methoxychlor	0.54	U
53494-70-5	Endrin Ketone	0.11	U
7421-93-4	Endrin Aldehyde	0.11	U
5103-71-9	alpha-Chlordane	0.05	U
5103-74-2	gamma-Chlordane	0.05	U
8001-35-2	Toxaphene	5.4	U
12674-11-2	Aroclor-1016	1.1	U
11104-28-2	Aroclor-1221	2.2	U
11141-16-5	Aroclor-1232	1.1	U
53469-21-9	Aroclor-1242	1.1	U
12672-29-6	Aroclor-1248	1.1	U
11097-69-1	Aroclor-1254	1.1	U
11096-82-5	Aroclor-1260	1.1	U

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
FEQ09

Lab Name: IEA-NJ Contract: 68D50011

Lab Code: IEANJ Case No.: 25210 SAS No.: _____ SDG No.: FEP50

Matrix: (soil/water): WATER Lab Sample ID: 65788003

Sample wt/vol: 1000 (g/ml) ml Lab File ID: D4BCLP99B_009

Moisture: _____ decanted: __ Date Received: 12/11/96

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 12/13/96

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 12/19/96

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: _____ Sulfur Cleanup: Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.05	U
319-85-7	Beta-BHC	0.05	U
319-86-8	delta-BHC	0.05	U
58-89-9	gamma-BHC (Lindane)	0.05	U
76-44-8	Heptachlor	0.05	U
309-00-2	Aldrin	0.05	U
1024-57-3	Heptachlor Epoxide	0.05	U
959-98-8	Endosulfan I	0.05	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan Sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0.50	U
53494-70-5	Endrin Ketone	0.10	U
7421-93-4	Endrin Aldehyde	0.10	U
5103-71-9	alpha-Chlordane	0.05	U
5103-74-2	gamma-Chlordane	0.05	U
8001-35-2	Toxaphene	5.0	U
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	2.0	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
FEP50

Lab Name: IEA-NJ Contract: 68D50011

Lab Code: IEANJ Case No.: 25210 SAS No.: _____ SDG No.: FEP50

Matrix: (soil/water): WATER Lab Sample ID: 65790001

Sample wt/vol: 910 (g/ml) ml Lab File ID: D4BCLP99B_010

Moisture: _____ decanted: __ Date Received: 12/11/96

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 12/13/96

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 12/19/96

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ____ Sulfur Cleanup: Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.06	U
319-85-7	Beta-BHC	0.06	U
319-86-8	delta-BHC	0.06	U
58-89-9	gamma-BHC (Lindane)	0.06	U
76-44-8	Heptachlor	0.06	U
309-00-2	Aldrin	0.06	U
1024-57-3	Heptachlor Epoxide	0.06	U
959-98-8	Endosulfan I	0.06	U
60-57-1	Dieldrin	0.11	U
72-55-9	4,4'-DDE	0.11	U
72-20-8	Endrin	0.11	U
33213-65-9	Endosulfan II	0.11	U
72-54-8	4,4'-DDD	0.11	U
1031-07-8	Endosulfan Sulfate	0.11	U
50-29-3	4,4'-DDT	0.11	U
72-43-5	Methoxychlor	0.55	U
53494-70-5	Endrin Ketone	0.11	U
7421-93-4	Endrin Aldehyde	0.11	U
5103-71-9	alpha-Chlordane	0.06	U
5103-74-2	gamma-Chlordane	0.06	U
8001-35-2	Toxaphene	5.5	U
12674-11-2	Aroclor-1016	1.1	U
11104-28-2	Aroclor-1221	2.2	U
11141-16-5	Aroclor-1232	1.1	U
53469-21-9	Aroclor-1242	1.1	U
12672-29-6	Aroclor-1248	1.1	U
11097-69-1	Aroclor-1254	1.1	U
11096-82-5	Aroclor-1260	1.1	U

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
PBLK76

Lab Name: IEA-NJ Contract: 68D50011

Lab Code: IEANJ Case No.: 25210 SAS No.: _____ SDG No.: FEP50

Matrix: (soil/water): WATER Lab Sample ID: PBLK76WG8438

Sample wt/vol: 1000 (g/ml) ml Lab File ID: D4BCLP99B_006

Moisture: _____ decanted: __ Date Received: _____

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 12/13/96

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 12/18/96

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: _____ Sulfur Cleanup: Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.05	U
319-85-7	Beta-BHC	0.05	U
319-86-8	delta-BHC	0.05	U
58-89-9	gamma-BHC (Lindane)	0.05	U
76-44-8	Heptachlor	0.05	U
309-00-2	Aldrin	0.05	U
1024-57-3	Heptachlor Epoxide	0.05	U
959-98-8	Endosulfan I	0.05	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan Sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0.50	U
53494-70-5	Endrin Ketone	0.10	U
7421-93-4	Endrin Aldehyde	0.10	U
5103-71-9	alpha-Chlordane	0.05	U
5103-74-2	gamma-Chlordane	0.05	U
8001-35-2	Toxaphene	5.0	U
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	2.0	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

000546

EPA SAMPLE NO.

PIBLK9A

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

Lab Name: IEA-NJ Contract: 68D50011

Lab Code: IEANJ Case No.: 25210 SAS No.: _____ SDG No.: FEP50

Matrix: (soil/water): WATER Lab Sample ID: PIBLK9A

Sample wt/vol: 1000 (g/ml) ml Lab File ID: D4BCLP99I_018

Moisture: _____ decanted: __ Date Received: _____

Extraction: (SepF/Cont/Sonc) ____ Date Extracted: _____

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 12/14/96

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N)__ pH:____ Sulfur Cleanup: __

CAS NO. COMPOUND CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L Q

319-84-6	alpha-BHC	0.05	U
319-85-7	Beta-BHC	0.05	U
319-86-8	delta-BHC	0.05	U
58-89-9	gamma-BHC (Lindane)	0.05	U
76-44-8	Heptachlor	0.05	U
309-00-2	Aldrin	0.05	U
1024-57-3	Heptachlor Epoxide	0.05	U
959-98-8	Endosulfan I	0.05	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan Sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0.50	U
53494-70-5	Endrin Ketone	0.10	U
7421-93-4	Endrin Aldehyde	0.10	U
5103-71-9	alpha-Chlordane	0.05	U
5103-74-2	gamma-Chlordane	0.05	U
8001-35-2	Toxaphene	5.0	U
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	2.0	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

000549

EPA SAMPLE NO.

PIBLK91

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

Lab Name: IEA-NJ Contract: 68D50011

Lab Code: IEANJ Case No.: 25210 SAS No.: _____ SDG No.: FEP50

Matrix: (soil/water): WATER Lab Sample ID: PIBLK91

Sample wt/vol: 1000 (g/ml) ml Lab File ID: D4ACLP99I_019

Moisture: _____ decanted: __ Date Received: _____

Extraction: (SepF/Cont/Sonc) ____ Date Extracted: _____

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 12/14/96

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N)__ pH:____ Sulfur Cleanup: __

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.05	U
319-85-7	Beta-BHC	0.05	U
319-86-8	delta-BHC	0.05	U
58-89-9	gamma-BHC (Lindane)	0.05	U
76-44-8	Heptachlor	0.05	U
309-00-2	Aldrin	0.05	U
1024-57-3	Heptachlor Epoxide	0.05	U
959-98-8	Endosulfan I	0.05	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan Sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0.50	U
53494-70-5	Endrin Ketone	0.10	U
7421-93-4	Endrin Aldehyde	0.10	U
5103-71-9	alpha-Chlordane	0.05	U
5103-74-2	gamma-Chlordane	0.05	U
8001-35-2	Toxaphene	5.0	U
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	2.0	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

000552

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
PIBLKBA

Lab Name: IEA-NJ Contract: 68D50011

Lab Code: IEANJ Case No.: 25210 SAS No.: _____ SDG No.: FEP50

Matrix: (soil/water): WATER Lab Sample ID: PIBLKBA

Sample wt/vol: 1000 (g/ml) ml Lab File ID: D4BCLP99B_003

Moisture: _____ decanted: __ Date Received: _____

Extraction: (SepF/Cont/Sonc) _____ Date Extracted: _____

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 12/18/96

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) __ pH: _____ Sulfur Cleanup: __

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.05	U
319-85-7	Beta-BHC	0.05	U
319-86-8	delta-BHC	0.05	U
58-89-9	gamma-BHC (Lindane)	0.05	U
76-44-8	Heptachlor	0.05	U
309-00-2	Aldrin	0.05	U
1024-57-3	Heptachlor Epoxide	0.05	U
959-98-8	Endosulfan I	0.05	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan Sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0.50	U
53494-70-5	Endrin Ketone	0.10	U
7421-93-4	Endrin Aldehyde	0.10	U
5103-71-9	alpha-Chlordane	0.05	U
5103-74-2	gamma-Chlordane	0.05	U
8001-35-2	Toxaphene	5.0	U
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	2.0	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

000555

EPA SAMPLE NO.

PIBLKB1

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

Lab Name: IEA-NJ Contract: 68D50011

Lab Code: IEANJ Case No.: 25210 SAS No.: _____ SDG No.: FEP50

Matrix: (soil/water): WATER Lab Sample ID: PIBLKB1

Sample wt/vol: 1000 (g/ml) ml Lab File ID: D4ACLP99B_004

Moisture: _____ decanted: __ Date Received: _____

Extraction: (SepF/Cont/Sonc) _____ Date Extracted: _____

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 12/18/96

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) __ pH: _____ Sulfur Cleanup: __

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.05	U
319-85-7	Beta-BHC	0.05	U
319-86-8	delta-BHC	0.05	U
58-89-9	gamma-BHC (Lindane)	0.05	U
76-44-8	Heptachlor	0.05	U
309-00-2	Aldrin	0.05	U
1024-57-3	Heptachlor Epoxide	0.05	U
959-98-8	Endosulfan I	0.05	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan Sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0.50	U
53494-70-5	Endrin Ketone	0.10	U
7421-93-4	Endrin Aldehyde	0.10	U
5103-71-9	alpha-Chlordane	0.05	U
5103-74-2	gamma-Chlordane	0.05	U
8001-35-2	Toxaphene	5.0	U
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	2.0	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
PIBLKBB

Lab Name: IEA-NJ Contract: 68D50011

Lab Code: IEANJ Case No.: 25210 SAS No.: _____ SDG No.: FEP50

Matrix: (soil/water): WATER Lab Sample ID: PIBLKBB

Sample wt/vol: 1000 (g/ml) ml Lab File ID: D4BCLP99B_017

Moisture: _____ decanted: __ Date Received: _____

Extraction: (SepF/Cont/Sonc) ____ Date Extracted: _____

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 12/19/96

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N)__ pH:____ Sulfur Cleanup: __

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.05	U
319-85-7	Beta-BHC	0.05	U
319-86-8	delta-BHC	0.05	U
58-89-9	gamma-BHC (Lindane)	0.05	U
76-44-8	Heptachlor	0.05	U
309-00-2	Aldrin	0.05	U
1024-57-3	Heptachlor Epoxide	0.05	U
959-98-8	Endosulfan I	0.05	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan Sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0.50	U
53494-70-5	Endrin Ketone	0.10	U
7421-93-4	Endrin Aldehyde	0.10	U
5103-71-9	alpha-Chlordane	0.05	U
5103-74-2	gamma-Chlordane	0.05	U
8001-35-2	Toxaphene	5.0	U
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	2.0	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
PIBLKB2

Lab Name: IEA-NJ Contract: 68D50011

Lab Code: IEANJ Case No.: 25210 SAS No.: _____ SDG No.: FEP50

Matrix: (soil/water): WATER Lab Sample ID: PIBLKB2

Sample wt/vol: 1000 (g/ml) ml Lab File ID: D4ACLP99B_018

Moisture: _____ decanted: __ Date Received: _____

Extraction: (SepF/Cont/Sonc) ____ Date Extracted: _____

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 12/19/96

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N)__ pH:____ Sulfur Cleanup: __

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.05	U
319-85-7	Beta-BHC	0.05	U
319-86-8	delta-BHC	0.05	U
58-89-9	gamma-BHC (Lindane)	0.05	U
76-44-8	Heptachlor	0.05	U
309-00-2	Aldrin	0.05	U
1024-57-3	Heptachlor Epoxide	0.05	U
959-98-8	Endosulfan I	0.05	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan Sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0.50	U
53494-70-5	Endrin Ketone	0.10	U
7421-93-4	Endrin Aldehyde	0.10	U
5103-71-9	alpha-Chlordane	0.05	U
5103-74-2	gamma-Chlordane	0.05	U
8001-35-2	Toxaphene	5.0	U
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	2.0	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
FEP50MS

Lab Name: IEA-NJ Contract: 68D50011

Lab Code: IEANJ Case No.: 25210 SAS No.: _____ SDG No.: FEP50

Matrix: (soil/water): WATER Lab Sample ID: 65790002MS

Sample wt/vol: 930 ✓ (g/ml) ml Lab File ID: D4BCLP99B_011

Moisture: _____ decanted: __ Date Received: 12/11/96

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 12/13/96

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 12/19/96

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ____ Sulfur Cleanup: Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.05	U
319-85-7	Beta-BHC	0.05	U
319-86-8	delta-BHC	0.05	U
58-89-9	gamma-BHC (Lindane)	0.93	
76-44-8	Heptachlor	0.62	
309-00-2	Aldrin	0.60	
1024-57-3	Heptachlor Epoxide	0.05	U
959-98-8	Endosulfan I	0.05	U
60-57-1	Dieldrin	1.6	
72-55-9	4,4'-DDE	0.11	U
72-20-8	Endrin	2.0	E
33213-65-9	Endosulfan II	0.11	U
72-54-8	4,4'-DDD	0.11	U
1031-07-8	Endosulfan Sulfate	0.11	U
50-29-3	4,4'-DDT	2.0	
72-43-5	Methoxychlor	0.54	U
53494-70-5	Endrin Ketone	0.11	U
7421-93-4	Endrin Aldehyde	0.11	U
5103-71-9	alpha-Chlordane	0.05	U
5103-74-2	gamma-Chlordane	0.05	U
8001-35-2	Toxaphene	5.4	U
12674-11-2	Aroclor-1016	1.1	U
11104-28-2	Aroclor-1221	2.2	U
11141-16-5	Aroclor-1232	1.1	U
53469-21-9	Aroclor-1242	1.1	U
12672-29-6	Aroclor-1248	1.1	U
11097-69-1	Aroclor-1254	1.1	U
11096-82-5	Aroclor-1260	1.1	U

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
FEP50MSD

Lab Name: IEA-NJ Contract: 68D50011

Lab Code: IEANJ Case No.: 25210 SAS No.: _____ SDG No.: FEP50

Matrix: (soil/water): WATER Lab Sample ID: 65790003MSD

Sample wt/vol: 1000 (g/ml) ml Lab File ID: D4BCLP99B_012

Moisture: _____ decanted: __ Date Received: 12/11/96

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 12/13/96

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 12/19/96

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ____ Sulfur Cleanup: Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.05	U
319-85-7	Beta-BHC	0.05	U
319-86-8	delta-BHC	0.05	U
58-89-9	gamma-BHC (Lindane)	0.76	
76-44-8	Heptachlor	0.55	
309-00-2	Aldrin	0.54	
1024-57-3	Heptachlor Epoxide	0.05	U
959-98-8	Endosulfan I	0.05	U
60-57-1	Dieldrin	1.3	
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	1.6	
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan Sulfate	0.10	U
50-29-3	4,4'-DDT	1.6	
72-43-5	Methoxychlor	0.50	U
53494-70-5	Endrin Ketone	0.10	U
7421-93-4	Endrin Aldehyde	0.10	U
5103-71-9	alpha-Chlordane	0.05	U
5103-74-2	gamma-Chlordane	0.05	U
8001-35-2	Toxaphene	5.0	U
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	2.0	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

FEQ01

Lab Name: IEA-NJ Contract: 68D50011

Lab Code: IEANJ Case No.: 25210 SAS No.: _____ SDG No.: FEQ01

Matrix: (soil/water) Soil Lab Sample ID: 65793001

Sample wt/vol: 5 (g/mL) g Lab File ID: A4671

Level: (low/med) LOW Date Received: 12/11/96

% Moisture: not dec. 34 Date Analyzed: 12/18/96

GC Column: RTX-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS: (ug/L or ug/Kg) ug/kg

CAS NO.	COMPOUND		Q
74-87-3	Chloromethane	15	U
74-83-9	Bromomethane	15	U
75-01-4	Vinyl Chloride	15	U
75-00-3	Chloroethane	15	U
75-09-2	Methylene Chloride	9	J
67-64-1	Acetone	10	JB
75-15-0	Carbon Disulfide	15	U
75-35-4	1,1-Dichloroethene	15	U
75-34-3	1,1-Dichloroethane	15	U
540-59-0	1,2-Dichloroethene(total)	15	U
67-66-3	Chloroform	15	U
107-06-2	1,2-Dichloroethane	15	U
78-93-3	2-Butanone	15	U
71-55-6	1,1,1-Trichloroethane	15	U
56-23-5	Carbon Tetrachloride	15	U
75-27-4	Bromodichloromethane	15	U
78-87-5	1,2-Dichloropropane	15	U
10061-01-5	cis-1,3-Dichloropropene	15	U
79-01-6	Trichloroethene	15	U
124-48-1	Dibromochloromethane	15	U
79-00-5	1,1,2-Trichloroethane	15	U
71-43-2	Benzene	15	U
10061-02-6	Trans-1,3-Dichloropropene	15	U
75-25-2	Bromoform	15	U
108-10-1	4-Methyl-2-Pentanone	15	U
591-78-6	2-Hexanone	15	U
127-18-4	Tetrachloroethene	15	U
108-88-3	Toluene	15	U
79-34-5	1,1,2,2-Tetrachloroethane	15	U
108-90-7	Chlorobenzene	15	U
100-41-4	Ethylbenzene	15	U
100-42-5	Styrene	15	U
1330-20-7	Total Xylenes	15	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

FEQ01

Lab Name: IEA-NJ Contract: 68D50011

Lab Code: IEANJ Case No.: 25210 SAS No.: _____ SDG No.: FEQ01

Matrix: (soil/water) Soil Lab Sample ID: 65793001

Sample wt/vol: 5 (g/mL) g Lab File ID: A4671

Level: (low/med) LOW Date Received: 12/11/96

% Moisture: not dec. 34 Date Analyzed: 12/18/96

GC Column: RTX-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Number TICs Found: 0

CONCENTRATION UNITS: (ug/L or ug/Kg) ug/kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
01.				
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1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

FEQ02

Lab Name: IEA-NJ Contract: 68D50011

Lab Code: IEANJ Case No.: 25210 SAS No.: _____ SDG No.: FEQ01

Matrix: (soil/water) Soil Lab Sample ID: 65793002

Sample wt/vol: 5 (g/mL) g Lab File ID: A4672

Level: (low/med) LOW Date Received: 12/11/96

% Moisture: not dec. 37 Date Analyzed: 12/18/96

GC Column: RTX-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS: (ug/L or ug/Kg) ug/kg

CAS NO.	COMPOUND		Q
74-87-3	Chloromethane	16	U
74-83-9	Bromomethane	16	U
75-01-4	Vinyl Chloride	16	U
75-00-3	Chloroethane	16	U
75-09-2	Methylene Chloride	15	J
67-64-1	Acetone	10	JB
75-15-0	Carbon Disulfide	16	U
75-35-4	1,1-Dichloroethene	16	U
75-34-3	1,1-Dichloroethane	16	U
540-59-0	1,2-Dichloroethene(total)	16	U
67-66-3	Chloroform	16	U
107-06-2	1,2-Dichloroethane	16	U
78-93-3	2-Butanone	16	U
71-55-6	1,1,1-Trichloroethane	16	U
56-23-5	Carbon Tetrachloride	16	U
75-27-4	Bromodichloromethane	16	U
78-87-5	1,2-Dichloropropane	16	U
10061-01-5	cis-1,3-Dichloropropene	16	U
79-01-6	Trichloroethene	16	U
124-48-1	Dibromochloromethane	16	U
79-00-5	1,1,2-Trichloroethane	16	U
71-43-2	Benzene	16	U
10061-02-6	Trans-1,3-Dichloropropene	16	U
75-25-2	Bromoform	16	U
108-10-1	4-Methyl-2-Pentanone	16	U
591-78-6	2-Hexanone	16	U
127-18-4	Tetrachloroethene	16	U
108-88-3	Toluene	16	U
79-34-5	1,1,2,2-Tetrachloroethane	16	U
108-90-7	Chlorobenzene	16	U
100-41-4	Ethylbenzene	16	U
100-42-5	Styrene	16	U
1330-20-7	Total Xylenes	16	U

1E

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

FEQ02

Lab Name: IEA-NJ Contract: 68D50011

Lab Code: IEANJ Case No.: 25210 SAS No.: _____ SDG No.: FEQ01

Matrix: (soil/water) Soil Lab Sample ID: 65793002

Sample wt/vol: 5 (g/mL) g Lab File ID: A4672

Level: (low/med) LOW Date Received: 12/11/96

% Moisture: not dec. 37 Date Analyzed: 12/18/96

GC Column: RTX-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Number TICs Found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
01.				
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1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

FEQ03

Lab Name: IEA-NJ Contract: 68D50011

Lab Code: IEANJ Case No.: 25210 SAS No.: _____ SDG No.: FEQ01

Matrix: (soil/water) Soil Lab Sample ID: 65793003

Sample wt/vol: 5 (g/mL) g Lab File ID: A4673

Level: (low/med) LOW Date Received: 12/11/96

% Moisture: not dec. 30 Date Analyzed: 12/18/96

GC Column: RTX-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS: (ug/L or ug/Kg) ug/kg

CAS NO.	COMPOUND		Q
74-87-3	Chloromethane	14	U
74-83-9	Bromomethane	14	U
75-01-4	Vinyl Chloride	14	U
75-00-3	Chloroethane	14	U
75-09-2	Methylene Chloride	12	J
67-64-1	Acetone	9	JB
75-15-0	Carbon Disulfide	14	U
75-35-4	1,1-Dichloroethene	14	U
75-34-3	1,1-Dichloroethane	14	U
540-59-0	1,2-Dichloroethene(total)	14	U
67-66-3	Chloroform	14	U
107-06-2	1,2-Dichloroethane	14	U
78-93-3	2-Butanone	14	U
71-55-6	1,1,1-Trichloroethane	14	U
56-23-5	Carbon Tetrachloride	14	U
75-27-4	Bromodichloromethane	14	U
78-87-5	1,2-Dichloropropane	14	U
10061-01-5	cis-1,3-Dichloropropene	14	U
79-01-6	Trichloroethene	14	U
124-48-1	Dibromochloromethane	14	U
79-00-5	1,1,2-Trichloroethane	14	U
71-43-2	Benzene	14	U
10061-02-6	Trans-1,3-Dichloropropene	14	U
75-25-2	Bromoform	14	U
108-10-1	4-Methyl-2-Pentanone	14	U
591-78-6	2-Hexanone	14	U
127-18-4	Tetrachloroethene	14	U
108-88-3	Toluene	14	U
79-34-5	1,1,2,2-Tetrachloroethane	14	U
108-90-7	Chlorobenzene	14	U
100-41-4	Ethylbenzene	14	U
100-42-5	Styrene	14	U
1330-20-7	Total Xylenes	14	U

1E

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

FEQ03

Lab Name: IEA-NJ Contract: 68D50011

Lab Code: IEANJ Case No.: 25210 SAS No.: _____ SDG No.: FEQ01

Matrix: (soil/water) Soil Lab Sample ID: 65793003

Sample wt/vol: 5 (g/mL) g Lab File ID: A4673

Level: (low/med) LOW Date Received: 12/11/96

% Moisture: not dec. 30 Date Analyzed: 12/18/96

GC Column: RTX-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Number TICs Found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
01.				
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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

FEQ04

Lab Name: IEA-NJ Contract: 68D50011

Lab Code: IEANJ Case No.: 25210 SAS No.: _____ SDG No.: FEQ01

Matrix: (soil/water) Soil Lab Sample ID: 65793004

Sample wt/vol: 5 (g/mL) g Lab File ID: A4674

Level: (low/med) LOW Date Received: 12/11/96

% Moisture: not dec. 40 Date Analyzed: 12/18/96

GC Column: RTX-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS: (ug/L or ug/Kg) ug/kg

CAS NO.	COMPOUND		Q
74-87-3	Chloromethane	17	U
74-83-9	Bromomethane	17	U
75-01-4	Vinyl Chloride	17	U
75-00-3	Chloroethane	17	U
75-09-2	Methylene Chloride	12	J
67-64-1	Acetone	10	JB
75-15-0	Carbon Disulfide	17	U
75-35-4	1,1-Dichloroethene	17	U
75-34-3	1,1-Dichloroethane	17	U
540-59-0	1,2-Dichloroethene(total)	17	U
67-66-3	Chloroform	17	U
107-06-2	1,2-Dichloroethane	17	U
78-93-3	2-Butanone	17	U
71-55-6	1,1,1-Trichloroethane	17	U
56-23-5	Carbon Tetrachloride	17	U
75-27-4	Bromodichloromethane	17	U
78-87-5	1,2-Dichloropropane	17	U
10061-01-5	cis-1,3-Dichloropropene	17	U
79-01-6	Trichloroethene	17	U
124-48-1	Dibromochloromethane	17	U
79-00-5	1,1,2-Trichloroethane	17	U
71-43-2	Benzene	17	U
10061-02-6	Trans-1,3-Dichloropropene	17	U
75-25-2	Bromoform	17	U
108-10-1	4-Methyl-2-Pentanone	17	U
591-78-6	2-Hexanone	17	U
127-18-4	Tetrachloroethene	17	U
108-88-3	Toluene	17	U
79-34-5	1,1,2,2-Tetrachloroethane	17	U
108-90-7	Chlorobenzene	17	U
100-41-4	Ethylbenzene	17	U
100-42-5	Styrene	17	U
1330-20-7	Total Xylenes	17	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

FEQ04

Lab Name: IEA-NJ Contract: 68D50011

Lab Code: IEANJ Case No.: 25210 SAS No.: _____ SDG No.: FEQ01

Matrix: (soil/water) Soil Lab Sample ID: 65793004

Sample wt/vol: 5 (g/mL) g Lab File ID: A4674

Level: (low/med) LOW Date Received: 12/11/96

% Moisture: not dec. 40 Date Analyzed: 12/18/96

GC Column: RTX-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Number TICs Found: 0

CONCENTRATION UNITS: (ug/L or ug/Kg) ug/kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
01.				
02.				
03.				
04.				
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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

FEQ05

Lab Name: IEA-NJ Contract: 68D50011

Lab Code: IEANJ Case No.: 25210 SAS No.: _____ SDG No.: FEQ01

Matrix: (soil/water) Soil Lab Sample ID: 65793005

Sample wt/vol: 5 (g/mL) g Lab File ID: A4675

Level: (low/med) LOW Date Received: 12/11/96

% Moisture: not dec. 29 Date Analyzed: 12/18/96

GC Column: RTX-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS: (ug/L or ug/Kg) ug/kg

CAS NO.	COMPOUND		Q
74-87-3	Chloromethane	14	U
74-83-9	Bromomethane	14	U
75-01-4	Vinyl Chloride	14	U
75-00-3	Chloroethane	14	U
75-09-2	Methylene Chloride	7	J
67-64-1	Acetone	8	JB
75-15-0	Carbon Disulfide	14	U
75-35-4	1,1-Dichloroethene	14	U
75-34-3	1,1-Dichloroethane	14	U
540-59-0	1,2-Dichloroethene(total)	14	U
67-66-3	Chloroform	14	U
107-06-2	1,2-Dichloroethane	14	U
78-93-3	2-Butanone	14	U
71-55-6	1,1,1-Trichloroethane	14	U
56-23-5	Carbon Tetrachloride	14	U
75-27-4	Bromodichloromethane	14	U
78-87-5	1,2-Dichloropropane	14	U
10061-01-5	cis-1,3-Dichloropropene	14	U
79-01-6	Trichloroethene	14	U
124-48-1	Dibromochloromethane	14	U
79-00-5	1,1,2-Trichloroethane	14	U
71-43-2	Benzene	14	U
10061-02-6	Trans-1,3-Dichloropropene	14	U
75-25-2	Bromoform	14	U
108-10-1	4-Methyl-2-Pentanone	14	U
591-78-6	2-Hexanone	14	U
127-18-4	Tetrachloroethene	14	U
108-88-3	Toluene	14	U
79-34-5	1,1,2,2-Tetrachloroethane	14	U
108-90-7	Chlorobenzene	14	U
100-41-4	Ethylbenzene	14	U
100-42-5	Styrene	14	U
1330-20-7	Total Xylenes	14	U

1E

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

FEQ05

Lab Name: IEA-NJ Contract: 68D50011

Lab Code: IEANJ Case No.: 25210 SAS No.: _____ SDG No.: FEQ01

Matrix: (soil/water) Soil Lab Sample ID: 65793005

Sample wt/vol: 5 (g/mL) g Lab File ID: A4675

Level: (low/med) LOW Date Received: 12/11/96

% Moisture: not dec. 29 Date Analyzed: 12/18/96

GC Column: RTX-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Number TICs Found: 0

CONCENTRATION UNITS: (ug/L or ug/Kg) ug/kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
01.				
02.				
03.				
04.				
05.				
06.				
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08.				
09.				
10.				
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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

FEQ06

Lab Name: IEA-NJ Contract: 68D50011

Lab Code: IEANJ Case No.: 25210 SAS No.: _____ SDG No.: FEQ01

Matrix: (soil/water) Soil Lab Sample ID: 65793008

Sample wt/vol: 5 (g/mL) g Lab File ID: A4678

Level: (low/med) LOW Date Received: 12/11/96

% Moisture: not dec. 32 Date Analyzed: 12/18/96

GC Column: RTX-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS: (ug/L or ug/Kg) ug/kg

CAS NO.	COMPOUND		Q
74-87-3	Chloromethane	15	U
74-83-9	Bromomethane	15	U
75-01-4	Vinyl Chloride	15	U
75-00-3	Chloroethane	15	U
75-09-2	Methylene Chloride	8	J
67-64-1	Acetone	15	U
75-15-0	Carbon Disulfide	15	U
75-35-4	1,1-Dichloroethene	15	U
75-34-3	1,1-Dichloroethane	15	U
540-59-0	1,2-Dichloroethene(total)	15	U
67-66-3	Chloroform	15	U
107-06-2	1,2-Dichloroethane	15	U
78-93-3	2-Butanone	15	U
71-55-6	1,1,1-Trichloroethane	15	U
56-23-5	Carbon Tetrachloride	15	U
75-27-4	Bromodichloromethane	15	U
78-87-5	1,2-Dichloropropane	15	U
10061-01-5	cis-1,3-Dichloropropene	15	U
79-01-6	Trichloroethene	15	U
124-48-1	Dibromochloromethane	15	U
79-00-5	1,1,2-Trichloroethane	15	U
71-43-2	Benzene	15	U
10061-02-6	Trans-1,3-Dichloropropene	15	U
75-25-2	Bromoform	15	U
108-10-1	4-Methyl-2-Pentanone	15	U
591-78-6	2-Hexanone	15	U
127-18-4	Tetrachloroethene	15	U
108-88-3	Toluene	15	U
79-34-5	1,1,2,2-Tetrachloroethane	15	U
108-90-7	Chlorobenzene	15	U
100-41-4	Ethylbenzene	15	U
100-42-5	Styrene	15	U
1330-20-7	Total Xylenes	15	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

FEQ06

Lab Name: IEA-NJ Contract: 68D50011

Lab Code: IEANJ Case No.: 25210 SAS No.: _____ SDG No.: FEQ01

Matrix: (soil/water) Soil Lab Sample ID: 65793008

Sample wt/vol: 5 (g/mL) g Lab File ID: A4678

Level: (low/med) LOW Date Received: 12/11/96

% Moisture: not dec. 32 Date Analyzed: 12/18/96

GC Column: RTX-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Number TICs Found: 0

CONCENTRATION UNITS: (ug/L or ug/Kg) ug/kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
01.				
02.				
03.				
04.				
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1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

000102

VBLKA1

Lab Name: IEA-NJ Contract: 68D50011

Lab Code: IEANJ Case No.: 25210 SAS No.: _____ SDG No.: FEQ01

Matrix: (soil/water) Soil Lab Sample ID: VBLKA1

Sample wt/vol: 5 (g/mL) g Lab File ID: A4662

Level: (low/med) LOW Date Received: _____

% Moisture: not dec. 0 Date Analyzed: 12/18/96

GC Column: RTX-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS: (ug/L or ug/Kg) ug/kg

CAS NO.	COMPOUND		Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	10	U
67-64-1	Acetone	4	J
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene(total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	Trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Total Xylenes	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.: VBLKA1

Lab Name: IEA-NJ Contract: 68D50011

Lab Code: IEANJ Case No.: 25210 SAS No.: _____ SDG No.: FEQ01

Matrix: (soil/water) Soil Lab Sample ID: VBLKA1

Sample wt/vol: 5 (g/mL) g Lab File ID: A4662

Level: (low/med) LOW Date Received: _____

% Moisture: not dec. 0 Date Analyzed: 12/18/96

GC Column: RTX-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Number TICs Found: 0

CONCENTRATION UNITS: (ug/L or ug/Kg) ug/kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
01.				
02.				
03.				
04.				
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06.				
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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLKA2

Lab Name: IEA-NJ Contract: 68D50011

Lab Code: IEANJ Case No.: 25210 SAS No.: _____ SDG No.: FEQ01

Matrix: (soil/water) Water Lab Sample ID: VBLKA2

Sample wt/vol: 5 (g/mL) ml Lab File ID: A4683

Level: (low/med) LOW Date Received: _____

% Moisture: not dec. _____ Date Analyzed: 12/18/96

GC Column: RTX-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS: (ug/L or ug/Kg) ug/l

CAS NO.	COMPOUND		Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	3	J
67-64-1	Acetone	4	J
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene(total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	Trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Total Xylenes	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

VBLKA2

Lab Name: IEA-NJ Contract: 68D50011

Lab Code: IEANJ Case No.: 25210 SAS No.: _____ SDG No.: FEQ01

Matrix: (soil/water) Water Lab Sample ID: VBLKA2

Sample wt/vol: 5 (g/mL) ml Lab File ID: A4683

Level: (low/med) LOW Date Received: _____

% Moisture: not dec. _____ Date Analyzed: 12/18/96

GC Column: RTX-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Number TICs Found: 0

CONCENTRATION UNITS: (ug/L or ug/Kg) ug/l

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
01.				
02.				
03.				
04.				
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1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VHBLKA1

Lab Name: IEA-NJ Contract: 68D50011

Lab Code: IEANJ Case No.: 25210 SAS No.: _____ SDG No.: FEQ01

Matrix: (soil/water) Water Lab Sample ID: VHBLKA1

Sample wt/vol: 5 (g/mL) ml Lab File ID: A4695

Level: (low/med) LOW Date Received: _____

% Moisture: not dec. _____ Date Analyzed: 12/18/96

GC Column: RTX-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS: (ug/L or ug/Kg) ug/l

CAS NO.	COMPOUND		Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	10	U
67-64-1	Acetone	4	JB
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene(total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	Trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Total Xylenes	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

VHBLKA1

Lab Name: IEA-NJ Contract: 68D50011

Lab Code: IEANJ Case No.: 25210 SAS No.: _____ SDG No.: FEQ01

Matrix: (soil/water) Water Lab Sample ID: VHBLKA1

Sample wt/vol: 5 (g/mL) ml Lab File ID: A4695

Level: (low/med) LOW Date Received: _____

% Moisture: not dec. _____ Date Analyzed: 12/18/96

GC Column: RTX-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Number TICs Found: 0

CONCENTRATION UNITS: (ug/L or ug/Kg) ug/l

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
01.				
02.				
03.				
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1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

FEQ05MS

Lab Name: IEA-NJ Contract: 68D50011

Lab Code: IEANJ Case No.: 25210 SAS No.: _____ SDG No.: FEQ01

Matrix: (soil/water) Soil Lab Sample ID: 65793006MS

Sample wt/vol: 5 (g/mL) g Lab File ID: A4676

Level: (low/med) LOW Date Received: 12/11/96

% Moisture: not dec. 29 Date Analyzed: 12/18/96

GC Column: RTX-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS: (ug/L or ug/Kg) ug/kg

CAS NO.	COMPOUND		Q
74-87-3	Chloromethane	14	U
74-83-9	Bromomethane	14	U
75-01-4	Vinyl Chloride	14	U
75-00-3	Chloroethane	14	U
75-09-2	Methylene Chloride	8	J
67-64-1	Acetone	8	JB
75-15-0	Carbon Disulfide	14	U
75-35-4	1,1-Dichloroethene	76	
75-34-3	1,1-Dichloroethane	14	U
540-59-0	1,2-Dichloroethene(total)	14	U
67-66-3	Chloroform	14	U
107-06-2	1,2-Dichloroethane	14	U
78-93-3	2-Butanone	14	U
71-55-6	1,1,1-Trichloroethane	14	U
56-23-5	Carbon Tetrachloride	14	U
75-27-4	Bromodichloromethane	14	U
78-87-5	1,2-Dichloropropane	14	U
10061-01-5	cis-1,3-Dichloropropene	14	U
79-01-6	Trichloroethene	74	
124-48-1	Dibromochloromethane	14	U
79-00-5	1,1,2-Trichloroethane	14	U
71-43-2	Benzene	81	
10061-02-6	Trans-1,3-Dichloropropene	14	U
75-25-2	Bromoform	14	U
108-10-1	4-Methyl-2-Pentanone	14	U
591-78-6	2-Hexanone	14	U
127-18-4	Tetrachloroethene	14	U
108-88-3	Toluene	79	
79-34-5	1,1,2,2-Tetrachloroethane	14	U
108-90-7	Chlorobenzene	82	
100-41-4	Ethylbenzene	14	U
100-42-5	Styrene	14	U
1330-20-7	Total Xylenes	14	U

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

FEQ05MSD

Lab Name: IEA-NJ Contract: 68D50011

Lab Code: IEANJ Case No.: 25210 SAS No.: _____ SDG No.: FEQ01

Matrix: (soil/water) Soil Lab Sample ID: 65793007MSD

Sample wt/vol: 5 (g/mL) g Lab File ID: A4677

Level: (low/med) LOW Date Received: 12/11/96

% Moisture: not dec. 29 Date Analyzed: 12/18/96

GC Column: RTX-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS: (ug/L or ug/Kg) ug/kg

CAS NO.	COMPOUND		Q
74-87-3	Chloromethane	14	U
74-83-9	Bromomethane	14	U
75-01-4	Vinyl Chloride	14	U
75-00-3	Chloroethane	14	U
75-09-2	Methylene Chloride	7	J
67-64-1	Acetone	8	JB
75-15-0	Carbon Disulfide	14	U
75-35-4	1,1-Dichloroethene	77	
75-34-3	1,1-Dichloroethane	14	U
540-59-0	1,2-Dichloroethene(total)	14	U
67-66-3	Chloroform	14	U
107-06-2	1,2-Dichloroethane	14	U
78-93-3	2-Butanone	14	U
71-55-6	1,1,1-Trichloroethane	14	U
56-23-5	Carbon Tetrachloride	14	U
75-27-4	Bromodichloromethane	14	U
78-87-5	1,2-Dichloropropane	14	U
10061-01-5	cis-1,3-Dichloropropene	14	U
79-01-6	Trichloroethene	74	
124-48-1	Dibromochloromethane	14	U
79-00-5	1,1,2-Trichloroethane	14	U
71-43-2	Benzene	78	
10061-02-6	Trans-1,3-Dichloropropene	14	U
75-25-2	Bromoform	14	U
108-10-1	4-Methyl-2-Pentanone	14	U
591-78-6	2-Hexanone	14	U
127-18-4	Tetrachloroethene	14	U
108-88-3	Toluene	81	
79-34-5	1,1,2,2-Tetrachloroethane	14	U
108-90-7	Chlorobenzene	85	
100-41-4	Ethylbenzene	14	U
100-42-5	Styrene	14	U
1330-20-7	Total Xylenes	14	U

1B

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

FEQ01

Lab Name: IEA-NJ Contract: 68D50011

Lab Code: IEANJ Case No.: 25210 SAS No.: _____ SDG No.: FEQ01

Matrix: (soil/water) Soil Lab Sample ID: 65793001

Sample wt/vol: 30 (g/mL) g Lab File ID: D0682

Level: (low/med) LOW Date Received: 12/11/96

% Moisture: 34 decanted: (Y/N) N Date Extracted: 12/13/96

Concentrated Extract Volume: 500 (uL) Date Analyzed: 12/18/96

Injection Volume: 2 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.45

CONCENTRATION UNITS: (ug/L or ug/Kg) ug/kg

CAS NO.	COMPOUND		Q
108-95-2	Phenol	500	U
111-44-4	Bis(2-Chloroethyl)Ether	500	U
95-57-8	2-Chlorophenol	500	U
541-73-1	1,3-Dichlorobenzene	500	U
106-46-7	1,4-Dichlorobenzene	500	U
95-50-1	1,2-Dichlorobenzene	500	U
95-48-7	2-Methylphenol	500	U
108-60-1	2,2'-Oxybis(1-Chloropropane)	500	U
106-44-5	4-Methylphenol	500	U
621-64-7	N-Nitrosodi-N-Propylamine	500	U
67-72-1	Hexachloroethane	500	U
98-95-3	Nitrobenzene	500	U
78-59-1	Isophorone	500	U
88-75-5	2-Nitrophenol	500	U
105-67-9	2,4-Dimethylphenol	500	U
111-91-1	Bis(2-Chloroethoxy) Methane	500	U
120-83-2	2,4-Dichlorophenol	500	U
120-82-1	1,2,4-Trichlorobenzene	500	U
91-20-3	Naphthalene	500	U
106-47-8	4-Chloroaniline	500	U
87-68-3	Hexachlorobutadiene	500	U
59-50-7	4-Chloro-3-Methylphenol	500	U
91-57-6	2-Methylnaphthalene	500	U
77-47-4	Hexachlorocyclopentadiene	500	U
88-06-2	2,4,6-Trichlorophenol	500	U
95-95-4	2,4,5-Trichlorophenol	1200	U
91-58-7	2-Chloronaphthalene	500	U
88-74-4	2-Nitroaniline	1200	U
131-11-3	Dimethylphthalate	500	U
208-96-8	Acenaphthylene	500	U
606-20-2	2,6-Dinitrotoluene	500	U
99-09-2	3-Nitroaniline	1200	U
83-32-9	Acenaphthene	500	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

FEQ01

Lab Name: IEA-NJ Contract: 68D50011

Lab Code: IEANJ Case No.: 25210 SAS No.: _____ SDG No.: FEQ01

Matrix: (soil/water) Soil Lab Sample ID: 65793001

Sample wt/vol: 30 (g/mL) g Lab File ID: D0682

Level: (low/med) LOW Date Received: 12/11/96

% Moisture: 34 decanted: (Y/N) N Date Extracted: 12/13/96

Concentrated Extract Volume: 500 (uL) Date Analyzed: 12/18/96

Injection Volume: 2 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.45

CONCENTRATION UNITS: (ug/L or ug/Kg) ug/kg

CAS NO.	COMPOUND		Q
51-28-5	2,4-Dinitrophenol	1200	U
100-02-7	4-Nitrophenol	1200	U
132-64-9	Dibenzofuran	500	U
121-14-2	2,4-Dinitrotoluene	500	U
84-66-2	Diethylphthalate	500	U
7005-72-3	4-Chlorophenyl-Phenyl Ether	500	U
86-73-7	Fluorene	500	U
100-01-6	4-Nitroaniline	1200	U
534-52-1	4,6-Dinitro-2-Methylphenol	1200	U
86-30-6	N-Nitrosodiphenylamine (1)	500	U
101-55-3	4-Bromophenyl-Phenylether	500	U
118-74-1	Hexachlorobenzene	500	U
87-86-5	Pentachlorophenol	1200	U
85-01-8	Phenanthrene	75	J
120-12-7	Anthracene	500	U
86-74-8	Carbazole	500	U
84-74-2	Di-N-Butylphthalate	500	U
206-44-0	Fluoranthene	230	J
129-00-0	Pyrene	190	J
85-68-7	Butylbenzylphthalate	500	U
91-94-1	3,3'-Dichlorobenzidine	500	U
56-55-3	Benzo(A)Anthracene	87	J
218-01-9	Chrysene	120	J
117-81-7	Bis(2-Ethylhexyl)Phthalate	67	J
117-84-0	Di-N-Octylphthalate	500	U
205-99-2	Benzo(B)Fluoranthene	500	U
207-08-9	Benzo(K)Fluoranthene	500	U
50-32-8	Benzo(A)Pyrene	98	J
193-39-5	Indeno(1,2,3-Cd)Pyrene	500	U
53-70-3	Dibenz(A,H)Anthracene	500	U
191-24-2	Benzo(G,H,I)Perylene	500	U

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EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

FEQ01

Lab Name: IEA-NJ Contract: 68D50011

Lab Code: IEANJ Case No.: 25210 SAS No.: _____ SDG No.: FEQ01

Matrix: (soil/water) Soil Lab Sample ID: 65793001

Sample wt/vol: 30 (g/mL) g Lab File ID: D0682

Level: (low/med) LOW Date Received: 12/11/96

% Moisture: 34 decanted: (Y/N) N Date Extracted: 12/13/96

Concentrated Extract Volume: 500 (uL) Date Analyzed: 12/18/96

Injection Volume: 2 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.45

Number TICs Found: 14

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
01.	Aldol Condensation Product	5.55	5500	J A B
02.	Unknown Acid	22.23	800	J
03.	Unknown Aromatic	35.73	640	J
04.	Unknown Acid	24.06	370	J
05.	Unknown	31.08	220	J B
06.	Unknown PAH	30.25	210	J
07.	Unknown	33.19	160	J
08.	Unknown Alcohol	27.26	150	J
09.	Unknown Alcohol	35.05	150	J
10.	Unknown	33.75	150	J
11.	Unknown	34.37	140	J
12.	Unknown Ketone	8.02	120	J
13.	Unknown	4.55	120	J B
14.	Unknown	36.96	120	J
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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.: FEQ02

Lab Name: IEA-NJ Contract: 68D50011

Lab Code: IEANJ Case No.: 25210 SAS No.: _____ SDG No.: FEQ01

Matrix: (soil/water) Soil Lab Sample ID: 65793002

Sample wt/vol: 30 (g/mL) g Lab File ID: D0683

Level: (low/med) LOW Date Received: 12/11/96

% Moisture: 37 decanted: (Y/N) N Date Extracted: 12/13/96

Concentrated Extract Volume: 500 (uL) Date Analyzed: 12/18/96

Injection Volume: 2 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.21

CONCENTRATION UNITS: (ug/L or ug/Kg) ug/kg

CAS NO.	COMPOUND		Q
108-95-2	Phenol	520	U
111-44-4	Bis(2-Chloroethyl)Ether	520	U
95-57-8	2-Chlorophenol	520	U
541-73-1	1,3-Dichlorobenzene	520	U
106-46-7	1,4-Dichlorobenzene	520	U
95-50-1	1,2-Dichlorobenzene	520	U
95-48-7	2-Methylphenol	520	U
108-60-1	2,2'-Oxybis(1-Chloropropane)	520	U
106-44-5	4-Methylphenol	520	U
621-64-7	N-Nitrosodi-N-Propylamine	520	U
67-72-1	Hexachloroethane	520	U
98-95-3	Nitrobenzene	520	U
78-59-1	Isophorone	520	U
88-75-5	2-Nitrophenol	520	U
105-67-9	2,4-Dimethylphenol	520	U
111-91-1	Bis(2-Chloroethoxy) Methane	520	U
120-83-2	2,4-Dichlorophenol	520	U
120-82-1	1,2,4-Trichlorobenzene	520	U
91-20-3	Naphthalene	520	U
106-47-8	4-Chloroaniline	520	U
87-68-3	Hexachlorobutadiene	520	U
59-50-7	4-Chloro-3-Methylphenol	520	U
91-57-6	2-Methylnaphthalene	520	U
77-47-4	Hexachlorocyclopentadiene	520	U
88-06-2	2,4,6-Trichlorophenol	520	U
95-95-4	2,4,5-Trichlorophenol	1300	U
91-58-7	2-Chloronaphthalene	520	U
88-74-4	2-Nitroaniline	1300	U
131-11-3	Dimethylphthalate	520	U
208-96-8	Acenaphthylene	520	U
606-20-2	2,6-Dinitrotoluene	520	U
99-09-2	3-Nitroaniline	1300	U
83-32-9	Acenaphthene	520	U

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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

FEQ02

Lab Name: IEA-NJ Contract: 68D50011

Lab Code: IEANJ Case No.: 25210 SAS No.: _____ SDG No.: FEQ01

Matrix: (soil/water) Soil Lab Sample ID: 65793002

Sample wt/vol: 30 (g/mL) g Lab File ID: D0683

Level: (low/med) LOW Date Received: 12/11/96

% Moisture: 37 decanted: (Y/N) N Date Extracted: 12/13/96

Concentrated Extract Volume: 500 (uL) Date Analyzed: 12/18/96

Injection Volume: 2 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.21

CONCENTRATION UNITS: (ug/L or ug/Kg) ug/kg

CAS NO.	COMPOUND		Q
51-28-5	2,4-Dinitrophenol	1300	U
100-02-7	4-Nitrophenol	1300	U
132-64-9	Dibenzofuran	520	U
121-14-2	2,4-Dinitrotoluene	520	U
84-66-2	Diethylphthalate	520	U
7005-72-3	4-Chlorophenyl-Phenyl Ether	520	U
86-73-7	Fluorene	520	U
100-01-6	4-Nitroaniline	1300	U
534-52-1	4,6-Dinitro-2-Methylphenol	1300	U
86-30-6	N-Nitrosodiphenylamine (1)	520	U
101-55-3	4-Bromophenyl-Phenylether	520	U
118-74-1	Hexachlorobenzene	520	U
87-86-5	Pentachlorophenol	1300	U
85-01-8	Phenanthrene	520	U
120-12-7	Anthracene	520	U
86-74-8	Carbazole	520	U
84-74-2	Di-N-Butylphthalate	520	U
206-44-0	Fluoranthene	520	U
129-00-0	Pyrene	520	U
85-68-7	Butylbenzylphthalate	520	U
91-94-1	3,3'-Dichlorobenzidine	520	U
56-55-3	Benzo(A)Anthracene	520	U
218-01-9	Chrysene	520	U
117-81-7	Bis(2-Ethylhexyl)Phthalate	520	U
117-84-0	Di-N-Octylphthalate	520	U
205-99-2	Benzo(B)Fluoranthene	520	U
207-08-9	Benzo(K)Fluoranthene	520	U
50-32-8	Benzo(A)Pyrene	520	U
193-39-5	Indeno(1,2,3-Cd)Pyrene	520	U
53-70-3	Dibenz(A,H)Anthracene	520	U
191-24-2	Benzo(G,H,I)Perylene	520	U

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EPA SAMPLE NO.

FEQ02

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: IEA-NJ Contract: 68D50011

Lab Code: IEANJ Case No.: 25210 SAS No.: _____ SDG No.: FEQ01

Matrix: (soil/water) Soil Lab Sample ID: 65793002

Sample wt/vol: 30 (g/mL) g Lab File ID: D0683

Level: (low/med) LOW Date Received: 12/11/96

% Moisture: 37 decanted: (Y/N) N Date Extracted: 12/13/96

Concentrated Extract Volume: 500 (uL) Date Analyzed: 12/18/96

Injection Volume: 2 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.21

Number TICs Found: 8

CONCENTRATION UNITS: (ug/L or ug/Kg) ug/kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
01.	Aldol Condensation Product	5.53	4100	JAB
02.	Unknown Aromatic	35.76	1400	J
03.	Unknown Alcohol	27.27	230	J
04.	Unknown PAH	30.33	160	J
05.	Unknown	33.21	160	J
06.	Unknown Aromatic	34.37	150	J
07.	Unknown PAH	36.19	120	J
08.	Unknown	4.55	110	JB
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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

FEQ03

Lab Name: IEA-NJ Contract: 68D50011

Lab Code: IEANJ Case No.: 25210 SAS No.: _____ SDG No.: FEQ01

Matrix: (soil/water) Soil Lab Sample ID: 65793003

Sample wt/vol: 30 (g/mL) g Lab File ID: G8391

Level: (low/med) LOW Date Received: 12/11/96

% Moisture: 30 decanted: (Y/N) N Date Extracted: 12/13/96

Concentrated Extract Volume: 500 (uL) Date Analyzed: 12/19/96

Injection Volume: 2 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.42

CONCENTRATION UNITS: (ug/L or ug/Kg) ug/kg

CAS NO.	COMPOUND		Q
108-95-2	Phenol	470	U
111-44-4	Bis(2-Chloroethyl)Ether	470	U
95-57-8	2-Chlorophenol	470	U
541-73-1	1,3-Dichlorobenzene	470	U
106-46-7	1,4-Dichlorobenzene	470	U
95-50-1	1,2-Dichlorobenzene	470	U
95-48-7	2-Methylphenol	470	U
108-60-1	2,2'-Oxybis(1-Chloropropane)	470	U
106-44-5	4-Methylphenol	470	U
621-64-7	N-Nitrosodi-N-Propylamine	470	U
67-72-1	Hexachloroethane	470	U
98-95-3	Nitrobenzene	470	U
78-59-1	Isophorone	470	U
88-75-5	2-Nitrophenol	470	U
105-67-9	2,4-Dimethylphenol	470	U
111-91-1	Bis(2-Chloroethoxy) Methane	470	U
120-83-2	2,4-Dichlorophenol	470	U
120-82-1	1,2,4-Trichlorobenzene	470	U
91-20-3	Naphthalene	470	U
106-47-8	4-Chloroaniline	470	U
87-68-3	Hexachlorobutadiene	470	U
59-50-7	4-Chloro-3-Methylphenol	470	U
91-57-6	2-Methylnaphthalene	470	U
77-47-4	Hexachlorocyclopentadiene	470	U
88-06-2	2,4,6-Trichlorophenol	470	U
95-95-4	2,4,5-Trichlorophenol	1200	U
91-58-7	2-Chloronaphthalene	470	U
88-74-4	2-Nitroaniline	1200	U
131-11-3	Dimethylphthalate	470	U
208-96-8	Acenaphthylene	470	U
606-20-2	2,6-Dinitrotoluene	470	U
99-09-2	3-Nitroaniline	1200	U
83-32-9	Acenaphthene	470	U

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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

FEQ03

Lab Name: IEA-NJ Contract: 68D50011

Lab Code: IEANJ Case No.: 25210 SAS No.: _____ SDG No.: FEQ01

Matrix: (soil/water) Soil Lab Sample ID: 65793003

Sample wt/vol: 30 (g/mL) g Lab File ID: G8391

Level: (low/med) LOW Date Received: 12/11/96

% Moisture: 30 decanted: (Y/N) N Date Extracted: 12/13/96

Concentrated Extract Volume: 500 (uL) Date Analyzed: 12/19/96

Injection Volume: 2 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.42

CONCENTRATION UNITS: (ug/L or ug/Kg) ug/kg

CAS NO.	COMPOUND		Q
51-28-5	2,4-Dinitrophenol	1200	U
100-02-7	4-Nitrophenol	1200	U
132-64-9	Dibenzofuran	470	U
121-14-2	2,4-Dinitrotoluene	470	U
84-66-2	Diethylphthalate	470	U
7005-72-3	4-Chlorophenyl-Phenyl Ether	470	U
86-73-7	Fluorene	470	U
100-01-6	4-Nitroaniline	1200	U
534-52-1	4,6-Dinitro-2-Methylphenol	1200	U
86-30-6	N-Nitrosodiphenylamine (1)	470	U
101-55-3	4-Bromophenyl-Phenylether	470	U
118-74-1	Hexachlorobenzene	470	U
87-86-5	Pentachlorophenol	1200	U
85-01-8	Phenanthrene	52	J
120-12-7	Anthracene	470	U
86-74-8	Carbazole	470	U
84-74-2	Di-N-Butylphthalate	470	U
206-44-0	Fluoranthene	95	J
129-00-0	Pyrene	93	J
85-68-7	Butylbenzylphthalate	470	U
91-94-1	3,3'-Dichlorobenzidine	470	U
56-55-3	Benzo(A)Anthracene	470	U
218-01-9	Chrysene	49	J
117-81-7	Bis(2-Ethylhexyl)Phthalate	230	J
117-84-0	Di-N-Octylphthalate	470	U
205-99-2	Benzo(B)Fluoranthene	49	J
207-08-9	Benzo(K)Fluoranthene	60	J
50-32-8	Benzo(A)Pyrene	470	U
193-39-5	Indeno(1,2,3-Cd)Pyrene	470	U
53-70-3	Dibenz(A,H)Anthracene	470	U
191-24-2	Benzo(G,H,I)Perylene	470	U

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EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

FEQ03

Lab Name: IEA-NJ Contract: 68D50011

Lab Code: IEANJ Case No.: 25210 SAS No.: _____ SDG No.: FEQ01

Matrix: (soil/water) Soil Lab Sample ID: 65793003

Sample wt/vol: 30 (g/mL) g Lab File ID: G8391

Level: (low/med) LOW Date Received: 12/11/96

% Moisture: 30 decanted: (Y/N) N Date Extracted: 12/13/96

Concentrated Extract Volume: 500 (uL) Date Analyzed: 12/19/96

Injection Volume: 2 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.42

Number TICs Found: 8

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
01.	Aldol Condensation Product	5.66	5500	JAB
02.	Unknown PAH	34.18	590	J
03.	Unknown PAH	35.54	530	J
04.	Unknown	26.23	380	J
05.	Unknown	27.17	290	J
06.	Unknown	29.33	290	J
07.	Unknown	22.15	270	J
08.	Unknown	26.97	220	J
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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

FEQ04

Lab Name: IEA-NJ Contract: 68D50011

Lab Code: IEANJ Case No.: 25210 SAS No.: _____ SDG No.: FEQ01

Matrix: (soil/water) Soil Lab Sample ID: 65793004

Sample wt/vol: 30 (g/mL) g Lab File ID: G8392

Level: (low/med) LOW Date Received: 12/11/96

% Moisture: 40 decanted: (Y/N) N Date Extracted: 12/13/96

Concentrated Extract Volume: 500 (uL) Date Analyzed: 12/19/96

Injection Volume: 2 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.44

CONCENTRATION UNITS: (ug/L or ug/Kg) ug/kg

CAS NO.	COMPOUND		Q
108-95-2	Phenol	550	U
111-44-4	Bis(2-Chloroethyl)Ether	550	U
95-57-8	2-Chlorophenol	550	U
541-73-1	1,3-Dichlorobenzene	550	U
106-46-7	1,4-Dichlorobenzene	550	U
95-50-1	1,2-Dichlorobenzene	550	U
95-48-7	2-Methylphenol	550	U
108-60-1	2,2'-Oxybis(1-Chloropropane)	550	U
106-44-5	4-Methylphenol	550	U
621-64-7	N-Nitrosodi-N-Propylamine	550	U
67-72-1	Hexachloroethane	550	U
98-95-3	Nitrobenzene	550	U
78-59-1	Isophorone	550	U
88-75-5	2-Nitrophenol	550	U
105-67-9	2,4-Dimethylphenol	550	U
111-91-1	Bis(2-Chloroethoxy) Methane	550	U
120-83-2	2,4-Dichlorophenol	550	U
120-82-1	1,2,4-Trichlorobenzene	550	U
91-20-3	Naphthalene	550	U
106-47-8	4-Chloroaniline	550	U
87-68-3	Hexachlorobutadiene	550	U
59-50-7	4-Chloro-3-Methylphenol	550	U
91-57-6	2-Methylnaphthalene	550	U
77-47-4	Hexachlorocyclopentadiene	550	U
88-06-2	2,4,6-Trichlorophenol	550	U
95-95-4	2,4,5-Trichlorophenol	1400	U
91-58-7	2-Chloronaphthalene	550	U
88-74-4	2-Nitroaniline	1400	U
131-11-3	Dimethylphthalate	550	U
208-96-8	Acenaphthylene	550	U
606-20-2	2,6-Dinitrotoluene	550	U
99-09-2	3-Nitroaniline	1400	U
83-32-9	Acenaphthene	550	U

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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

FEQ04

Lab Name: IEA-NJ Contract: 68D50011

Lab Code: IEANJ Case No.: 25210 SAS No : _____ SDG No.: FEQ01

Matrix: (soil/water) Soil Lab Sample ID: 65793004

Sample wt/vol: 30 (g/mL) g Lab File ID: G8392

Level: (low/med) LOW Date Received: 12/11/96

% Moisture: 40 decanted: (Y/N) N Date Extracted: 12/13/96

Concentrated Extract Volume: 500 (uL) Date Analyzed: 12/19/96

Injection Volume: 2 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.44

CONCENTRATION UNITS: (ug/L or ug/Kg) ug/kg

CAS NO.	COMPOUND		Q
51-28-5	2,4-Dinitrophenol	1400	U
100-02-7	4-Nitrophenol	1400	U
132-64-9	Dibenzofuran	550	U
121-14-2	2,4-Dinitrotoluene	550	U
84-66-2	Diethylphthalate	550	U
7005-72-3	4-Chlorophenyl-Phenyl Ether	550	U
86-73-7	Fluorene	550	U
100-01-6	4-Nitroaniline	1400	U
534-52-1	4,6-Dinitro-2-Methylphenol	1400	U
86-30-6	N-Nitrosodiphenylamine (1)	550	U
101-55-3	4-Bromophenyl-Phenylether	550	U
118-74-1	Hexachlorobenzene	550	U
87-86-5	Pentachlorophenol	1400	U
85-01-8	Phenanthrene	550	U
120-12-7	Anthracene	550	U
86-74-8	Carbazole	550	U
84-74-2	Di-N-Butylphthalate	550	U
206-44-0	Fluoranthene	550	U
129-00-0	Pyrene	550	U
85-68-7	Butylbenzylphthalate	550	U
91-94-1	3,3'-Dichlorobenzidine	550	U
56-55-3	Benzo(A)Anthracene	550	U
218-01-9	Chrysene	550	U
117-81-7	Bis(2-Ethylhexyl)Phthalate	550	U
117-84-0	Di-N-Octylphthalate	550	U
205-99-2	Benzo(B)Fluoranthene	550	U
207-08-9	Benzo(K)Fluoranthene	66	J
50-32-8	Benzo(A)Pyrene	550	U
193-39-5	Indeno(1,2,3-Cd)Pyrene	550	U
53-70-3	Dibenz(A,H)Anthracene	550	U
191-24-2	Benzo(G,H,I)Perylene	550	U

1F

EPA SAMPLE NO.: FEQ04

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: IEA-NJ Contract: 68D50011

Lab Code: IEANJ Case No.: 25210 SAS No.: _____ SDG No.: FEQ01

Matrix: (soil/water) Soil Lab Sample ID: 65793004

Sample wt/vol: 30 (g/mL) g Lab File ID: G8392

Level: (low/med) LOW Date Received: 12/11/96

% Moisture: 40 decanted: (Y/N) N Date Extracted: 12/13/96

Concentrated Extract Volume: 500 (uL) Date Analyzed: 12/19/96

Injection Volume: 2 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.44

Number TICs Found: 13

CONCENTRATION UNITS: (ug/L or ug/Kg) ug/kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
01.	Aldol Condensation Product	5.66	5800	JAB
02.	Unknown PAH	34.15	1100	J
03.	Unknown PAH	37.18	610	J
04.	Unknown PAH	35.51	400	J
05.	Unknown PAH	31.89	290	J
06.	Unknown PAH	30.82	280	J
07.	Unknown Aromatic	31.69	250	J
08.	Unknown Ketone	4.70	210	JB
09.	Unknown PAH	37.38	210	J
10.	Unknown	26.51	170	J
11.	Unknown	24.62	140	J
12.	Unknown	28.65	140	J
13.	Unknown Alkene	27.15	120	J
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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

FEQ05

Lab Name: IEA-NJ Contract: 68D50011

Lab Code: IEANJ Case No.: 25210 SAS No.: _____ SDG No.: FEQ01

Matrix: (soil/water) Soil Lab Sample ID: 65793005

Sample wt/vol: 30 (g/mL) g Lab File ID: D0686

Level: (low/med) LOW Date Received: 12/11/96

% Moisture: 29 decanted: (Y/N) N Date Extracted: 12/13/96

Concentrated Extract Volume: 500 (uL) Date Analyzed: 12/18/96

Injection Volume: 2 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.53

CONCENTRATION UNITS: (ug/L or ug/Kg) ug/kg

CAS NO.	COMPOUND		Q
108-95-2	Phenol	460	U
111-44-4	Bis(2-Chloroethyl)Ether	460	U
95-57-8	2-Chlorophenol	460	U
541-73-1	1,3-Dichlorobenzene	460	U
106-46-7	1,4-Dichlorobenzene	460	U
95-50-1	1,2-Dichlorobenzene	460	U
95-48-7	2-Methylphenol	460	U
108-60-1	2,2'-Oxybis(1-Chloropropane)	460	U
106-44-5	4-Methylphenol	460	U
621-64-7	N-Nitrosodi-N-Propylamine	460	U
67-72-1	Hexachloroethane	460	U
98-95-3	Nitrobenzene	460	U
78-59-1	Isophorone	460	U
88-75-5	2-Nitrophenol	460	U
105-67-9	2,4-Dimethylphenol	460	U
111-91-1	Bis(2-Chloroethoxy) Methane	460	U
120-83-2	2,4-Dichlorophenol	460	U
120-82-1	1,2,4-Trichlorobenzene	460	U
91-20-3	Naphthalene	460	U
106-47-8	4-Chloroaniline	460	U
87-68-3	Hexachlorobutadiene	460	U
59-50-7	4-Chloro-3-Methylphenol	460	U
91-57-6	2-Methylnaphthalene	460	U
77-47-4	Hexachlorocyclopentadiene	460	U
88-06-2	2,4,6-Trichlorophenol	460	U
95-95-4	2,4,5-Trichlorophenol	1200	U
91-58-7	2-Chloronaphthalene	460	U
88-74-4	2-Nitroaniline	1200	U
131-11-3	Dimethylphthalate	460	U
208-96-8	Acenaphthylene	460	U
606-20-2	2,6-Dinitrotoluene	460	U
99-09-2	3-Nitroaniline	1200	U
83-32-9	Acenaphthene	460	U

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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.: 060219

FEQ05

Lab Name: IEA-NJ Contract: 68D50011

Lab Code: IEANJ Case No.: 25210 SAS No.: _____ SDG No.: FEQ01

Matrix: (soil/water) Soil Lab Sample ID: 65793005

Sample wt/vol: 30 (g/mL) g Lab File ID: D0686

Level: (low/med) LOW Date Received: 12/11/96

% Moisture: 29 decanted: (Y/N) N Date Extracted: 12/13/96

Concentrated Extract Volume: 500 (uL) Date Analyzed: 12/18/96

Injection Volume: 2 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.53

CONCENTRATION UNITS: (ug/L or ug/Kg) ug/kg

CAS NO.	COMPOUND		Q
51-28-5	2,4-Dinitrophenol	1200	U
100-02-7	4-Nitrophenol	1200	U
132-64-9	Dibenzofuran	460	U
121-14-2	2,4-Dinitrotoluene	460	U
84-66-2	Diethylphthalate	460	U
7005-72-3	4-Chlorophenyl-Phenyl Ether	460	U
86-73-7	Fluorene	460	U
100-01-6	4-Nitroaniline	1200	U
534-52-1	4,6-Dinitro-2-Methylphenol	1200	U
86-30-6	N-Nitrosodiphenylamine (1)	460	U
101-55-3	4-Bromophenyl-Phenylether	460	U
118-74-1	Hexachlorobenzene	460	U
87-86-5	Pentachlorophenol	1200	U
85-01-8	Phenanthrene	460	U
120-12-7	Anthracene	460	U
86-74-8	Carbazole	460	U
84-74-2	Di-N-Butylphthalate	460	U
206-44-0	Fluoranthene	110	J
129-00-0	Pyrene	89	J
85-68-7	Butylbenzylphthalate	460	U
91-94-1	3,3'-Dichlorobenzidine	460	U
56-55-3	Benzo(A)Anthracene	460	U
218-01-9	Chrysene	68	J
117-81-7	Bis(2-Ethylhexyl)Phthalate	84	J
117-84-0	Di-N-Octylphthalate	460	U
205-99-2	Benzo(B)Fluoranthene	99	J
207-08-9	Benzo(K)Fluoranthene	460	U
50-32-8	Benzo(A)Pyrene	57	J
193-39-5	Indeno(1,2,3-Cd)Pyrene	460	U
53-70-3	Dibenz(A,H)Anthracene	460	U
191-24-2	Benzo(G,H,I)Perylene	460	U

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EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

FEQ05

Lab Name: IEA-NJ Contract: 68D50011

Lab Code: IEANJ Case No.: 25210 SAS No.: _____ SDG No.: FEQ01

Matrix: (soil/water) Soil Lab Sample ID: 65793005

Sample wt/vol: 30 (g/mL) g Lab File ID: D0686

Level: (low/med) LOW Date Received: 12/11/96

% Moisture: 29 decanted: (Y/N) N Date Extracted: 12/13/96

Concentrated Extract Volume: 500 (uL) Date Analyzed: 12/18/96

Injection Volume: 2 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.53

Number TICs Found: 10

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
01.	Aldol Condensation Product	5.52	4100	JAB
02.	Unknown Alkene	35.74	590	J
03.	Unknown	33.20	220	J
04.	Unknown PAH	34.36	180	J
05.	Unknown	31.23	150	J
06.	Unknown Acid	22.19	130	J
07.	Unknown	27.26	120	J
08.	Unknown PAH	36.18	110	J
09.	Unknown	4.55	110	J B
10.	Unknown PAH	31.03	100	J
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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

FEQ06

Lab Name: IEA-NJ Contract: 68D50011

Lab Code: IEANJ Case No.: 25210 SAS No.: _____ SDG No.: FEQ01

Matrix: (soil/water) Soil Lab Sample ID: 65793008

Sample wt/vol: 30 (g/mL) g Lab File ID: G8399

Level: (low/med) LOW Date Received: 12/11/96

% Moisture: 32 decanted: (Y/N) N Date Extracted: 12/13/96

Concentrated Extract Volume: 500 (uL) Date Analyzed: 12/20/96

Injection Volume: 2 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.68

CONCENTRATION UNITS: (ug/L or ug/Kg) ug/kg

CAS NO.	COMPOUND		Q
108-95-2	Phenol	480	U
111-44-4	Bis(2-Chloroethyl)Ether	480	U
95-57-8	2-Chlorophenol	480	U
541-73-1	1,3-Dichlorobenzene	480	U
106-46-7	1,4-Dichlorobenzene	480	U
95-50-1	1,2-Dichlorobenzene	480	U
95-48-7	2-Methylphenol	480	U
108-60-1	2,2'-Oxybis(1-Chloropropane)	480	U
106-44-5	4-Methylphenol	480	U
621-64-7	N-Nitrosodi-N-Propylamine	480	U
67-72-1	Hexachloroethane	480	U
98-95-3	Nitrobenzene	480	U
78-59-1	Isophorone	480	U
88-75-5	2-Nitrophenol	480	U
105-67-9	2,4-Dimethylphenol	480	U
111-91-1	Bis(2-Chloroethoxy) Methane	480	U
120-83-2	2,4-Dichlorophenol	480	U
120-82-1	1,2,4-Trichlorobenzene	480	U
91-20-3	Naphthalene	480	U
106-47-8	4-Chloroaniline	480	U
87-68-3	Hexachlorobutadiene	480	U
59-50-7	4-Chloro-3-Methylphenol	480	U
91-57-6	2-Methylnaphthalene	480	U
77-47-4	Hexachlorocyclopentadiene	480	U
88-06-2	2,4,6-Trichlorophenol	480	U
95-95-4	2,4,5-Trichlorophenol	1200	U
91-58-7	2-Chloronaphthalene	480	U
88-74-4	2-Nitroaniline	1200	U
131-11-3	Dimethylphthalate	480	U
208-96-8	Acenaphthylene	480	U
606-20-2	2,6-Dinitrotoluene	480	U
99-09-2	3-Nitroaniline	1200	U
83-32-9	Acenaphthene	480	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

FEQ06

Lab Name: IEA-NJ Contract: 68D50011

Lab Code: IEANJ Case No.: 25210 SAS No.: _____ SDG No.: FEQ01

Matrix: (soil/water) Soil Lab Sample ID: 65793008

Sample wt/vol: 30 (g/mL) g Lab File ID: G8399

Level: (low/med) LOW Date Received: 12/11/96

% Moisture: 32 decanted: (Y/N) N Date Extracted: 12/13/96

Concentrated Extract Volume: 500 (uL) Date Analyzed: 12/20/96

Injection Volume: 2 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.68

CONCENTRATION UNITS: (ug/L or ug/Kg) ug/kg

CAS NO.	COMPOUND		Q
51-28-5	2,4-Dinitrophenol	1200	U
100-02-7	4-Nitrophenol	1200	U
132-64-9	Dibenzofuran	480	U
121-14-2	2,4-Dinitrotoluene	480	U
84-66-2	Diethylphthalate	480	U
7005-72-3	4-Chlorophenyl-Phenyl Ether	480	U
86-73-7	Fluorene	480	U
100-01-6	4-Nitroaniline	1200	U
534-52-1	4,6-Dinitro-2-Methylphenol	1200	U
86-30-6	N-Nitrosodiphenylamine (1)	480	U
101-55-3	4-Bromophenyl-Phenylether	480	U
118-74-1	Hexachlorobenzene	480	U
87-86-5	Pentachlorophenol	1200	U
85-01-8	Phenanthrene	100	J
120-12-7	Anthracene	480	U
86-74-8	Carbazole	480	U
84-74-2	Di-N-Butylphthalate	480	U
206-44-0	Fluoranthene	180	J
129-00-0	Pyrene	160	J
85-68-7	Butylbenzylphthalate	480	U
91-94-1	3,3'-Dichlorobenzidine	480	U
56-55-3	Benzo(A)Anthracene	68	J
218-01-9	Chrysene	95	J
117-81-7	Bis(2-Ethylhexyl)Phthalate	190	J
117-84-0	Di-N-Octylphthalate	480	U
205-99-2	Benzo(B)Fluoranthene	480	U
207-08-9	Benzo(K)Fluoranthene	130	J
50-32-8	Benzo(A)Pyrene	72	J
193-39-5	Indeno(1,2,3-Cd)Pyrene	480	U
53-70-3	Dibenz(A,H)Anthracene	480	U
191-24-2	Benzo(G,H,I)Perylene	480	U

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EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

FEQ06

Lab Name: IEA-NJ Contract: 68D50011

Lab Code: IEANJ Case No.: 25210 SAS No.: _____ SDG No.: FEQ01

Matrix: (soil/water) Soil Lab Sample ID: 65793008

Sample wt/vol: 30 (g/mL) g Lab File ID: G8399

Level: (low/med) LOW Date Received: 12/11/96

% Moisture: 32 decanted: (Y/N) N Date Extracted: 12/13/96

Concentrated Extract Volume: 500 (uL) Date Analyzed: 12/20/96

Injection Volume: 2 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.68

Number TICs Found: 8

CONCENTRATION UNITS: (ug/L or ug/Kg) ug/kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
01.	Aldol Condensation Product	5.62	4500	JAB
02.	Unknown PAH	37.05	440	J
03.	Unknown PAH	34.06	280	J
04.	Unknown Alcohol	30.44	270	J
05.	Unknown PAH	35.41	250	J
06.	Unknown PAH	39.05	180	J
07.	Unknown Ketone	4.66	130	JB
08.	Unknown Cycloalkane	29.55	110	J
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EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SBLKD1

Lab Name: IEA-NJ Contract: 68D50011

Lab Code: IEANJ Case No.: 25210 SAS No.: _____ SDG No.: FEQ01

Matrix: (soil/water) Soil Lab Sample ID: SBLKD1

Sample wt/vol: 30 (g/mL) g Lab File ID: D0681

Level: (low/med) LOW Date Received: _____

% Moisture: 0 decanted: (Y/N) N Date Extracted: 12/13/96

Concentrated Extract Volume: 500 (uL) Date Analyzed: 12/18/96

Injection Volume: 2 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: _____

CONCENTRATION UNITS: (ug/L or ug/Kg) ug/kg

CAS NO.	COMPOUND		Q
108-95-2	Phenol	330	U
111-44-4	Bis(2-Chloroethyl)Ether	330	U
95-57-8	2-Chlorophenol	330	U
541-73-1	1,3-Dichlorobenzene	330	U
106-46-7	1,4-Dichlorobenzene	330	U
95-50-1	1,2-Dichlorobenzene	330	U
95-48-7	2-Methylphenol	330	U
108-60-1	2,2'-Oxybis(1-Chloropropane)	330	U
106-44-5	4-Methylphenol	330	U
621-64-7	N-Nitrosodi-N-Propylamine	330	U
67-72-1	Hexachloroethane	330	U
98-95-3	Nitrobenzene	330	U
78-59-1	Isophorone	330	U
88-75-5	2-Nitrophenol	330	U
105-67-9	2,4-Dimethylphenol	330	U
111-91-1	Bis(2-Chloroethoxy) Methane	330	U
120-83-2	2,4-Dichlorophenol	330	U
120-82-1	1,2,4-Trichlorobenzene	330	U
91-20-3	Naphthalene	330	U
106-47-8	4-Chloroaniline	330	U
87-68-3	Hexachlorobutadiene	330	U
59-50-7	4-Chloro-3-Methylphenol	330	U
91-57-6	2-Methylnaphthalene	330	U
77-47-4	Hexachlorocyclopentadiene	330	U
88-06-2	2,4,6-Trichlorophenol	330	U
95-95-4	2,4,5-Trichlorophenol	830	U
91-58-7	2-Chloronaphthalene	330	U
88-74-4	2-Nitroaniline	830	U
131-11-3	Dimethylphthalate	330	U
208-96-8	Acenaphthylene	330	U
606-20-2	2,6-Dinitrotoluene	330	U
99-09-2	3-Nitroaniline	830	U
83-32-9	Acenaphthene	330	U

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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SBLKD1

Lab Name: IEA-NJ Contract: 68D50011

Lab Code: IEANJ Case No.: 25210 SAS No.: _____ SDG No.: FEQ01

Matrix: (soil/water) Soil Lab Sample ID: SBLKD1

Sample wt/vol: 30 (g/mL) g Lab File ID: D0681

Level: (low/med) LOW Date Received: _____

% Moisture: 0 decanted: (Y/N) N Date Extracted: 12/13/96

Concentrated Extract Volume: 500 (uL) Date Analyzed: 12/18/96

Injection Volume: 2 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: _____

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/kg	Q
51-28-5	2,4-Dinitrophenol	830	U
100-02-7	4-Nitrophenol	830	U
132-64-9	Dibenzofuran	330	U
121-14-2	2,4-Dinitrotoluene	330	U
84-66-2	Diethylphthalate	330	U
7005-72-3	4-Chlorophenyl-Phenyl Ether	330	U
86-73-7	Fluorene	330	U
100-01-6	4-Nitroaniline	830	U
534-52-1	4,6-Dinitro-2-Methylphenol	830	U
86-30-6	N-Nitrosodiphenylamine (1)	330	U
101-55-3	4-Bromophenyl-Phenylether	330	U
118-74-1	Hexachlorobenzene	330	U
87-86-5	Pentachlorophenol	830	U
85-01-8	Phenanthrene	330	U
120-12-7	Anthracene	330	U
86-74-8	Carbazole	330	U
84-74-2	Di-N-Butylphthalate	330	U
206-44-0	Fluoranthene	330	U
129-00-0	Pyrene	330	U
85-68-7	Butylbenzylphthalate	330	U
91-94-1	3,3'-Dichlorobenzidine	330	U
56-55-3	Benzo(A)Anthracene	330	U
218-01-9	Chrysene	330	U
117-81-7	Bis(2-Ethylhexyl)Phthalate	330	U
117-84-0	Di-N-Octylphthalate	330	U
205-99-2	Benzo(B)Fluoranthene	330	U
207-08-9	Benzo(K)Fluoranthene	330	U
50-32-8	Benzo(A)Pyrene	330	U
193-39-5	Indeno(1,2,3-Cd)Pyrene	330	U
53-70-3	Dibenz(A,H)Anthracene	330	U
191-24-2	Benzo(G,H,I)Perylene	330	U

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EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SBLKD1

Lab Name: IEA-NJ Contract: 68D50011

Lab Code: IEANJ Case No.: 25210 SAS No.: _____ SDG No.: FEQ01

Matrix: (soil/water) Soil Lab Sample ID: SBLK~~1~~D1 pos 12/24/96

Sample wt/vol: 30 (g/mL) g Lab File ID: D0681

Level: (low/med) LOW Date Received: _____

% Moisture: 0 decanted: (Y/N) N Date Extracted: 12/13/96

Concentrated Extract Volume: 500 (uL) Date Analyzed: 12/18/96

Injection Volume: 2 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: _____

Number TICs Found: 4

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
01.	Aldol Condensation Product	5.55	3900	JAB
02.	Unknown	4.55	110	J
03.	Unknown Aromatic	31.06	110	J
04.	Unknown	5.83	72	J
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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SBLKG1

Lab Name: IEA-NJ Contract: 68D50011

Lab Code: IEANJ Case No.: 25210 SAS No.: _____ SDG No.: FEQ01

Matrix: (soil/water) Soil Lab Sample ID: SBLKG1

Sample wt/vol: 30 (g/mL) g Lab File ID: G8390

Level: (low/med) LOW Date Received: _____

% Moisture: 0 decanted: (Y/N) N Date Extracted: 12/13/96

Concentrated Extract Volume: 500 (uL) Date Analyzed: 12/19/96

Injection Volume: 2 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: _____

CONCENTRATION UNITS: (ug/L or ug/Kg) ug/kg

CAS NO.	COMPOUND		Q
108-95-2	Phenol	330	U
111-44-4	Bis(2-Chloroethyl)Ether	330	U
95-57-8	2-Chlorophenol	330	U
541-73-1	1,3-Dichlorobenzene	330	U
106-46-7	1,4-Dichlorobenzene	330	U
95-50-1	1,2-Dichlorobenzene	330	U
95-48-7	2-Methylphenol	330	U
108-60-1	2,2'-Oxybis(1-Chloropropane)	330	U
106-44-5	4-Methylphenol	330	U
621-64-7	N-Nitrosodi-N-Propylamine	330	U
67-72-1	Hexachloroethane	330	U
98-95-3	Nitrobenzene	330	U
78-59-1	Isophorone	330	U
88-75-5	2-Nitrophenol	330	U
105-67-9	2,4-Dimethylphenol	330	U
111-91-1	Bis(2-Chloroethoxy) Methane	330	U
120-83-2	2,4-Dichlorophenol	330	U
120-82-1	1,2,4-Trichlorobenzene	330	U
91-20-3	Naphthalene	330	U
106-47-8	4-Chloroaniline	330	U
87-68-3	Hexachlorobutadiene	330	U
59-50-7	4-Chloro-3-Methylphenol	330	U
91-57-6	2-Methylnaphthalene	330	U
77-47-4	Hexachlorocyclopentadiene	330	U
88-06-2	2,4,6-Trichlorophenol	330	U
95-95-4	2,4,5-Trichlorophenol	830	U
91-58-7	2-Chloronaphthalene	330	U
88-74-4	2-Nitroaniline	830	U
131-11-3	Dimethylphthalate	330	U
208-96-8	Acenaphthylene	330	U
606-20-2	2,6-Dinitrotoluene	330	U
99-09-2	3-Nitroaniline	830	U
83-32-9	Acenaphthene	330	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SBLKG1

Lab Name: IEA-NJ Contract: 68D50011

Lab Code: IEANJ Case No.: 25210 SAS No.: _____ SDG No.: FEQ01

Matrix: (soil/water) Soil Lab Sample ID: SBLKG1

Sample wt/vol: 30 (g/mL) g Lab File ID: G8390

Level: (low/med) LOW Date Received: _____

% Moisture: 0 decanted: (Y/N) N Date Extracted: 12/13/96

Concentrated Extract Volume: 500 (uL) Date Analyzed: 12/19/96

Injection Volume: 2 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: _____

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/kg	Q
51-28-5	2,4-Dinitrophenol	830	U
100-02-7	4-Nitrophenol	830	U
132-64-9	Dibenzofuran	330	U
121-14-2	2,4-Dinitrotoluene	330	U
84-66-2	Diethylphthalate	330	U
7005-72-3	4-Chlorophenyl-Phenyl Ether	330	U
86-73-7	Fluorene	330	U
100-01-6	4-Nitroaniline	830	U
534-52-1	4,6-Dinitro-2-Methylphenol	830	U
86-30-6	N-Nitrosodiphenylamine (1)	330	U
101-55-3	4-Bromophenyl-Phenylether	330	U
118-74-1	Hexachlorobenzene	330	U
87-86-5	Pentachlorophenol	830	U
85-01-8	Phenanthrene	330	U
120-12-7	Anthracene	330	U
86-74-8	Carbazole	330	U
84-74-2	Di-N-Butylphthalate	330	U
206-44-0	Fluoranthene	330	U
129-00-0	Pyrene	330	U
85-68-7	Butylbenzylphthalate	330	U
91-94-1	3,3'-Dichlorobenzidine	330	U
56-55-3	Benzo(A)Anthracene	330	U
218-01-9	Chrysene	330	U
117-81-7	Bis(2-Ethylhexyl)Phthalate	330	U
117-84-0	Di-N-Octylphthalate	330	U
205-99-2	Benzo(B)Fluoranthene	330	U
207-08-9	Benzo(K)Fluoranthene	330	U
50-32-8	Benzo(A)Pyrene	330	U
193-39-5	Indeno(1,2,3-Cd)Pyrene	330	U
53-70-3	Dibenz(A,H)Anthracene	330	U
191-24-2	Benzo(G,H,I)Perylene	330	U

1F

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SBLKG1

Lab Name: IEA-NJ Contract: 68D50011

Lab Code: IEANJ Case No.: 25210 SAS No.: _____ SDG No.: FEQ01

Matrix: (soil/water) Soil Lab Sample ID: SBLKG1

Sample wt/vol: 30 (g/mL) g Lab File ID: G8390

Level: (low/med) LOW Date Received: _____

% Moisture: 0 decanted: (Y/N) N Date Extracted: 12/13/96

Concentrated Extract Volume: 500 (uL) Date Analyzed: 12/19/96

Injection Volume: 2 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: _____

Number TICs Found: 5

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
01.	Aldol Condensation Product	5.66	3900	JA
02.	Unknown Ketone	4.70	140	J
03.	Unknown PAH	31.73	96	J
04.	Unknown	6.02	90	J
05.	Unknown	30.23	68	J
06.				
07.				
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1B

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

FEQ05MS

Lab Name: IEA-NJ Contract: 68D50011

Lab Code: IEANJ Case No.: 25210 SAS No.: _____ SDG No.: FEQ01

Matrix: (soil/water) Soil Lab Sample ID: 65793006MS

Sample wt/vol: 30 (g/mL) g Lab File ID: D0687

Level: (low/med) LOW Date Received: 12/11/96

% Moisture: 29 decanted: (Y/N) N Date Extracted: 12/13/96

Concentrated Extract Volume: 500 (uL) Date Analyzed: 12/18/96

Injection Volume: 2 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.53

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/kg	Q
108-95-2	Phenol	1700	
111-44-4	Bis(2-Chloroethyl)Ether	460	U
95-57-8	2-Chlorophenol	1700	
541-73-1	1,3-Dichlorobenzene	460	U
106-46-7	1,4-Dichlorobenzene	1200	
95-50-1	1,2-Dichlorobenzene	460	U
95-48-7	2-Methylphenol	460	U
108-60-1	2,2'-Oxybis(1-Chloropropane)	460	U
106-44-5	4-Methylphenol	460	U
621-64-7	N-Nitrosodi-N-Propylamine	1400	
67-72-1	Hexachloroethane	460	U
98-95-3	Nitrobenzene	460	U
78-59-1	Isophorone	460	U
88-75-5	2-Nitrophenol	460	U
105-67-9	2,4-Dimethylphenol	460	U
111-91-1	Bis(2-Chloroethoxy) Methane	460	U
120-83-2	2,4-Dichlorophenol	460	U
120-82-1	1,2,4-Trichlorobenzene	1300	
91-20-3	Naphthalene	460	U
106-47-8	4-Chloroaniline	460	U
87-68-3	Hexachlorobutadiene	460	U
59-50-7	4-Chloro-3-Methylphenol	1700	
91-57-6	2-Methylnaphthalene	460	U
77-47-4	Hexachlorocyclopentadiene	460	U
88-06-2	2,4,6-Trichlorophenol	460	U
95-95-4	2,4,5-Trichlorophenol	1200	U
91-58-7	2-Chloronaphthalene	460	U
88-74-4	2-Nitroaniline	1200	U
131-11-3	Dimethylphthalate	460	U
208-96-8	Acenaphthylene	460	U
606-20-2	2,6-Dinitrotoluene	460	U
99-09-2	3-Nitroaniline	1200	U
83-32-9	Acenaphthene	1300	

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

FEQ05MS

Lab Name: IEA-NJ Contract: 68D50011

Lab Code: IEANJ Case No.: 25210 SAS No.: _____ SDG No.: FEQ01

Matrix: (soil/water) Soil Lab Sample ID: 65793006MS

Sample wt/vol: 30 (g/mL) g Lab File ID: D0687

Level: (low/med) LOW Date Received: 12/11/96

% Moisture: 29 decanted: (Y/N) N Date Extracted: 12/13/96

Concentrated Extract Volume: 500 (uL) Date Analyzed: 12/18/96

Injection Volume: 2 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.53

CONCENTRATION UNITS: (ug/L or ug/Kg) ug/kg

CAS NO.	COMPOUND		Q
51-28-5	2,4-Dinitrophenol	1200	U
100-02-7	4-Nitrophenol	2200	
132-64-9	Dibenzofuran	460	U
121-14-2	2,4-Dinitrotoluene	1200	
84-66-2	Diethylphthalate	460	U
7005-72-3	4-Chlorophenyl-Phenyl Ether	460	U
86-73-7	Fluorene	460	U
100-01-6	4-Nitroaniline	1200	U
534-52-1	4,6-Dinitro-2-Methylphenol	1200	U
86-30-6	N-Nitrosodiphenylamine (1)	460	U
101-55-3	4-Bromophenyl-Phenylether	460	U
118-74-1	Hexachlorobenzene	460	U
87-86-5	Pentachlorophenol	3000	
85-01-8	Phenanthrene	460	U
120-12-7	Anthracene	460	U
86-74-8	Carbazole	460	U
84-74-2	Di-N-Butylphthalate	460	U
206-44-0	Fluoranthene	460	U
129-00-0	Pyrene	1300	
85-68-7	Butylbenzylphthalate	460	U
91-94-1	3,3'-Dichlorobenzidine	460	U
56-55-3	Benzo(A)Anthracene	48	J
218-01-9	Chrysene	68	J
117-81-7	Bis(2-Ethylhexyl)Phthalate	77	J
117-84-0	Di-N-Octylphthalate	460	U
205-99-2	Benzo(B)Fluoranthene	93	J
207-08-9	Benzo(K)Fluoranthene	460	U
50-32-8	Benzo(A)Pyrene	53	J
193-39-5	Indeno(1,2,3-Cd)Pyrene	460	U
53-70-3	Dibenz(A,H)Anthracene	460	U
191-24-2	Benzo(G,H,I)Perylene	460	U

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

FEQ05MSD

Lab Name: IEA-NJ Contract: 68D50011

Lab Code: IEANJ Case No.: 25210 SAS No.: _____ SDG No.: FEQ01

Matrix: (soil/water) Soil Lab Sample ID: 65793007MSD

Sample wt/vol: 30 (g/mL) g Lab File ID: D0688

Level: (low/med) LOW Date Received: 12/11/96

% Moisture: 29 decanted: (Y/N) N Date Extracted: 12/13/96

Concentrated Extract Volume: 500 (uL) Date Analyzed: 12/19/96

Injection Volume: 2 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.53

CONCENTRATION UNITS: (ug/L or ug/Kg) ug/kg

CAS NO.	COMPOUND		Q
108-95-2	Phenol	1800	
111-44-4	Bis(2-Chloroethyl)Ether	460	U
95-57-8	2-Chlorophenol	1800	
541-73-1	1,3-Dichlorobenzene	460	U
106-46-7	1,4-Dichlorobenzene	1200	
95-50-1	1,2-Dichlorobenzene	460	U
95-48-7	2-Methylphenol	460	U
108-60-1	2,2'-Oxybis(1-Chloropropane)	460	U
106-44-5	4-Methylphenol	460	U
621-64-7	N-Nitrosodi-N-Propylamine	1600	
67-72-1	Hexachloroethane	460	U
98-95-3	Nitrobenzene	460	U
78-59-1	Isophorone	460	U
88-75-5	2-Nitrophenol	460	U
105-67-9	2,4-Dimethylphenol	460	U
111-91-1	Bis(2-Chloroethoxy) Methane	460	U
120-83-2	2,4-Dichlorophenol	460	U
120-82-1	1,2,4-Trichlorobenzene	1400	
91-20-3	Naphthalene	460	U
106-47-8	4-Chloroaniline	460	U
87-68-3	Hexachlorobutadiene	460	U
59-50-7	4-Chloro-3-Methylphenol	1900	
91-57-6	2-Methylnaphthalene	460	U
77-47-4	Hexachlorocyclopentadiene	460	U
88-06-2	2,4,6-Trichlorophenol	460	U
95-95-4	2,4,5-Trichlorophenol	1200	U
91-58-7	2-Chloronaphthalene	460	U
88-74-4	2-Nitroaniline	1200	U
131-11-3	Dimethylphthalate	460	U
208-96-8	Acenaphthylene	460	U
606-20-2	2,6-Dinitrotoluene	460	U
99-09-2	3-Nitroaniline	1200	U
83-32-9	Acenaphthene	1400	

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

FEQ05MSD

Lab Name: IEA-NJ Contract: 68D50011

Lab Code: IEANJ Case No.: 25210 SAS No.: _____ SDG No.: FEQ01

Matrix: (soil/water) Soil Lab Sample ID: 65793007MSD

Sample wt/vol: 30 (g/mL) g Lab File ID: D0688

Level: (low/med) LOW Date Received: 12/11/96

% Moisture: 29 decanted: (Y/N) N Date Extracted: 12/13/96

Concentrated Extract Volume: 500 (uL) Date Analyzed: 12/19/96

Injection Volume: 2 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.53

CONCENTRATION UNITS: (ug/L or ug/Kg) ug/kg

CAS NO.	COMPOUND		Q
51-28-5	2,4-Dinitrophenol	1200	U
100-02-7	4-Nitrophenol	2400	
132-64-9	Dibenzofuran	460	U
121-14-2	2,4-Dinitrotoluene	1300	
84-66-2	Diethylphthalate	460	U
7005-72-3	4-Chlorophenyl-Phenyl Ether	460	U
86-73-7	Fluorene	460	U
100-01-6	4-Nitroaniline	1200	U
534-52-1	4,6-Dinitro-2-Methylphenol	1200	U
86-30-6	N-Nitrosodiphenylamine (1)	460	U
101-55-3	4-Bromophenyl-Phenylether	460	U
118-74-1	Hexachlorobenzene	460	U
87-86-5	Pentachlorophenol	3500	
85-01-8	Phenanthrene	460	U
120-12-7	Anthracene	460	U
86-74-8	Carbazole	460	U
84-74-2	Di-N-Butylphthalate	460	U
206-44-0	Fluoranthene	82	J
129-00-0	Pyrene	1400	
85-68-7	Butylbenzylphthalate	460	U
91-94-1	3,3'-Dichlorobenzidine	460	U
56-55-3	Benzo(A)Anthracene	460	U
218-01-9	Chrysene	51	J
117-81-7	Bis(2-Ethylhexyl)Phthalate	87	J
117-84-0	Di-N-Octylphthalate	460	U
205-99-2	Benzo(B)Fluoranthene	460	U
207-08-9	Benzo(K)Fluoranthene	460	U
50-32-8	Benzo(A)Pyrene	460	U
193-39-5	Indeno(1,2,3-Cd)Pyrene	460	U
53-70-3	Dibenz(A,H)Anthracene	460	U
191-24-2	Benzo(G,H,I)Perylene	460	U

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
FEQ01

Lab Name: IEA-NJ Contract: 68D50011

Lab Code: IEANJ Case No.: 25210 SAS No.: _____ SDG No.: FEQ01

Matrix: (soil/water): SOIL Lab Sample ID: 65793001

Sample wt/vol: 30 (g/ml) g Lab File ID: D4BCLP99B_034

Moisture: 34 decanted: N Date Received: 12/11/96

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 12/12/96

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 12/20/96

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.4 Sulfur Cleanup: Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	2.6	U
319-85-7	Beta-BHC	2.6	U
319-86-8	delta-BHC	2.6	U
58-89-9	gamma-BHC (Lindane)	2.6	U
76-44-8	Heptachlor	2.6	U
309-00-2	Aldrin	2.6	U
1024-57-3	Heptachlor Epoxide	2.6	U
959-98-8	Endosulfan I	2.6	U
60-57-1	Dieldrin	5.0	U
72-55-9	4,4'-DDE	5.0	U
72-20-8	Endrin	5.0	U
33213-65-9	Endosulfan II	5.0	U
72-54-8	4,4'-DDD	5.0	U
1031-07-8	Endosulfan Sulfate	5.0	U
50-29-3	4,4'-DDT	5.0	U
72-43-5	Methoxychlor	26	U
53494-70-5	Endrin Ketone	5.0	U
7421-93-4	Endrin Aldehyde	5.0	U
5103-71-9	alpha-Chlordane	1.7	JP
5103-74-2	gamma-Chlordane	2.5	J
8001-35-2	Toxaphene	260	U
12674-11-2	Aroclor-1016	50	U
11104-28-2	Aroclor-1221	100	U
11141-16-5	Aroclor-1232	50	U
53469-21-9	Aroclor-1242	50	U
12672-29-6	Aroclor-1248	50	U
11097-69-1	Aroclor-1254	50	U
11096-82-5	Aroclor-1260	50	U

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
FEQ02

Lab Name: IEA-NJ Contract: 68D50011

Lab Code: IEANJ Case No.: 25210 SAS No.: _____ SDG No.: FEQ01

Matrix: (soil/water): SOIL Lab Sample ID: 65793002

Sample wt/vol: 30 (g/ml) g Lab File ID: D4BCLP99B_035

Moisture: 37 decanted: N Date Received: 12/11/96

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 12/12/96

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 12/20/96

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.2 Sulfur Cleanup: Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	2.7	U
319-85-7	Beta-BHC	2.7	U
319-86-8	delta-BHC	2.7	U
58-89-9	gamma-BHC (Lindane)	2.7	U
76-44-8	Heptachlor	2.7	U
309-00-2	Aldrin	2.7	U
1024-57-3	Heptachlor Epoxide	2.7	U
959-98-8	Endosulfan I	2.7	U
60-57-1	Dieldrin	5.2	U
72-55-9	4,4'-DDE	5.2	U
72-20-8	Endrin	5.2	U
33213-65-9	Endosulfan II	5.2	U
72-54-8	4,4'-DDD	5.2	U
1031-07-8	Endosulfan Sulfate	5.2	U
50-29-3	4,4'-DDT	5.2	U
72-43-5	Methoxychlor	27	U
53494-70-5	Endrin Ketone	5.2	U
7421-93-4	Endrin Aldehyde	5.2	U
5103-71-9	alpha-Chlordane	1.5	JP
5103-74-2	gamma-Chlordane	2.0	JP
8001-35-2	Toxaphene	270	U
12674-11-2	Aroclor-1016	52	U
11104-28-2	Aroclor-1221	110	U
11141-16-5	Aroclor-1232	52	U
53469-21-9	Aroclor-1242	52	U
12672-29-6	Aroclor-1248	52	U
11097-69-1	Aroclor-1254	52	U
11096-82-5	Aroclor-1260	52	U

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE No.
FEQ03

Lab Name: IEA-NJ Contract: 68D50011

Lab Code: IEANJ Case No.: 25210 SAS No.: _____ SDG No.: FEQ01

Matrix: (soil/water): SOIL Lab Sample ID: 65793003

Sample wt/vol: 30 (g/ml) g Lab File ID: D4BCLP99B_036

Moisture: 30 decanted: N Date Received: 12/11/96

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 12/12/96

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 12/20/96

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.4 Sulfur Cleanup: Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	2.4	U
319-85-7	Beta-BHC	2.4	U
319-86-8	delta-BHC	2.4	U
58-89-9	gamma-BHC (Lindane)	2.4	U
76-44-8	Heptachlor	2.4	U
309-00-2	Aldrin	2.4	U
1024-57-3	Heptachlor Epoxide	2.4	U
959-98-8	Endosulfan I	2.4	U
60-57-1	Dieldrin	4.7	U
72-55-9	4,4'-DDE	4.7	U
72-20-8	Endrin	4.7	U
33213-65-9	Endosulfan II	4.7	U
72-54-8	4,4'-DDD	4.7	U
1031-07-8	Endosulfan Sulfate	4.7	U
50-29-3	4,4'-DDT	4.7	U
72-43-5	Methoxychlor	24	U
53494-70-5	Endrin Ketone	4.7	U
7421-93-4	Endrin Aldehyde	4.7	U
5103-71-9	alpha-Chlordane	1.2	JP
5103-74-2	gamma-Chlordane	1.3	JP
8001-35-2	Toxaphene	240	U
12674-11-2	Aroclor-1016	47	U
11104-28-2	Aroclor-1221	96	U
11141-16-5	Aroclor-1232	47	U
53469-21-9	Aroclor-1242	47	U
12672-29-6	Aroclor-1248	47	U
11097-69-1	Aroclor-1254	47	U
11096-82-5	Aroclor-1260	47	U

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PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
FEQ04

Lab Name: IEA-NJ Contract: 68D50011

Lab Code: IEANJ Case No.: 25210 SAS No.: _____ SDG No.: FEQ01

Matrix: (soil/water): SOIL Lab Sample ID: 65793004

Sample wt/vol: 30 (g/ml) g Lab File ID: D4BCLP99B_037

Moisture: 40 decanted: N Date Received: 12/11/96

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 12/12/96

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 12/20/96

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.4 Sulfur Cleanup: Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	2.8	U
319-85-7	Beta-BHC	2.8	U
319-86-8	delta-BHC	2.8	U
58-89-9	gamma-BHC (Lindane)	2.8	U
76-44-8	Heptachlor	2.8	U
309-00-2	Aldrin	2.8	U
1024-57-3	Heptachlor Epoxide	2.8	U
959-98-8	Endosulfan I	2.8	U
60-57-1	Dieldrin	5.5	U
72-55-9	4,4'-DDE	5.5	U
72-20-8	Endrin	5.5	U
33213-65-9	Endosulfan II	5.5	U
72-54-8	4,4'-DDD	5.5	U
1031-07-8	Endosulfan Sulfate	5.5	U
50-29-3	4,4'-DDT	5.5	U
72-43-5	Methoxychlor	28	U
53494-70-5	Endrin Ketone	5.5	U
7421-93-4	Endrin Aldehyde	5.5	U
5103-71-9	alpha-Chlordane	2.8	U
5103-74-2	gamma-Chlordane	1.5	JP
8001-35-2	Toxaphene	280	U
12674-11-2	Aroclor-1016	55	U
11104-28-2	Aroclor-1221	110	U
11141-16-5	Aroclor-1232	55	U
53469-21-9	Aroclor-1242	55	U
12672-29-6	Aroclor-1248	55	U
11097-69-1	Aroclor-1254	55	U
11096-82-5	Aroclor-1260	55	U

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
FEQ05

Lab Name: IEA-NJ Contract: 68D50011

Lab Code: IEANJ Case No.: 25210 SAS No.: _____ SDG No.: FEQ01

Matrix: (soil/water): SOIL Lab Sample ID: 65793005

Sample wt/vol: 30 (g/ml) g Lab File ID: D4BCLP99B_038

Moisture: 29 decanted: N Date Received: 12/11/96

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 12/12/96

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 12/20/96

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.5 Sulfur Cleanup: Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	2.4	U
319-85-7	Beta-BHC	2.4	U
319-86-8	delta-BHC	2.4	U
58-89-9	gamma-BHC (Lindane)	2.4	U
76-44-8	Heptachlor	2.4	U
309-00-2	Aldrin	2.4	U
1024-57-3	Heptachlor Epoxide	2.4	U
959-98-8	Endosulfan I	2.4	U
60-57-1	Dieldrin	4.6	U
72-55-9	4,4'-DDE	4.6	U
72-20-8	Endrin	4.6	U
33213-65-9	Endosulfan II	4.6	U
72-54-8	4,4'-DDD	4.6	U
1031-07-8	Endosulfan Sulfate	4.6	U
50-29-3	4,4'-DDT	4.6	U
72-43-5	Methoxychlor	24	U
53494-70-5	Endrin Ketone	4.6	U
7421-93-4	Endrin Aldehyde	4.6	U
5103-71-9	alpha-Chlordane	2.4	U
5103-74-2	gamma-Chlordane	2.4	U
8001-35-2	Toxaphene	240	U
12674-11-2	Aroclor-1016	46	U
11104-28-2	Aroclor-1221	94	U
11141-16-5	Aroclor-1232	46	U
53469-21-9	Aroclor-1242	46	U
12672-29-6	Aroclor-1248	46	U
11097-69-1	Aroclor-1254	46	U
11096-82-5	Aroclor-1260	46	U

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
FEQ06

Lab Name: IEA-NJ Contract: 68D50011

Lab Code: IEANJ Case No.: 25210 SAS No.: _____ SDG No.: FEQ01

Matrix: (soil/water): SOIL Lab Sample ID: 65793008

Sample wt/vol: 30 (g/ml) g Lab File ID: D4BCLP99B_041

Moisture: 32 decanted: N Date Received: 12/11/96

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 12/12/96

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 12/20/96

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.7 Sulfur Cleanup: Y

CAS NO. COMPOUND CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG Q

319-84-6	alpha-BHC	2.5	U
319-85-7	Beta-BHC	2.5	U
319-86-8	delta-BHC	2.5	U
58-89-9	gamma-BHC (Lindane)	2.5	U
76-44-8	Heptachlor	2.5	U
309-00-2	Aldrin	2.5	U
1024-57-3	Heptachlor Epoxide	2.5	U
959-98-8	Endosulfan I	2.5	U
60-57-1	Dieldrin	2.6	JP
72-55-9	4,4'-DDE	4.8	U
72-20-8	Endrin	4.8	U
33213-65-9	Endosulfan II	4.8	U
72-54-8	4,4'-DDD	4.8	U
1031-07-8	Endosulfan Sulfate	4.8	U
50-29-3	4,4'-DDT	4.8	U
72-43-5	Methoxychlor	25	U
53494-70-5	Endrin Ketone	4.8	U
7421-93-4	Endrin Aldehyde	4.8	U
5103-71-9	alpha-Chlordane	1.8	JP
5103-74-2	gamma-Chlordane	2.6	
8001-35-2	Toxaphene	250	U
12674-11-2	Aroclor-1016	48	U
11104-28-2	Aroclor-1221	98	U
11141-16-5	Aroclor-1232	48	U
53469-21-9	Aroclor-1242	48	U
12672-29-6	Aroclor-1248	48	U
11097-69-1	Aroclor-1254	48	U
11096-82-5	Aroclor-1260	48	U

000582

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
PBLK77

Lab Name: IEA-NJ Contract: 68D50011

Lab Code: IEANJ Case No.: 25210 SAS No.: _____ SDG No.: FE001

Matrix: (soil/water): SOIL Lab Sample ID: PBLK77WG8424

Sample wt/vol: 30 (g/ml) g Lab File ID: D4BCLP99B_033

Moisture: 0 decanted: __ Date Received: _____

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 12/12/96

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 12/19/96

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: ____ Sulfur Cleanup: Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	1.7	U
319-85-7	Beta-BHC	1.7	U
319-86-8	delta-BHC	1.7	U
58-89-9	gamma-BHC (Lindane)	1.7	U
76-44-8	Heptachlor	1.7	U
309-00-2	Aldrin	1.7	U
1024-57-3	Heptachlor Epoxide	1.7	U
959-98-8	Endosulfan I	1.7	U
60-57-1	Dieldrin	3.3	U
72-55-9	4,4'-DDE	3.3	U
72-20-8	Endrin	3.3	U
33213-65-9	Endosulfan II	3.3	U
72-54-8	4,4'-DDD	3.3	U
1031-07-8	Endosulfan Sulfate	3.3	U
50-29-3	4,4'-DDT	3.3	U
72-43-5	Methoxychlor	17	U
53494-70-5	Endrin Ketone	3.3	U
7421-93-4	Endrin Aldehyde	3.3	U
5103-71-9	alpha-Chlordane	1.7	U
5103-74-2	gamma-Chlordane	1.7	U
8001-35-2	Toxaphene	170	U
12674-11-2	Aroclor-1016	33	U
11104-28-2	Aroclor-1221	67	U
11141-16-5	Aroclor-1232	33	U
53469-21-9	Aroclor-1242	33	U
12672-29-6	Aroclor-1248	33	U
11097-69-1	Aroclor-1254	33	U
11096-82-5	Aroclor-1260	33	U

000557

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
PIBLK9A

Lab Name: IEA-NJ Contract: 68D50011

Lab Code: IEANJ Case No.: 25210 SAS No.: _____ SDG No.: FEQ01

Matrix: (soil/water): WATER Lab Sample ID: PIBLK9A

Sample wt/vol: 1000 (g/ml) ml Lab File ID: D4BCLP99I_018

Moisture: _____ decanted: __ Date Received: _____

Extraction: (SepF/Cont/Sonc) ____ Date Extracted: _____

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 12/14/96

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) __ pH: ____ Sulfur Cleanup: __

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.05	U
319-85-7	Beta-BHC	0.05	U
319-86-8	delta-BHC	0.05	U
58-89-9	gamma-BHC (Lindane)	0.05	U
76-44-8	Heptachlor	0.05	U
309-00-2	Aldrin	0.05	U
1024-57-3	Heptachlor Epoxide	0.05	U
959-98-8	Endosulfan I	0.05	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan Sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0.50	U
53494-70-5	Endrin Ketone	0.10	U
7421-93-4	Endrin Aldehyde	0.10	U
5103-71-9	alpha-Chlordane	0.05	U
5103-74-2	gamma-Chlordane	0.05	U
8001-35-2	Toxaphene	5.0	U
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	2.0	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

000590

EPA SAMPLE NO.

PIBLK91

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

Lab Name: IEA-NJ Contract: 68D50011

Lab Code: IEANJ Case No.: 25210 SAS No.: _____ SDG No.: FEQ01

Matrix: (soil/water): WATER Lab Sample ID: PIBLK91

Sample wt/vol: 1000 (g/ml) ml Lab File ID: D4ACLP99I_019

Moisture: _____ decanted: __ Date Received: _____

Extraction: (SepF/Cont/Sonc) _____ Date Extracted: _____

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 12/14/96

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) __ pH: _____ Sulfur Cleanup: __

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.05	U
319-85-7	Beta-BHC	0.05	U
319-86-8	delta-BHC	0.05	U
58-89-9	gamma-BHC (Lindane)	0.05	U
76-44-8	Heptachlor	0.05	U
309-00-2	Aldrin	0.05	U
1024-57-3	Heptachlor Epoxide	0.05	U
959-98-8	Endosulfan I	0.05	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan Sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0.50	U
53494-70-5	Endrin Ketone	0.10	U
7421-93-4	Endrin Aldehyde	0.10	U
5103-71-9	alpha-Chlordane	0.05	U
5103-74-2	gamma-Chlordane	0.05	U
8001-35-2	Toxaphene	5.0	U
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	2.0	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
PIBLKBC

Lab Name: IEA-NJ Contract: 68D50011

Lab Code: IEANJ Case No.: 25210 SAS No.: _____ SDG No.: FE001

Matrix: (soil/water): WATER Lab Sample ID: PIBLKBC

Sample wt/vol: 1000 (g/ml) ml Lab File ID: D4BCLP99B_030

Moisture: _____ decanted: __ Date Received: _____

Extraction: (SepF/Cont/Sonc) ____ Date Extracted: _____

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 12/19/96

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) __ pH: ____ Sulfur Cleanup: __

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.05	U
319-85-7	Beta-BHC	0.05	U
319-86-8	delta-BHC	0.05	U
58-89-9	gamma-BHC (Lindane)	0.05	U
76-44-8	Heptachlor	0.05	U
309-00-2	Aldrin	0.05	U
1024-57-3	Heptachlor Epoxide	0.05	U
959-98-8	Endosulfan I	0.05	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan Sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0.50	U
53494-70-5	Endrin Ketone	0.10	U
7421-93-4	Endrin Aldehyde	0.10	U
5103-71-9	alpha-Chlordane	0.05	U
5103-74-2	gamma-Chlordane	0.05	U
8001-35-2	Toxaphene	5.0	U
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	2.0	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

000596

EPA SAMPLE NO.

PIBLKB3

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

Lab Name: IEA-NJ Contract: 68D50011

Lab Code: IEANJ Case No.: 25210 SAS No.: _____ SDG No.: FEQ01

Matrix: (soil/water): WATER Lab Sample ID: PIBLKB3

Sample wt/vol: 1000 (g/ml) ml Lab File ID: D4ACLP99B_031

Moisture: _____ decanted: __ Date Received: _____

Extraction: (SepF/Cont/Sonc) ____ Date Extracted: _____

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 12/19/96

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) __ pH: ____ Sulfur Cleanup: __

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.05	U
319-85-7	Beta-BHC	0.05	U
319-86-8	delta-BHC	0.05	U
58-89-9	gamma-BHC (Lindane)	0.05	U
76-44-8	Heptachlor	0.05	U
309-00-2	Aldrin	0.05	U
1024-57-3	Heptachlor Epoxide	0.05	U
959-98-8	Endosulfan I	0.05	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan Sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0.50	U
53494-70-5	Endrin Ketone	0.10	U
7421-93-4	Endrin Aldehyde	0.10	U
5103-71-9	alpha-Chlordane	0.05	U
5103-74-2	gamma-Chlordane	0.05	U
8001-35-2	Toxaphene	5.0	U
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	2.0	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

000599

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
PIBLKBD

Lab Name: IEA-NJ Contract: 68D50011

Lab Code: IEANJ Case No.: 25210 SAS No.: _____ SDG No.: FEQ01

Matrix: (soil/water): WATER Lab Sample ID: PIBLKBD

Sample wt/vol: 1000 (g/ml) ml Lab File ID: D4BCLP99B_044

Moisture: _____ decanted: __ Date Received: _____

Extraction: (SepF/Cont/Sonc) ____ Date Extracted: _____

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 12/20/96

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) __ pH: ____ Sulfur Cleanup: __

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.05	U
319-85-7	Beta-BHC	0.05	U
319-86-8	delta-BHC	0.05	U
58-89-9	gamma-BHC (Lindane)	0.05	U
76-44-8	Heptachlor	0.05	U
309-00-2	Aldrin	0.05	U
1024-57-3	Heptachlor Epoxide	0.05	U
959-98-8	Endosulfan I	0.05	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan Sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0.50	U
53494-70-5	Endrin Ketone	0.10	U
7421-93-4	Endrin Aldehyde	0.10	U
5103-71-9	alpha-Chlordane	0.05	U
5103-74-2	gamma-Chlordane	0.05	U
8001-35-2	Toxaphene	5.0	U
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	2.0	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
PIBLKB4

Lab Name: IEA-NJ Contract: 68D50011

Lab Code: IEANJ Case No.: 25210 SAS No.: _____ SDG No.: FEQ01

Matrix: (soil/water): WATER Lab Sample ID: PIBLKB4

Sample wt/vol: 1000 (g/ml) ml Lab File ID: D4ACLP99B_045

Moisture: _____ decanted: __ Date Received: _____

Extraction: (SepF/Cont/Sonc) _____ Date Extracted: _____

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 12/20/96

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) __ pH: _____ Sulfur Cleanup: __

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.05	U
319-85-7	Beta-BHC	0.05	U
319-86-8	delta-BHC	0.05	U
58-89-9	gamma-BHC (Lindane)	0.05	U
76-44-8	Heptachlor	0.05	U
309-00-2	Aldrin	0.05	U
1024-57-3	Heptachlor Epoxide	0.05	U
959-98-8	Endosulfan I	0.05	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan Sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0.50	U
53494-70-5	Endrin Ketone	0.10	U
7421-93-4	Endrin Aldehyde	0.10	U
5103-71-9	alpha-Chlordane	0.05	U
5103-74-2	gamma-Chlordane	0.05	U
8001-35-2	Toxaphene	5.0	U
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	2.0	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

000605

EPA SAMPLE NO.

FEQ05MS

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

Lab Name: IEA-NJ Contract: 68D50011

Lab Code: IEANJ Case No.: 25210 SAS No.: _____ SDG No.: FEQ01

Matrix: (soil/water): SOIL Lab Sample ID: 65793006MS

Sample wt/vol: 30 (g/ml) g Lab File ID: D4BCLP99B_042

Moisture: 29 decanted: N Date Received: 12/11/96

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 12/12/96

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 12/20/96

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.5 Sulfur Cleanup: Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	2.4	U
319-85-7	Beta-BHC	2.4	U
319-86-8	delta-BHC	2.4	U
58-89-9	gamma-BHC (Lindane)	19	
76-44-8	Heptachlor	16	
309-00-2	Aldrin	16	
1024-57-3	Heptachlor Epoxide	2.4	U
959-98-8	Endosulfan I	2.4	U
60-57-1	Dieldrin	34	
72-55-9	4,4'-DDE	4.6	U
72-20-8	Endrin	43	
33213-65-9	Endosulfan II	4.6	U
72-54-8	4,4'-DDD	4.6	U
1031-07-8	Endosulfan Sulfate	4.6	U
50-29-3	4,4'-DDT	46	
72-43-5	Methoxychlor	24	U
53494-70-5	Endrin Ketone	4.6	U
7421-93-4	Endrin Aldehyde	4.6	U
5103-71-9	alpha-Chlordane	1.5	JP
5103-74-2	gamma-Chlordane	2.1	J
8001-35-2	Toxaphene	240	U
12674-11-2	Aroclor-1016	46	U
11104-28-2	Aroclor-1221	94	U
11141-16-5	Aroclor-1232	46	U
53469-21-9	Aroclor-1242	46	U
12672-29-6	Aroclor-1248	46	U
11097-69-1	Aroclor-1254	46	U
11096-82-5	Aroclor-1260	46	U

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
FEQ05MSD

Lab Name: IEA-NJ Contract: 68D50011

Lab Code: IEANJ Case No.: 25210 SAS No.: _____ SDG No.: FEQ01

Matrix: (soil/water): SOIL Lab Sample ID: 65793007MSD

Sample wt/vol: 30 (g/ml) g Lab File ID: D4BCLP99B_040

Moisture: 29 decanted: N Date Received: 12/11/96

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 12/12/96

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 12/20/96

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.5 Sulfur Cleanup: Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	2.4	U
319-85-7	Beta-BHC	2.4	U
319-86-8	delta-BHC	2.4	U
58-89-9	gamma-BHC (Lindane)	16	
76-44-8	Heptachlor	14	P
309-00-2	Aldrin	15	
1024-57-3	Heptachlor Epoxide	2.4	U
959-98-8	Endosulfan I	2.4	U
60-57-1	Dieldrin	31	
72-55-9	4,4'-DDE	4.6	U
72-20-8	Endrin	40	
33213-65-9	Endosulfan II	4.6	U
72-54-8	4,4'-DDD	4.6	U
1031-07-8	Endosulfan Sulfate	4.6	U
50-29-3	4,4'-DDT	43	
72-43-5	Methoxychlor	24	U
53494-70-5	Endrin Ketone	4.6	U
7421-93-4	Endrin Aldehyde	4.6	U
5103-71-9	alpha-Chlordane	2.4	U
5103-74-2	gamma-Chlordane	1.9	J
8001-35-2	Toxaphene	240	U
12674-11-2	Aroclor-1016	46	U
11104-28-2	Aroclor-1221	94	U
11141-16-5	Aroclor-1232	46	U
53469-21-9	Aroclor-1242	46	U
12672-29-6	Aroclor-1248	46	U
11097-69-1	Aroclor-1254	46	U
11096-82-5	Aroclor-1260	46	U

APPENDIX C
CONTRACT REQUIRED DETECTION/QUANTIFICATION LIMITS AND ANALYTICAL DATA SUMMARY TABLES

Table C-1
Garland City of Quail Creek Landfill (CERCLIS ID TXD980697205)
Target Compound List and CRQLs

		Contract Required Quantitation Limits		
Volatile Organics	**CAS Number**	**Water (ug/L)**	**Soil (Low) (ug/kg)**	**Soil (Medium) (ug/kg)**
1,1,1-Trichloroethane	000071-55-6	10	10	1200
1,1,2,2-Tetrachloroethane	000079-34-5	10	10	1200
1,1,2-Trichloroethane	000079-00-5	10	10	1200
1,1-Dichloroethane	000075-34-3	10	10	1200
1,1-Dichloroethene	000075-35-4	10	10	1200
1,2-Dichloroethane	000107-06-2	10	10	1200
1,2-Dichloroethene (total)	000540-59-0	10	10	1200
1,2-Dichloropropane	000078-87-5	10	10	1200
2-Butanone	000078-93-3	10	10	1200
2-Hexanone	000591-78-6	10	10	1200
4-Methyl-2-pentanone	000108-10-1	10	10	1200
Acetone	000067-64-1	10	10	1200
Benzene	000071-43-2	10	10	1200
Bromodichloromethane	000075-27-4	10	10	1200
Bromoform	000075-25-2	10	10	1200
Bromomethane	000074-83-9	10	10	1200
Carbon disulfide	000075-15-0	10	10	1200
Carbon tetrachloride	000056-23-5	10	10	1200
Chlorobenzene	000108-90-7	10	10	1200
Chloroethane	000075-00-3	10	10	1200
Chloroform	000067-66-3	10	10	1200
Chloromethane	000074-87-3	10	10	1200
cis-1,3-Dichloropropene	010061-01-5	10	10	1200
Dibromochloromethane	000124-48-1	10	10	1200
Ethyl benzene	000100-41-4	10	10	1200
Methylene Chloride	000075-09-2	10	10	1200
Styrene	000100-42-5	10	10	1200
Tetrachloroethene	000127-18-4	10	10	1200
Toluene	000108-88-3	10	10	1200
trans-1,3-Dichloropropene	010061-02-6	10	10	1200
Trichloroethene	000079-01-6	10	10	1200
Vinyl Chloride	000075-01-4	10	10	1200
Xylene (total)	001330-20-7	10	10	1200

Note: Quantitation limits listed for soil/sediment are based on wet weight. The quantitation limits calculated by the laboratory for soil/sediment, on a dry weight basis as required by the contract, will be higher.

Source: EPA CLP Routine Analytical Services Organic Scope of Work (OLM01.8), March 1990

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Table C-1 Continued
Garland City of Quail Creek Landfill (CERCLIS ID TXD980697205)
Target Compound List and CRQLs

		Contract Required Quantitation Limits		
Semi-Volatile Organics	**CAS Number**	**Water (ug/L)**	**Soil (Low) (ug/kg)**	**Soil (Medium) (ug/kg)**
1,2,4-Trichlorobenzene	000120-82-1	10	330	10000
1,2-Dichlorobenzene	000095-50-1	10	330	10000
1,3-Dichlorobenzene	000541-73-1	10	330	10000
1,4-Dichlorobenzene	000106-46-7	10	330	10000
2,2'-Oxybis(1-chloropropane)	000108-60-1	10	330	10000
2,4,5-Trichlorophenol	000095-95-4	25	800	25000
2,4,6-Trichlorophenol	000088-06-2	10	330	10000
2,4-Dichlorophenol	000120-83-2	10	330	10000
2,4-Dimethylphenol	000105-67-9	10	330	10000
2,4-Dinitrophenol	000051-28-5	25	800	25000
2,4-Dinitrotoluene	000121-14-2	10	330	10000
2,6-Dinitrotoluene	000606-20-2	10	330	10000
2-Chloronaphthalene	000091-58-7	10	330	10000
2-Chlorophenol	000095-57-8	10	330	10000
2-Methylnaphthalene	000091-57-6	10	330	10000
2-Methylphenol	000095-48-7	10	330	10000
2-Nitroaniline	000088-74-4	25	800	25000
2-Nitrophenol	000088-75-5	10	330	10000
3,3'-Dichlorobenzidine	000091-94-1	10	330	10000
3-Nitroaniline	000099-09-2	25	800	25000
4,6-Dinitro-2-methylphenol	000534-52-1	25	800	25000
4-Bromophenyl-phenylether	000101-55-3	10	330	10000
4-Chloro-3-methylphenol	000059-50-7	10	330	10000
4-Chloroaniline	000106-47-8	10	330	10000
4-Chlorophenyl-phenylether	007005-72-3	10	330	10000
4-Methylphenol	000106-44-5	10	330	10000
4-Nitroaniline	000100-01-6	25	800	25000
4-Nitrophenol	000100-02-7	25	800	25000
Acenaphthene	000083-32-9	10	330	10000
Acenaphthylene	000208-96-8	10	330	10000
Anthracene	000120-12-7	10	330	10000
Benzo(a)anthracene	000056-55-3	10	330	10000
Benzo(a)pyrene	000050-32-8	10	330	10000
Benzo(b)fluoranthene	000205-99-2	10	330	10000
Benzo(g,h,i)perylene	000191-24-2	10	330	10000
Benzo(k)fluoranthene	000207-08-9	10	330	10000
bis(2-Chloroethoxy)methane	000111-91-1	10	330	10000
bis(2-Chloroethyl)ether	000111-44-4	10	330	10000
bis(2-Ethylhexyl)phthalate	000117-81-7	10	330	10000

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Table C-1 Continued
Garland City of Quail Creek Landfill (CERCLIS ID TXD980697205)
Target Compound List and CRQLs

		Contract Required Quantitation Limits		
Semi-Volatile Organics	**CAS Number**	**Water (ug/L)**	**Soil (Low) (ug/kg)**	**Soil (Medium) (ug/kg)**
Butylbenzylphthalate	000085-68-7	10	330	10000
Carbazole	000086-74-8	10	330	10000
Chrysene	000218-01-9	10	330	10000
Di-n-butylphthalate	000084-74-2	10	330	10000
Di-n-octylphthalate	000117-84-0	10	330	10000
Dibenz(a,h)anthracene	000053-70-3	10	330	10000
Dibenzofuran	000132-64-9	10	330	10000
Diethylphthalate	000084-66-2	10	330	10000
Dimethylphthalate	000131-11-3	10	330	10000
Fluoranthene	000206-44-0	10	330	10000
Fluorene	000086-73-7	10	330	10000
Hexachlorobenzene	000118-74-1	10	330	10000
Hexachlorobutadiene	000087-68-3	10	330	10000
Hexachlorocyclopentadiene	000077-47-4	10	330	10000
Hexachloroethane	000067-72-1	10	330	10000
Indeno(1,2,3-cd)pyrene	000193-39-5	10	330	10000
Isophorone	000078-59-1	10	330	10000
N-Nitroso-di-n-propylamine	000621-64-7	10	330	10000
N-Nitrosodiphenylamine	000086-30-6	10	330	10000
Naphthalene	000091-20-3	10	330	10000
Nitrobenzene	000098-95-3	10	330	10000
Pentachlorophenol	000087-86-5	25	800	25000
Phenanthrene	000085-01-8	10	330	10000
Phenol	000108-95-2	10	330	10000
Pyrene	000129-00-0	10	330	10000

Note: Quantitation limits listed for soil/sediment are based on wet weight. The quantitation limits calculated by the laboratory for soil/sediment, on a dry weight basis as required by the contract, will be higher.

Source: EPA CLP Routine Analytical Services Organic Scope of Work (OLM01.8), March 1990

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Table C-1 Continued
Garland City of Quail Creek Landfill (CERCLIS ID TXD980697205)
Target Compound List and CRQLs

		Contract Required Quantitation Limits	
Pesticides	**CAS Number**	**Water (ug/L)**	**Soil (ug/kg)**
4,4'-DDD	000072-54-8	0.1	3.3
4,4'-DDE	000072-55-9	0.1	3.3
4,4'-DDT	000050-29-3	0.1	3.3
Aldrin	000309-00-2	0.05	1.7
alpha-BHC	000319-84-6	0.05	1.7
alpha-Chlordane	005103-71-9	0.05	1.7
beta-BHC	000319-85-7	0.05	1.7
delta-BHC	000319-86-8	0.05	1.7
Dieldrin	000060-57-1	0.1	3.3
Endosulfan I	000959-98-8	0.05	1.7
Endosulfan II	033213-65-9	0.1	3.3
Endosulfan sulfate	001031-07-8	0.1	3.3
Endrin	000072-20-8	0.1	3.3
Endrin aldehyde	007421-36-3	0.1	3.3
Endrin ketone	053494-70-5	0.1	3.3
gamma-BHC (lindane)	000058-89-9	0.05	1.7
gamma-Chlordane	005103-74-2	0.05	1.7
Heptachlor	000076-44-8	0.05	1.7
Heptachlor epoxide	001024-57-3	0.05	1.7
Methoxychlor	000072-43-5	0.5	17
Toxaphene	008001-35-2	5	165

Note: Quantitation limits listed for soil/sediment are based on wet weight. The quantitation limits calculated by the laboratory for soil/sediment, on a dry weight basis as required by the contract, will be higher.

Source: EPA CLP Routine Analytical Services Organic Scope of Work (OLM01.8), March 1990

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Table C-1 Continued
Garland City of Quail Creek Landfill (CERCLIS ID TXD980697205)
Target Compound List and CRQLs

		Contract Required Quantitation Limits	
Polychlorinated Biphenyls	**CAS Number**	**Water (ug/L)**	**Soil (ug/kg)**
Aroclor-1016	012674-11-3	1	33
Aroclor-1221	011104-28-2	2	67
Aroclor-1232	011141-16-5	1	33
Aroclor-1242	053469-21-9	1	33
Aroclor-1248	012672-29-6	1	33
Aroclor-1254	011097-69-1	1	33
Aroclor-1260	011096-82-5	1	33

Note: Quantitation limits listed for soil/sediment are based on wet weight. The quantitation limits calculated by the laboratory for soil/sediment, on a dry weight basis as required by the contract, will be higher.

Source: EPA CLP Routine Analytical Services Organic Scope of Work (OLM01.8), March 1990

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Table C-1 Continued
Garland City of Quail Creek Landfill (CERCLIS ID TXD980697205)
Target Compound List and CRQLs

		Contract Required Quantitation Limits	
Dioxin/Furans	**CAS Number**	**Water (ug/L)**	**Soil (ug/kg)**
1234678-HpCDD	035822-46-9	25	2.5
1234678-HpCDF	067562-39-4	25	2.5
123478-HxCDD	039227-28-6	25	2.5
123478-HxCDF	070648-26-9	25	2.5
1234789-HpCDF	055673-89-7	25	2.5
123678-HxCDD	057653-85-7	25	2.5
123678-HxCDF	057117-44-9	25	2.5
12378-PeCDD	040321-76-4	25	2.5
12378-PeCDF	057117-41-6	25	2.5
123789-HxCDD	019408-74-3	25	2.5
123789-HxCDF	072918-21-9	25	2.5
234678-HxCDF	060851-34-5	25	2.5
23478-PeCDF	057117-31-4	25	2.5
2378-TCDD	001746-01-6	10	1
2378-TCDF	051207-31-9	10	1
OCDD	003268-87-9	50	5
OCDF	039001-02-0	50	5

Note: Quantitation limits listed for soil/sediment are based on wet weight. The quantitation limits calculated by the laboratory for soil/sediment, on a dry weight basis as required by the contract, will be higher.

Source: EPA CLP Routine Analytical Services Organic Scope of Work (OLM01.8), March 1990

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Table C-2
Garland City of Quail Creek Landfill (CERCLIS ID TXD980697205)
Target Analyte List and CRDLs

Metals	CAS Number	*Contract Required Detection Limits* Water (ug/L)	Soil (mg/kg)
ALUMINUM	007429-90-5	200	40
ANTIMONY	007440-36-0	60	12
ARSENIC	007440-38-2	10	2
BARIUM	007440-39-3	200	40
BERYLLIUM	007440-41-7	5	1
CADMIUM	007440-43-9	5	1
CALCIUM	007440-70-2	5000	1000
CHROMIUM	007440-47-3	10	2
COBALT	007440-48-4	50	10
COPPER	007440-50-8	25	5
CYANIDE	000057-12-5	10	5
IRON	007439-89-6	100	20
LEAD	007439-92-1	5	1
MAGNESIUM	007439-95-4	5000	1000
MANGANESE	007439-96-5	15	3
MERCURY	007439-97-6	0.2	0.1
NICKEL	007440-02-0	40	8
POTASSIUM	007440-09-7	5000	1000
SELENIUM	007782-49-2	5	1
SILVER	007440-22-4	10	2
SODIUM	007440-23-5	5000	1000
THALLIUM	007440-28-0	10	2
VANADIUM	007440-62-2	50	10
ZINC	007440-66-6	20	4

Note: Quantitation limits listed for soil/sediment are based on wet weight. The quantitation limits calculated by the laboratory for soil/sediment, on a dry weight basis as required by the contract, will be higher.

Source: EPA CLP Routine Analytical Services Inorganic Scope of Work (ILM01.8), March 1990

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APPENDIX D
REFERENCES

REFERENCE 1

REFERENCE 2

Table C-3
Garland City of Quail Creek Landfill (CERCLIS ID TXD980697205)
Sediment Characterization Sampling Volatile Organics Results (UG/KG)

Analyte	Maximum Background	3 Times Maximum Background	Station Sample Lab ID Date QC Type Depth	SED-02 SED-02 FEQ02 12/10/96 Normal 0.0'-0.5'	SED-03 SED-03 FEQ03 12/10/96 Normal 0.0'-0.5'	SED-04 SED-04 FEQ04 12/10/96 Normal 0.0'-0.5'	SED-05 SED-05 FEQ05 12/10/96 Normal 0.0'-0.5'	SED-05 SED-06 FEQ06 12/10/96 Duplicate 0.0'-0.5'
1,1,1-Trichloroethane	ND	-----		16 U	14 U	17 U	14 U	15 U
1,1,2,2-Tetrachloroethane	ND	-----		16 U	14 U	17 U	14 U	15 U
1,1,2-Trichloroethane	ND	-----		16 U	14 U	17 U	14 U	15 U
1,1-Dichloroethane	ND	-----		16 U	14 U	17 U	14 U	15 U
1,1-Dichloroethene	ND	-----		16 U	14 U	17 U	14 U	15 U
1,2-Dichloroethane	ND	-----		16 U	14 U	17 U	14 U	15 U
1,2-Dichloroethene (total)	ND	-----		16 U	14 U	17 U	14 U	15 U
1,2-Dichloropropane	ND	-----		16 U	14 U	17 U	14 U	15 U
2-Butanone	ND	-----		16 U	14 U	17 U	14 U	15 U
2-Hexanone	ND	-----		16 U	14 U	17 U	14 U	15 U
4-Methyl-2-pentanone	ND	-----		16 U	14 U	17 U	14 U	15 U
Acetone	ND	-----		16 U	14 U	17 U	14 U	15 U
Benzene	ND	-----		16 U	14 U	17 U	14 U	15 U
Bromodichloromethane	ND	-----		16 U	14 U	17 U	14 U	15 U
Bromoform	ND	-----		16 U	14 U	17 U	14 U	15 U
Bromomethane	ND	-----		16 U	14 U	17 U	14 U	15 U
Carbon disulfide	ND	-----		16 U	14 U	17 U	14 U	15 U
Carbon tetrachloride	ND	-----		16 U	14 U	17 U	14 U	15 U
Chlorobenzene	ND	-----		16 U	14 U	17 U	14 U	15 U
Chloroethane	ND	-----		16 U	14 U	17 U	14 U	15 U
Chloroform	ND	-----		16 U	14 U	17 U	14 U	15 U
Chloromethane	ND	-----		16 U	14 U	17 U	14 U	15 U
cis-1,3-Dichloropropene	ND	-----		16 U	14 U	17 U	14 U	15 U
Dibromochloromethane	ND	-----		16 U	14 U	17 U	14 U	15 U
Ethylbenzene	ND	-----		16 U	14 U	17 U	14 U	15 U

Shaded Values Exceed 3 Times Maximum Background Concentrations for Constituents Attributable to the Site.

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Table C-3 (Continued)
Garland City of Quail Creek Landfill (CERCLIS ID TXD980697205)
Sediment Characterization Sampling Volatile Organics Results (UG/KG)

Analyte	Maximum Background	3 Times Maximum Background	Station Sample Lab ID Date QC Type Depth	SED-02 SED-02 FEQ02 12/10/96 Normal 0.0'-0.5'	SED-03 SED-03 FEQ03 12/10/96 Normal 0.0'-0.5'	SED-04 SED-04 FEQ04 12/10/96 Normal 0.0'-0.5'	SED-05 SED-05 FEQ05 12/10/96 Normal 0.0'-0.5'	SED-05 SED-06 FEQ06 12/10/96 Duplicate 0.0'-0.5'
Methylene Chloride	9	27		15 J	12 J	12 J	7 J	8 J
Styrene	ND	-----		16 U	14 U	17 U	14 U	15 U
Tetrachloroethene	ND	-----		16 U	14 U	17 U	14 U	15 U
Toluene	ND	-----		16 U	14 U	17 U	14 U	15 U
trans-1,3-Dichloropropene	ND	-----		16 U	14 U	17 U	14 U	15 U
Trichloroethene	ND	-----		16 U	14 U	17 U	14 U	15 U
Vinyl Chloride	ND	-----		16 U	14 U	17 U	14 U	15 U
Xylenes (total)	ND	-----		16 U	14 U	17 U	14 U	15 U

Shaded Values Exceed 3 Times Maximum Background Concentrations for Constituents Attributable to the Site.

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Table C-3
Garland City of Quail Creek Landfill (CERCLIS ID TXD980697205)
Sediment Characterization Sampling Semi-Volatile Organics Results (UG/KG)

Analyte	Maximum Background	3 Times Maximum Background	Station Sample Lab ID Date QC Type Depth	SED-02 SED-02 [illegible] [illegible] Normal 0.0'-0.5'	SED-03 [illegible] [illegible] [illegible] Normal 0.0'-0.5'	[illegible] [illegible] [illegible] [illegible] [illegible] [illegible]	SED-05 [illegible] [illegible] [illegible] Normal 0.0'-0.5'	SED-05 SED-06 [illegible] [illegible] Duplicate 0.0'-0.5'
1,2,4-Trichlorobenzene	ND	-----		520 U	470 U	550 U	460 U	480 U
1,2-Dichlorobenzene	ND	-----		520 U	470 U	550 U	460 U	480 U
1,3-Dichlorobenzene	ND	-----		520 U	470 U	550 U	460 U	480 U
1,4-Dichlorobenzene	ND	-----		520 U	470 U	550 U	460 U	480 U
2,2'-Oxybis(1-chloropropane)	ND	-----		520 U	470 U	550 U	460 U	480 U
2,4,5-Trichlorophenol	ND	-----		1300 U	1200 U	1400 U	1200 U	1200 U
2,4,6-Trichlorophenol	ND	-----		520 U	470 U	550 U	460 U	480 U
2,4-Dichlorophenol	ND	-----		520 U	470 U	550 U	460 U	480 U
2,4-Dimethylphenol	ND	-----		520 U	470 U	550 U	460 U	480 U
2,4-Dinitrophenol	ND	-----		1300 U	1200 U	1400 U	1200 U	1200 U
2,4-Dinitrotoluene	ND	-----		520 U	470 U	550 U	460 U	480 U
2,6-Dinitrotoluene	ND	-----		520 U	470 U	550 U	460 U	480 U
2-Chloronaphthalene	ND	-----		520 U	470 U	550 U	460 U	480 U
2-Chlorophenol	ND	-----		520 U	470 U	550 U	460 U	480 U
2-Methylnaphthalene	ND	-----		520 U	470 U	550 U	460 U	480 U
2-Methylphenol	ND	-----		520 U	470 U	550 U	460 U	480 U
2-Nitroaniline	ND	-----		1300 U	1200 U	1400 U	1200 U	1200 U
2-Nitrophenol	ND	-----		520 U	470 U	550 U	460 U	480 U
3,3'-Dichlorobenzidine	ND	-----		520 U	470 U	550 U	460 U	480 U
3-Nitroaniline	ND	-----		1300 U	1200 U	1400 U	1200 U	1200 U
4,6-Dinitro-2-methylphenol	ND	-----		1300 U	1200 U	1400 U	1200 U	1200 U
4-Bromophenyl-phenylether	ND	-----		520 U	470 U	550 U	460 U	480 U
4-Chloro-3-methylphenol	ND	-----		520 U	470 U	550 U	460 U	480 U
4-Chloroaniline	ND	-----		520 U	470 U	550 U	460 U	480 U
4-Chlorophenyl-phenylether	ND	-----		520 U	470 U	550 U	460 U	480 U

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Table C-3 (Continued)
Garland City of Quail Creek Landfill (CERCLIS ID TXD980697205)
Sediment Characterization Sampling Semi-Volatile Organics Results (UG/KG)

Analyte	Maximum Background	3 Times Maximum Background	Station Sample Lab ID Date QC Type Depth	SED-02 SED-02 FEQ02 12/10/96 Normal 0.0'-0.5'	SED-03 SED-03 FEQ03 12/10/96 Normal 0.0'-0.5'	SED-04 SED-04 FEQ04 12/10/96 Normal 0.0'-0.5'	SED-05 SED-05 FEQ05 12/10/96 Normal 0.0'-0.5'	SED-05 SED-06 FEQ06 12/10/96 Duplicate 0.0'-0.5'
4-Methylphenol	ND	-----		520 U	470 U	550 U	460 U	480 U
4-Nitroaniline	ND	-----		1300 U	1200 U	1400 U	1200 U	1200 U
4-Nitrophenol	ND	-----		1300 U	1200 U	1400 U	1200 U	1200 U
Acenaphthene	ND	-----		520 U	470 U	550 U	460 U	480 U
Acenaphthylene	ND	-----		520 U	470 U	550 U	460 U	480 U
Anthracene	ND	-----		520 U	470 U	550 U	460 U	480 U
Benzo(a)anthracene	87	261		520 U	470 U	550 U	460 U	68 J
Benzo(a)pyrene	98	294		520 U	470 U	550 U	57 J	72 J
Benzo(b)fluoranthene	ND	-----		520 U	49 J C-BSQL	550 U	99 J C-BSQL	480 U
Benzo(g,h,i)perylene	ND	-----		520 U	470 U	550 U	460 U	480 U
Benzo(k)fluoranthene	ND	-----		520 U	60 J C-BSQL	66 J C-BSQL	460 U	130 J C-BSQL
bis(2-Chloroethoxy)methane	ND	-----		520 U	470 U	550 U	460 U	480 U
bis(2-Chloroethyl)ether	ND	-----		520 U	470 U	550 U	460 U	480 U
bis(2-Ethylhexyl)phthalate	67	201		520 U	230 J C-BSQL	550 U	84 J	190 J
Butylbenzylphthalate	ND	-----		520 U	470 U	550 U	460 U	480 U
Carbazole	ND	-----		520 U	470 U	550 U	460 U	480 U
Chrysene	120	360		520 U	49 J	550 U	68 J	95 J
Di-n-butylphthalate	ND	-----		520 U	470 U	550 U	460 U	480 U
Di-n-octylphthalate	ND	-----		520 U	470 U	550 U	460 U	480 U
Dibenz(a,h)anthracene	ND	-----		520 U	470 U	550 U	460 U	480 U
Dibenzofuran	ND	-----		520 U	470 U	550 U	460 U	480 U
Diethylphthalate	ND	-----		520 U	470 U	550 U	460 U	480 U
Dimethylphthalate	ND	-----		520 U	470 U	550 U	460 U	480 U
Fluoranthene	230	690		520 U	95 J	550 U	110 J	180 J
Fluorene	ND	-----		520 U	470 U	550 U	460 U	480 U

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Table C-3 (Continued)
Garland City of Quail Creek Landfill (CERCLIS ID TXD980697205)
Sediment Characterization Sampling Semi-Volatile Organics Results (UG/KG)

Analyte	Maximum Background	3 Times Maximum Background	Station Sample Lab ID Date QC Type Depth	SED-02 SED-02 FEQ02 12/10/96 Normal 0.0'-0.5'	SED-03 SED-03 FEQ03 12/10/96 Normal 0.0'-0.5'	SED-04 SED-04 FEQ04 12/10/96 Normal 0.0'-0.5'	SED-05 SED-05 FEQ05 12/10/96 Normal 0.0'-0.5'	SED-05 SED-06 FEQ06 12/10/96 Duplicate 0.0'-0.5'
Hexachlorobenzene	ND	-----		520 U	470 U	550 U	460 U	480 U
Hexachlorobutadiene	ND	-----		520 U	470 U	550 U	460 U	480 U
Hexachlorocyclopentadiene	ND	-----		520 U	470 U	550 U	460 U	480 U
Hexachloroethane	ND	-----		520 U	470 U	550 U	460 U	480 U
Indeno(1,2,3-cd)pyrene	ND	-----		520 U	470 U	550 U	460 U	480 U
Isophorone	ND	-----		520 U	470 U	550 U	460 U	480 U
N-Nitroso-di-n-propylamine	ND	-----		520 U	470 U	550 U	460 U	480 U
N-Nitrosodiphenylamine	ND	-----		520 U	470 U	550 U	460 U	480 U
Naphthalene	ND	-----		520 U	470 U	550 U	460 U	480 U
Nitrobenzene	ND	-----		520 U	470 U	550 U	460 U	480 U
Pentachlorophenol	ND	-----		1300 U	1200 U	1400 U	1200 U	1200 U
Phenanthrene	75	225		520 U	52 J	550 U	460 U	100 J
Phenol	ND	-----		520 U	470 U	550 U	460 U	480 U
Pyrene	190	570		520 U	93 J	550 U	89 J	160 J

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Table C-3
Garland City of Quail Creek Landfill (CERCLIS ID TXD980697205)
Sediment Characterization Sampling Pesticides Results (UG/KG)

Analyte	Maximum Background	3 Times Maximum Background	Station Sample Lab ID Date QC Type Depth	SED-02 SED-02 FEQ02 12/10/96 Normal 0.0'-0.5'		SED-03 SED-03 FEQ03 12/10/96 Normal 0.0'-0.5'		SED-04 SED-04 FEQ04 12/10/96 Normal 0.0'-0.5'		SED-05 SED-05 FEQ05 12/10/96 Normal 0.0'-0.5'		SED-05 SED-06 FEQ06 12/10/96 Duplicate 0.0'-0.5'		
4,4'-DDD	ND	-----		5.2	U	4.7	U	5.5	U	4.6	U	4.8	U	
4,4'-DDE	ND	-----		5.2	U	4.7	U	5.5	U	4.6	U	4.8	U	
4,4'-DDT	ND	-----		5.2	U	4.7	U	5.5	U	4.6	U	4.8	U	
Aldrin	ND	-----		2.7	U	2.4	U	2.8	U	2.4	U	2.5	U	
alpha-BHC	ND	-----		2.7	U	2.4	U	2.8	U	2.4	U	2.5	U	
alpha-Chlordane	1.7	5.1		1.5	J	1.2	J	2.8	U	2.4	U	1.8	J	
beta-BHC	ND	-----		2.7	U	2.4	U	2.8	U	2.4	U	2.5	U	
delta-BHC	ND	-----		2.7	U	2.4	U	2.8	U	2.4	U	2.5	U	
Dieldrin	ND	-----		5.2	U	4.7	U	5.5	U	4.6	U	2.6	J	C-BSQL
Endosulfan I	ND	-----		2.7	U	2.4	U	2.8	U	2.4	U	2.5	U	
Endosulfan II	ND	-----		5.2	U	4.7	U	5.5	U	4.6	U	4.8	U	
Endosulfan sulfate	ND	-----		5.2	U	4.7	U	5.5	U	4.6	U	4.8	U	
Endrin	ND	-----		5.2	U	4.7	U	5.5	U	4.6	U	4.8	U	
Endrin aldehyde	ND	-----		5.2	U	4.7	U	5.5	U	4.6	U	4.8	U	
Endrin ketone	ND	-----		5.2	U	4.7	U	5.5	U	4.6	U	4.8	U	
gamma-BHC (lindane)	ND	-----		2.7	U	2.4	U	2.8	U	2.4	U	2.5	U	
gamma-Chlordane	2.5	7.5		2	J	1.3	J	1.5	J	2.4	U	2.6		
Heptachlor	ND	-----		2.7	U	2.4	U	2.8	U	2.4	U	2.5	U	
Heptachlor epoxide	ND	-----		2.7	U	2.4	U	2.8	U	2.4	U	2.5	U	
Methoxychlor	ND	-----		27	U	24	U	28	U	24	U	25	U	
Toxaphene	ND	-----		270	U	240	U	280	U	240	U	250	U	

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Table C-3
Garland City of Quail Creek Landfill (CERCLIS ID TXD980697205)
Sediment Characterization Sampling Polychlorinated Biphenyls Results (UG/KG)

Analyte	Maximum Background	3 Times Maximum Background	Station Sample Lab ID Date QC Type Depth	SED-02 SED-02 FEQ02 12/10/96 Normal 0.0'-0.5'	SED-03 SED-03 FEQ03 12/10/96 Normal 0.0'-0.5'	SED-04 SED-04 FEQ04 12/10/96 Normal 0.0'-0.5'	SED-05 SED-05 FEQ05 12/10/96 Normal 0.0'-0.5'	SED-05 SED-06 FEQ06 12/10/96 Duplicate 0.0'-0.5'
Aroclor-1016	ND	-----		52 U	47 U	55 U	46 U	48 U
Aroclor-1221	ND	-----		110 U	96 U	110 U	94 U	98 U
Aroclor-1232	ND	-----		52 U	47 U	55 U	46 U	48 U
Aroclor-1242	ND	-----		52 U	47 U	55 U	46 U	48 U
Aroclor-1248	ND	-----		52 U	47 U	55 U	46 U	48 U
Aroclor-1254	ND	-----		52 U	47 U	55 U	46 U	48 U
Aroclor-1260	ND	-----		52 U	47 U	55 U	46 U	48 U

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Table C-3
Garland City of Quail Creek Landfill (CERCLIS ID TXD980697205)
Sediment Characterization Sampling Metals Results (MG/KG)

Analyte	Maximum Background	3 Times Maximum Background	Station Sample Lab ID Date QC Type Depth	SED-02 SED-02 MFGX52 12/10/96 Normal 0.0'-0.5'	SED-03 SED-03 MFGX53 12/10/96 Normal 0.0'-0.5'	SED-04 SED-04 MFGX54 12/10/96 Normal 0.0'-0.5'	SED-05 SED-05 MFGX55 12/10/96 Normal 0.0'-0.5'	SED-05 SED-05 MFGX56 12/10/96 Duplicate 0.0'-0.5'
ALUMINUM	9180	27540		18600	10800	18200	12200	10400
ANTIMONY	ND	-----		0.65 U	0.84 LUC	0.69 LUC	0.8 LUC	0.6 U
ARSENIC	6.1	18.3		9.6	4.4	8	6.2	6.4
BARIUM	92.7	278.1		120	126	120	107	119
BERYLLIUM	0.61	1.83		0.95 L	0.64 LJv	0.98 L	0.78 L	0.78 LJv
CADMIUM	0.38	1.14		0.49 L	0.42 L	0.29 L	0.22 L	0.36 L
CALCIUM	207000	621000		122000	117000	121000	166000	182000
CHROMIUM	23.2	69.6		22.2	16.9	22.8	25.3	24.6
COBALT	7.2	21.6		7.7 L	5.3 L	9.7 L	10.5 L	10.5 L
COPPER	14	42		19.1	14	19.4	12.5	15.7
CYANIDE	0.41	1.23		0.49 UJv	0.55 LJv	1.4 Jv C-NA	5.6 Jv C-NA	2.6 Jv C-NA
IRON	13300	39900		16300	13000	20700	17300	16700
LEAD	39.4	118.2		41.4	32.4	30.1	24.2	27
MAGNESIUM	2340	7020		3140	2710	3540	2880	2740
MANGANESE	508	1524		422	369	685	645	665
MERCURY	ND	-----		0.08 U	0.08 U	0.08 U	0.07 U	0.07 U
NICKEL	11.9	35.7		16.6 J^	11.2 LJ^	16.5 J^	14.7 J^	15.3 J^
POTASSIUM	1460	4380		2830	1480 L	2820	1670	1730
SELENIUM	0.89	2.67		0.77 U	0.76 U	1.4 L	0.68 U	0.72 U
SILVER	ND	-----		0.16 U	0.16 U	0.16 U	0.14 U	0.15 U
SODIUM	347	1041		216 L	240 L	180 L	306 L	311 L
THALLIUM	1.7	5.1		0.97 U	0.95 U	1.2 L	0.85 U	0.89 U
VANADIUM	35.6	106.8		46.7	28.9	50.9	43.8	40.9
ZINC	81	243		94.7 Jv	108 Jv	93.7 Jv	69.4 Jv	91.3 Jv

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Table C-4
Garland City of Quail Creek Landfill (CERCLIS ID TXD980697205)
Surface Water Characterization Sampling Volatile Organics Results (UG/L)

Analyte	Maximum Background	3 Times Maximum Background	Station Sample Lab ID Date	SW-02 SW-02 [illegible] 12/10/96	SW-03 SW-03 [illegible] 12/10/96	SW-03 SW-04 [illegible] 12/10/96	Lab Blank On Propane	Lab Blank On Propane
1,1,1-Trichloroethane	ND	-----		10 U	10 U	10 U		
1,1,2,2-Tetrachloroethane	ND	-----		10 U	10 U	10 U		
1,1,2-Trichloroethane	ND	-----		10 U	10 U	10 U		
1,1-Dichloroethane	ND	-----		10 U	10 U	10 U		
1,1-Dichloroethene	ND	-----		10 U	10 U	10 U		
1,2-Dichloroethane	ND	-----		10 U	10 U	10 U		
1,2-Dichloroethene (total)	ND	-----		10 U	10 U	10 U		
1,2-Dichloropropane	ND	-----		10 U	10 U	10 U		
2-Butanone	ND	-----		10 U	10 U	10 U		
2-Hexanone	ND	-----		10 U	10 U	10 U		
4-Methyl-2-pentanone	ND	-----		10 U	10 U	10 U		
Acetone	ND	-----		15 UJ	10 U	10 U		
Benzene	ND	-----		10 U	10 U	10 U		
Bromodichloromethane	ND	-----		10 U	10 U	10 U		
Bromoform	ND	-----		10 U	10 U	10 U		
Bromomethane	ND	-----		10 U	10 U	10 U		
Carbon disulfide	ND	-----		10 U	10 U	10 U		
Carbon tetrachloride	ND	-----		10 U	10 U	10 U		
Chlorobenzene	ND	-----		10 U	10 U	10 U		
Chloroethane	ND	-----		10 U	10 U	10 U		
Chloroform	ND	-----		10 U	10 U	10 U		
Chloromethane	ND	-----		10 U	10 U	10 U		
cis-1,3-Dichloropropene	ND	-----		10 U	10 U	10 U		
Dibromochloromethane	ND	-----		10 U	10 U	10 U		
Ethylbenzene	ND	-----		10 U	10 U	10 U		
Methylene Chloride	ND	-----		10 U	10 U	10 U		
Styrene	ND	-----		10 U	10 U	10 U		

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Table C-4 (Continued)
Garland City of Quail Creek Landfill (CERCLIS ID TXD980697205)
Surface Water Characterization Sampling Volatile Organics Results (UG/L)

Analyte	Maximum Background	3 Times Maximum Background	Station Sample Lab ID Date	SW-02 SW-02 FEQ07 12/10/96	SW-03 SW-03 FEQ09 12/10/96	SW-03 SW-04 FEQ08 12/10/96	Left Blank On Purpose	Left Blank On Purpose
Tetrachloroethene	ND	-----		10 U	10 U	10 U		
Toluene	ND	-----		10 U	10 U	10 U		
trans-1,3-Dichloropropene	ND	-----		10 U	10 U	10 U		
Trichloroethene	ND	-----		10 U	10 U	10 U		
Vinyl Chloride	ND	-----		10 U	10 U	10 U		
Xylenes (total)	ND	-----		10 U	10 U	10 U		

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Table C-4
Garland City of Quail Creek Landfill (CERCLIS ID TXD980697205)
Surface Water Characterization Sampling Semi-Volatile Organics Results (UG/L)

Analyte	Maximum Background	3 Times Maximum Background	Station Sample Lab ID Date	SW-02 SW-02 FEQ07 12/10/96	SW-03 SW-03 FEQ09 12/10/96	SW-03 SW-04 FEQ08 12/10/96	Left Blank On Purpose	Left Blank On Purpose
1,2,4-Trichlorobenzene	ND	-----		10 U	10 U	10 U		
1,2-Dichlorobenzene	ND	-----		10 U	10 U	10 U		
1,3-Dichlorobenzene	ND	-----		10 U	10 U	10 U		
1,4-Dichlorobenzene	ND	-----		10 U	10 U	10 U		
2,2'-Oxybis(1-chloropropane)	ND	-----		10 U	10 U	10 U		
2,4,5-Trichlorophenol	ND	-----		26 U	26 U	25 U		
2,4,6-Trichlorophenol	ND	-----		10 U	10 U	10 U		
2,4-Dichlorophenol	ND	-----		10 U	10 U	10 U		
2,4-Dimethylphenol	ND	-----		10 U	2 J C-BSQL	10 U		
2,4-Dinitrophenol	ND	-----		26 U	26 U	25 U		
2,4-Dinitrotoluene	ND	-----		10 U	10 U	10 U		
2,6-Dinitrotoluene	ND	-----		10 U	10 U	10 U		
2-Chloronaphthalene	ND	-----		10 U	10 U	10 U		
2-Chlorophenol	ND	-----		10 U	10 U	10 U		
2-Methylnaphthalene	ND	-----		10 U	10 U	10 U		
2-Methylphenol	ND	-----		10 U	10 U	10 U		
2-Nitroaniline	ND	-----		26 U	26 U	25 U		
2-Nitrophenol	ND	-----		10 U	10 U	10 U		
3,3'-Dichlorobenzidine	ND	-----		10 U	10 U	10 U		
3-Nitroaniline	ND	-----		26 U	26 U	25 U		
4,6-Dinitro-2-methylphenol	ND	-----		26 U	26 U	25 U		
4-Bromophenyl-phenylether	ND	-----		10 U	10 U	10 U		
4-Chloro-3-methylphenol	ND	-----		10 U	10 U	10 U		
4-Chloroaniline	ND	-----		10 U	10 U	10 U		
4-Chlorophenyl-phenylether	ND	-----		10 U	10 U	10 U		
4-Methylphenol	ND	-----		10 U	10 U	10 U		
4-Nitroaniline	ND	-----		26 U	26 U	25 U		

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Table C-4 (Continued)
Garland City of Quail Creek Landfill (CERCLIS ID TXD980697205)
Surface Water Characterization Sampling Semi-Volatile Organics Results (UG/L)

Analyte	Maximum Background	3 Times Maximum Background	Station Sample Lab ID Date	SW-02 SW-02 FEQ07 12/10/96	SW-03 SW-03 FEQ09 12/10/96	SW-03 SW-04 FEQ08 12/10/96	Left Blank On Purpose	Left Blank On Purpose
4-Nitrophenol	ND	-----		26 U	26 U	25 U		
Acenaphthene	ND	-----		10 U	10 U	10 U		
Acenaphthylene	ND	-----		10 U	10 U	10 U		
Anthracene	ND	-----		10 U	10 U	10 U		
Benzo(a)anthracene	ND	-----		10 U	10 U	10 U		
Benzo(a)pyrene	ND	-----		10 U	10 U	10 U		
Benzo(b)fluoranthene	ND	-----		10 U	10 U	10 U		
Benzo(g,h,i)perylene	ND	-----		10 U	10 U	10 U		
Benzo(k)fluoranthene	ND	-----		10 U	10 U	10 U		
bis(2-Chloroethoxy)methane	ND	-----		10 U	10 U	10 U		
bis(2-Chloroethyl)ether	ND	-----		10 U	10 U	10 U		
bis(2-Ethylhexyl)phthalate	2	6		2 J	10 U	10 U		
Butylbenzylphthalate	ND	-----		10 U	10 U	1 J C-BSQL		
Carbazole	ND	-----		10 U	10 U	10 U		
Chrysene	ND	-----		10 U	10 U	10 U		
Di-n-butylphthalate	ND	-----		10 U	10 U	10 U		
Di-n-octylphthalate	ND	-----		10 U	5 J C-BSQL	5 J C-BSQL		
Dibenz(a,h)anthracene	ND	-----		10 U	10 U	10 U		
Dibenzofuran	ND	-----		10 U	10 U	10 U		
Diethylphthalate	ND	-----		10 U	1 J C-BSQL	1 J C-BSQL		
Dimethylphthalate	ND	-----		10 U	10 U	10 U		
Fluoranthene	ND	-----		10 U	10 U	10 U		
Fluorene	ND	-----		10 U	10 U	10 U		
Hexachlorobenzene	ND	-----		10 U	10 U	10 U		
Hexachlorobutadiene	ND	-----		10 U	10 U	10 U		
Hexachlorocyclopentadiene	ND	-----		10 U	10 U	10 U		
Hexachloroethane	ND	-----		10 U	10 U	10 U		

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Table C-4 (Continued)
Garland City of Quail Creek Landfill (CERCLIS ID TXD980697205)
Surface Water Characterization Sampling Semi-Volatile Organics Results (UG/L)

Analyte	Maximum Background	3 Times Maximum Background	Station Sample Lab ID Date	SW-02 SW-02 FEQ07 12/10/96	SW-03 SW-03 FEQ09 12/10/96	SW-03 SW-04 FEQ08 12/10/96	Left Blank On Purpose	Left Blank On Purpose
Indeno(1,2,3-cd)pyrene	ND	-----		10 U	10 U	10 U		
Isophorone	ND	-----		10 U	10 U	10 U		
N-Nitroso-di-n-propylamine	ND	-----		10 U	10 U	10 U		
N-Nitrosodiphenylamine	ND	-----		10 U	10 U	10 U		
Naphthalene	ND	-----		10 U	10 U	10 U		
Nitrobenzene	ND	-----		10 U	10 U	10 U		
Pentachlorophenol	ND	-----		26 U	26 U	25 U		
Phenanthrene	ND	-----		10 U	10 U	10 U		
Phenol	ND	-----		10 U	10 U	10 U		
Pyrene	ND	-----		10 U	10 U	10 U		

Shaded Values Exceed 3 Times Maxiumum Background Concentrations for Constituents Attributable to the Site.

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Table C-4
Garland City of Quail Creek Landfill (CERCLIS ID TXD980697205)
Surface Water Characterization Sampling Pesticides Results (UG/L)

Analyte	Maximum Background	3 Times Maximum Background	Station Sample Lab ID Date	SW-02 SW-02 FEQ07 12/10/96		SW-03 SW-03 FEQ09 12/10/96		SW-03 SW-04 FEQ08 12/10/96		Left Blank On Purpose	Left Blank On Purpose
4,4'-DDD	ND	-----		0.11	U	0.1	U	0.11	U		
4,4'-DDE	ND	-----		0.11	U	0.1	U	0.11	U		
4,4'-DDT	ND	-----		0.11	U	0.1	U	0.11	U		
Aldrin	ND	-----		0.05	U	0.05	U	0.05	U		
alpha-BHC	ND	-----		0.05	U	0.05	U	0.05	U		
alpha-Chlordane	ND	-----		0.05	U	0.05	U	0.05	U		
beta-BHC	ND	-----		0.05	U	0.05	U	0.05	U		
delta-BHC	ND	-----		0.05	U	0.05	U	0.05	U		
Dieldrin	ND	-----		0.11	U	0.1	U	0.11	U		
Endosulfan I	ND	-----		0.05	U	0.05	U	0.05	U		
Endosulfan II	ND	-----		0.11	U	0.1	U	0.11	U		
Endosulfan sulfate	ND	-----		0.11	U	0.1	U	0.11	U		
Endrin	ND	-----		0.11	U	0.1	U	0.11	U		
Endrin aldehyde	ND	-----		0.11	U	0.1	U	0.11	U		
Endrin ketone	ND	-----		0.11	U	0.1	U	0.11	U		
gamma-BHC (lindane)	ND	-----		0.05	U	0.05	U	0.05	U		
gamma-Chlordane	ND	-----		0.05	U	0.05	U	0.05	U		
Heptachlor	ND	-----		0.05	U	0.05	U	0.05	U		
Heptachlor epoxide	ND	-----		0.05	U	0.05	U	0.05	U		
Methoxychlor	ND	-----		0.53	U	0.5	U	0.54	U		
Toxaphene	ND	-----		5.3	U	5	U	5.4	U		

Shaded Values Exceed 3 Times Maximum Background Concentrations for Constituents Attributable to the Site.

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Table C-4
Garland City of Quail Creek Landfill (CERCLIS ID TXD980697205)
Surface Water Characterization Sampling Polychlorinated Biphenyls Results (UG/L)

Analyte	Maximum Background	3 Times Maximum Background	Station Sample Lab ID Date	SW-02 SW-02 FEQ07 12/10/96	SW-03 SW-03 FEQ09 12/10/96	SW-03 SW-04 FEQ08 12/10/96	Left Blank On Purpose	Left Blank On Purpose
Aroclor-1016	ND	-----		1.1 U	1 U	1.1 U		
Aroclor-1221	ND	-----		2.1 U	2 U	2.2 U		
Aroclor-1232	ND	-----		1.1 U	1 U	1.1 U		
Aroclor-1242	ND	-----		1.1 U	1 U	1.1 U		
Aroclor-1248	ND	-----		1.1 U	1 U	1.1 U		
Aroclor-1254	ND	-----		1.1 U	1 U	1.1 U		
Aroclor-1260	ND	-----		1.1 U	1 U	1.1 U		

Shaded Values Exceed Times Maximum Background Concentrtions for Constituents Attributable to the Site.

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Table C-4
Garland City of Quail Creek Landfill (CERCLIS ID TXD980697205)
Surface Water Characterization Sampling Metals Results (UG/L)

Analyte	Maximum Background	3 Times Maximum Background	Station Sample Lab ID Date	SW-02 SW-02 MFGX58 12/10/96			SW-03 SW-03 MFGX39 12/10/96			SW-03 SW-04 MFGX59 12/10/96			Left Blank On Purpose	Left Blank On Purpose
ALUMINUM	114	342		578		C-NA	89.2	LJv		32.4	LJv			
ANTIMONY	ND	-----		3	LUC		4	LUC		3.4	LUC			
ARSENIC	ND	-----		2	U		2	U		2	U			
BARIUM	75.9	227.7		153	L		86.9	L		93.8	L			
BERYLLIUM	ND	-----		0.3	U		0.3	U		0.3	U			
CADMIUM	ND	-----		0.45	LUC		3.1	L	C-BSQL	3.4	L	C-BSQL		
CALCIUM	86600	259800		132000			79100			84500				
CHROMIUM	0.65	1.95		1.2	L		1.2	L		0.79	L			
COBALT	ND	-----		1.6	L	C-BSQL	0.7	U		0.7	U			
COPPER	5.5	16.5		4.7	L		9.3	L		8.9	L			
CYANIDE	11	33		3	U		13			7.9				
IRON	335	1005		2210		C-NA	139			216				
LEAD	ND	-----		4.7	UC		3.1	UCJ		4	UCJ			
MAGNESIUM	3610	10830		7750			3930	L		4190	L			
MANGANESE	84.6	253.8		830		C-NA	142			153				
MERCURY	ND	-----		0.1	U		0.1	U		0.1	U			
NICKEL	ND	-----		0.8	U		6	LJv	C-BSQL	5.4	LJv	C-BSQL		
POTASSIUM	3700	11100		2620	L		5940			6370				
SELENIUM	ND	-----		4.1	LJ	C-BSQL	2.4	U		2.4	U			
SILVER	ND	-----		0.5	U		0.5	U		0.5	U			
SODIUM	35900	107700		14700			50400			54600				
THALLIUM	ND	-----		3	U		3	U		3	U			
VANADIUM	0.85	2.55		1.8	L		1.2	L		1.5	L			
ZINC	46.1	138.3		54.7			69.7			71.3				

Shaded Values Exceed 3 Times Maximum Background Concentrations for Constituents Attributable to the Site.

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SITE INSPECTION TASK WORK PLAN
FOR
QUAIL CREEK LANDFILL
TXD980697205
WA # 25-6JZZ

EPA Project Manager	Date
Project Manager	6/21/93 Date
Team Leader	6/14/93 Date

SITE INSPECTION TASK WORK PLAN
FOR
QUAIL CREEK LANDFILL
TXD980697205
WA # 25-6JZZ

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SITE INSPECTION TASK WORK PLAN
FOR
QUAIL CREEK LANDFILL
TXD980697205
WA # 25-6JZZ

1.0 INTRODUCTION

The Fluor Daniel ARCS Team was tasked by the U.S. Environmental Protection Agency (EPA) to develop the Site Inspection Task Work Plan for the Quail Creek Landfill Site (TXD980697205). This site is located in Garland, Dallas County, Texas.

1.1 Site Sampling Inspection Objectives

The Site Inspection (SI) is an intermediate investigation study of the pre-remedial process. It further characterizes the site through the Hazard Ranking System (HRS) documentation. The SI expands on information obtained during the Preliminary Assessment (PA) conducted by the Texas Department of Health (TDH).

The objectives of the site inspection are to describe possible hazardous waste contamination at the site and correlate this to a sampling strategy. The site specific activities and the responsibilities of the field team will also be identified.

1.2 Site Description

The City of Garland Quail Creek Landfill site is an inactive landfill located in Garland, Texas. The site is adjacent to the Union Pacific (formerly Missouri-Kansas-Texas) railroad tracks to the north, Highway 66 to the northwest, Mills Branch (creek) to the south, and Centerville Road to the east. The geographical coordinates of the center of the site are 32°54'19" north latitude and 96°36'24" west longitude (Ref. 1, 2).

The site encompasses 35 to 40 acres (Ref 2). The site is located on two parcels with two different owners; Cambridge Consolidated who owns the majority of the site, and Millcreek Associates Limited Partnership (Ref 4). The total area of these two parcels is over 58 acres (Ref 4). The City of Garland, who leased the property, disposed approximately 73,000 tons of refuse into the landfill from May 1972 to March 1975 (Ref 2). The landfill was exclusively

filled with municipal solid waste, no liquid or hazardous waste was accepted (Ref 2). The landfill had a 2 foot final cover of topsoil applied after disposal activities ceased (Ref. 10). Although the site does not have an engineered liner, the site is noted to have a natural clay liner (Ref 10). No leachate controls, gas extraction, or other landfill controls exist at the site.

The United States Environmental Protection Agency (EPA) identified the City of Garland Quail Creek landfill as a potential Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) site upon receipt of the CERCLA "Potential Hazardous Waste Site Identification and Preliminary Assessment" report filed by the TDH on February 24, 1981 (Ref 2). A final strategy determination of "no action needed" was made by the TDH on February 24, 1981 (Ref 3).

Currently the site is vacant. There are no buildings or other structures on-site. The site is densely vegetated (Photolog). Dumping of trash, wood waste, tires, etc. has occurred since site closure; however, there is no indication that dumping of hazardous wastes has occurred. Two monitoring wells were found on the northern edge of the site on it's eastern half (See Figure 2). A third monitoring well was found off-site in the middle of the Union Pacific railroad tracks near the other two wells. It is not known if these monitoring wells have been previously sampled for hazardous constituents. Other physical features of the site include; an intermittent creek that runs North-South through the middle of the site, and a sink hole on the northern side of the site. Site access is limited by a fence on the eastern border of the site with Centerville Road. The western edge of the site is not fenced and easy access can be gained by a dirt road that enters the site from the northwest corner of the site where it borders Commerce Road. This dirt road is used as an access for City of Garland Utility Workers to get to on-site power lines.

The site drains south into Mills Branch which is adjacent to the site. There is no single point of entry (PPE) as this site is adjacent to Mills Branch for over a mile of its length. Overland flow from the site will enter Mills Branch at numerous points along the southern site boundary. Mills Branch drains into Rowlett Creek less than 1 mile from the site. Rowlett Creek then outlets less than 1/2 mile south into Lake Ray Hubbard. Lake Ray Hubbard is used as a main water supply for the City of Dallas. The locations of the drinking water

intakes have not been determined. Lake Ray Hubbard was formed by damming the east fork of the Trinity River. The 15 mile downstream segment ends on the east fork of the Trinity River south of Lake Ray Hubbard. This site is located on properties that are partially within the Mills Branch floodplain (Ref 9); however it has not been determined if the landfill itself is within the 500 year floodplain.

Land use within 1/2 mile of the site includes industrial/public works, residential, undeveloped bottom land, and cemetery. Within 1/2 mile of the site to the northeast is East Garland Road Landfill (TXD980750582). An SI is currently being conducted, by Fluor Daniel, on the East Garland Landfill. An older residential area is within 1/2 mile southwest of the site. There is a residential area currently in development south of Mills Branch from the site. Land use to the north and east of the site is primarily industrial/public works, cemetery and undeveloped land. Land use to the west and northwest of the site is mixed commercial/residential. The industrial/public works businesses north and east of the site may be within 200 feet of the site. No residences, schools, commercial agriculture, or terrestrial sensitive environments are located within 200 feet of the site (Ref 12).

Mills Branch is a small creek that is not believed to be fished or have any other resource uses. Rowlett Creek is fished recreationally, particularly after rains which trigger spawning runs of white bass. There are no known drinking water intakes or other water resource uses along Rowlett Creek from the PPE to it's outlet into Lake Ray Hubbard. Lake Ray Hubbard is fished recreationally. The east fork of the Trinity River south of Lake Ray Hubbard is fished recreationally. There are no known drinking water intakes or other water resource uses along the east fork of the Trinity River from Lake Ray Hubbard to the end of the 15 mile downstream segment.

There are no municipal water wells in the City of Garland (Ref 6). The City of Garland receives its water from Lake Lavon. The City of Garland historically used ground water for its municipal water source; however, ground water has not been used since 1960. All municipal wells were abandoned and filled with sand and concrete. The depth to ground water for these wells (3,200 feet) and ground water temperature discouraged further use (Ref 6).

There are no federal or state designated sensitive environments near the site (Refs 7, 8). No federal or state designated endangered or threatened species are known to exist within 4 miles of the site (Ref 7, 8). The Texas Garter snake is a state Category 2 (under review) species and may inhabit terrestrial areas within 4 miles of the site (Ref 8).

The population surrounding the site is estimated as follows:

0 - 1/4 mile	759
1/4 - 1/2 mile	2,052
1/2 - 1 mile	7,309
1 - 2 miles	25,638
2 - 3 miles	29,348
3 - 4 miles	44,425

The population for the 0 - 1/4 mile ring was determined by a house count during the site reconnaissance (Ref 12). A total of 252 houses were determined to be within 1/4 mile of the site. A housing population density (3.01 persons per house) was determined (Ref 11). The population for the distance rings starting at greater than 1 mile were determined through the use of GEMS (Ref 15). The population for the 1/4-1/2 mile and 1/2-1 mile ring were determined by linearly interpolating the population density from the 0-1/4 mile ring to the 1-2 mile ring.

1.3 Site Specific Objectives

The primary objective of this site inspection is to document the presence, or absence, of hazardous materials both on-site and off-site. An HRS prescore for the site will then be determined. This information will indicate if the site warrants further investigation or if no further action is required.

This sampling plan will address all possible pathways of migration. Ground water samples will be taken from the two on-site monitoring wells to determine migration of contaminants to ground water. Sediment samples will be taken from the surface water pathway to determine potential migration of contaminants. The clay cover in place over the waste interred at this site will be sampled to determine potential exposures from both the soil exposure pathway and air pathway.

2.0 DATA REVIEW AND DATA COLLECTION

All previously collected sampling and non-sampling data are addressed in this section. Proposed data collection activities are also detailed.

No samples are known have been taken from this site at any time that have been analyzed for hazardous constituents. The City of Garland visually inspects this landfill every six months and to date there have been no signs of release (Ref 5).

All data collection activities will be conducted in accordance with the following documents:

- "Final Project Work Plan - Revision 1 for the Site Inspection Project, EPA Region VI, Volume I", June 9, 1992, Fluor Daniel.
- "Original Project Field Sampling Quality Assurance Project Plan for the Site Investigations, Region VI, EPA", July 5, 1992, Fluor Daniel.
- "CLP Users Guide", EPA Region VI, not dated.
- "Original Health and Safety Plan, Site Inspections", June 8, 1992, Fluor Daniel.

There are still many questions and data gaps concerning this site. It is expected that some of the site questions will go unanswered and some data gaps cannot be filled using appropriate references. However, an attempt will be made to answer all data gaps during the sampling event, and through additional contact with the State of Texas and the City of Garland. The list of data gaps is given in Table 1. Proposed sample locations and rationale are listed in Table 2. Figure 3 shows the proposed sample locations.

2.1 Source Waste Characterization

Sample analysis will consist of Target Compound List (TCL) organics and Target Analyte List (TAL) inorganics. The available records do not indicate that there are any particular constituents of concern for this site (Ref 2). Volatile organics are likely to be present through the decomposition of organic materials interred at the landfill. The presence of semivolatiles

is possible from many waste types, including construction wastes. Pesticides and PCBs are of concern because they may have been mixed with other waste types (i.e. construction wastes) disposed at this site. Inorganics may originate from many waste types. Cyanides may be present from plating wastes and other metal processing wastes. However, significant amounts of industrial waste are not believed to be interred at the site.

2.9 Ground Water Migration Pathway

The site is located in the western portion of the East Texas Basin Province. The regional geologic setting is characterized by mixed, thick sequence of terrigenous (sandstone, siltstone, shale) and carbonate (limestone, dolomite) units that appear relatively undeformed. The general orientation of these strata, including the regional fault pattern, is northeast-southwest. The local geological setting is described as the Ozan formation ("lower Taylor marl"), which has a thickness of greater than 500 feet (Ref 13). The native clays have variable permeability and are characterized by moderate to very high shrink-swell (Ref 14). The annual precipitation in the Garland area is approximately 35 inches per year (Ref 15).

This site is built upon an area of clays of variable permeability. The leaching potential from the bottom of the landfill to ground water may be significant. The potential for horizontal migration through the soils may also be significant. The two on-site monitoring wells will be sampled to determine migration of contaminants to ground water.

The City of Garland and adjacent cities rely completely on surface water (Lake Lavon or Lake Ray Hubbard) for domestic water use. No municipal wells are known to exist within 4 miles of the site. There are no known private drinking water wells within 1 mile of the site. Therefore, no drinking water well samples will be taken as part of this SI.

2.1 Surface Water Migration Pathway

The site drains south into Mills Branch which is adjacent to the site. There is no single point of entry as this site is adjacent to Mills Branch for over a mile of its length. Overland flow from the site will enter Mills Branch at numerous points along the southern site boundary. Mills Branch drains into Rowlett Creek less than 1 mile from the site. Rowlett Creek then outlets less than 1/2 mile south, into Lake Ray Hubbard. Lake Ray Hubbard is used as a

..er supply for the City of Dallas and other municipalities. The locations of the drinking water intakes have not been determined. Lake Ray Hubbard was formed by damming the east fork of the Trinity River. The 15 mile downstream segment ends on the east fork of the Trinity River, south of Lake Ray Hubbard. There are no Federal or State designated sensitive environments along the 15 mile downstream segment; however, there may be wetlands along the 15 mile downstream segment.

The sampling plan has been designed to determine the potential migration of materials by sampling soil at the site and sampling sediment at Mills Branch. Since there is no single PPE for the site, the surface water sediment characterization will be accomplished by sampling sediment on the western site boundary (background sample) and eastern site boundary to document a possible release to the surface water pathway.

2.2 Soil Exposure Pathway

Business and public works facilities on the north side of the Union Pacific railroad tracks and across Centerville Road may be located within 200 feet of the site. No residences, schools, day care facilities, or terrestrial sensitive habitats are located within 200 feet of the site (Ref 13). Currently the site is vacant. A dirt road runs on the north edge of the site. This road is believed to be used by City of Garland utility workers to obtain access to on-site power lines. The site has been used for dumping of trash, wood waste, tires, etc. It is likely that the site is used for recreational purposes, such as horseback riding and walking dogs. Soil erosion is limited due to the flat terrain of the site and the site's thick vegetation.

The sampling plan has been designed to characterize the site, and to determine if nearby workers are within 200 feet of observed contamination, by taking soil and sediment samples in the landfill cells. Background soil samples will be taken east and north of the site, in open fields.

2.3 Air Migration Pathway

The site has a 2 foot clay soil cover and is densely vegetated. Therefore, the air pathway risk from non-volatile hazardous compounds is minimal. There was no observed gas release on-site; however, gas formation through waste decomposition must be occurring. Therefore,

samples will be taken in the clay cover to determine what gas constituents are available to the air migration pathway.

3.0 PROJECT MANAGEMENT

Key personnel, level of effort and project schedule are addressed in this section of the report.

The EPA project manager for this site is Mr. Lonnie Ross.

The SI Project Manager for Fluor Daniel is Mr. Jonathan Stewart. Mr. Stewart is responsible for the day-to-day management of all SI tasks associated with the work assignment. He is the key point of contact to the EPA Project Manager.

The Team Leader for Fluor Daniel for the Quail Creek Landfill Site is Mr. William Walters. He will obtain site access, perform the site reconnaissance, prepare the sampling plan, direct field activities and prepare the final report.

Ms. Jean Koeninger will be responsible for coordinating all sample documentation, including the CLP paperwork.

One additional staff member will assist with sampling, decontamination and documentation.

The sampling inspection is scheduled for the week of July 12, 1993.

4.0 REFERENCES

1. U.S. Geological Survey, 7.5 minute topographic map, Rowlett, Tex., 1959 (photorevised 1968 and 1973).

2. Texas Department of Health, "Potential Hazardous Waste Site Identification and Preliminary Assessment", February 24, 1981.

3. Texas Department of Health, "Potential Hazardous Waste Site Final Strategy Determination", February 24, 1981.

4. Record of Telephone Conversations between Tom Casabonne, Fluor Daniel, and the Dallas County Tax Office (various personnel). March 22-30, 1993.

5. Record of Telephone Conversation between Tom Casabonne, Fluor Daniel, and Ken Smith, Landfill Director City of Garland Sanitation Department. March 16, 1993.

6. Record of Telephone Conversation between Josh Sacker, Fluor Daniel, and Jack May, City of Garland Water Department. April 8, 1993.

7. Record of Telephone Conversation between Josh Sacker, Fluor Daniel, and Jeff Reed, U.S. Fish & Wildlife Service Ecological Division. April 7, 1993.

8. Record of Telephone Conversation between Josh Sacker, Fluor Daniel, and Dorinda Sullivan, State of Texas Parks & Wildlife. April 7, 1993.

9. Federal Emergency Management Agency, Flood Insurance Rate Maps, Garland, Texas, Community-Panel Number 485471 0020 D, Map Revised Date August 15, 1990.

10. Record of Telephone Conversation between Tom Casabonne, Fluor Daniel, and Ken Smith, Landfill Director City of Garland Sanitation Department. April 5, 1993.

11. County and City Data Book. U.S. Department of Commerce, Bureau of the Census. Pg 715. 1988.

12. Quail Creek Landfill Reconnaissance Field Notebook. William Walters. 5/12/93.

13. Geologic Atlas of Texas, Dallas Sheet. Bureau of Economic Geology, the University of Texas at Austin. 1972.

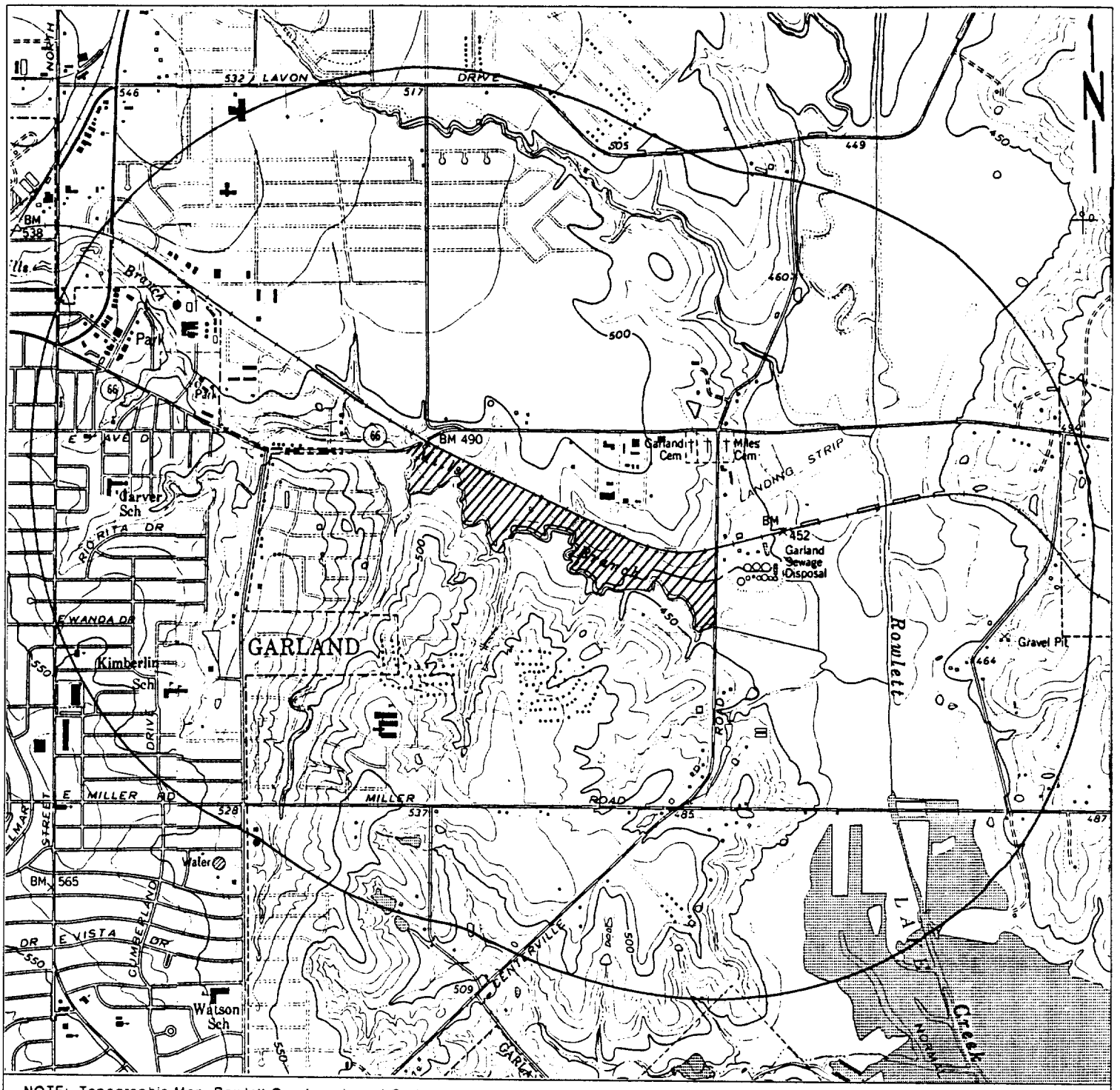
14. Soil Survey of Dallas County, Texas. United States Department of Agriculture, Soil Conservation Service. Pgs 25, 27, 28, 29, 36, 78, 144 & 145. February, 1980.

15. Geographic Exposure Modeling System, Census data for the Quail Creek Landfill Site, Garland, Texas. May 13, 1993.

FIGURE 1

SITE LOCATION MAP

H:\635341\230\QUAILCRK.WPL



NOTE: Topographic Map, Rowlett Quadrangle and Garland Quadrangle. 1959. Photorevised 1968 (Garland 1967) and 1973

SCALE 1:24 000

1 ½ 0 1 MILE

1000 0 1000 2000 3000 4000 5000 6000 7000 FEET

1 .5 0 1 KILOMETER

QUADRANGLE LOCATION

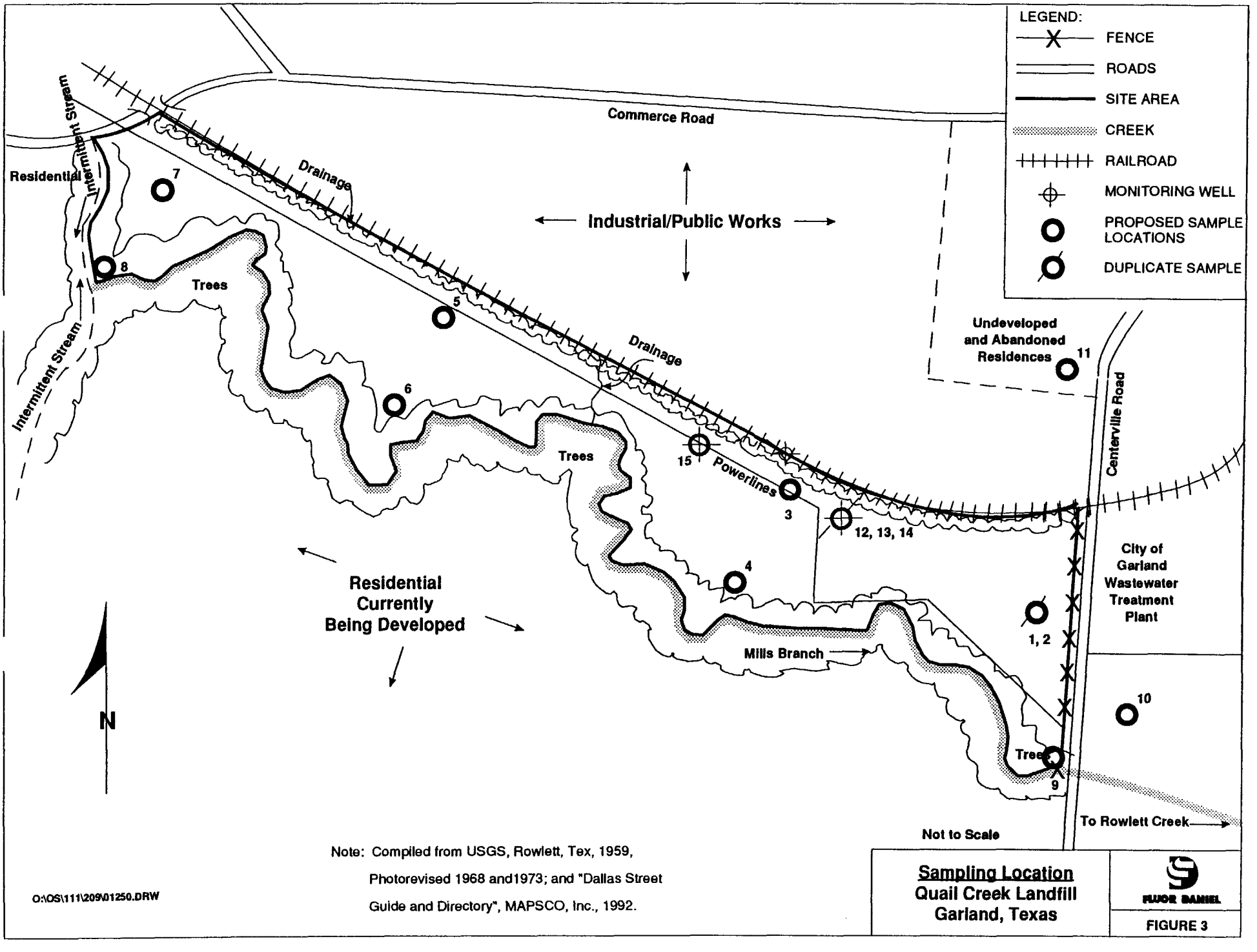
Location Map

Quail Creek Landfill

Garland, Texas

FLUOR DANIEL

Figure 1



Note: Compiled from USGS, Rowlett, Tex, 1959, Photorevised 1968 and1973; and "Dallas Street Guide and Directory", MAPSCO, Inc., 1992.

O:\OS\111\209\01250.DRW

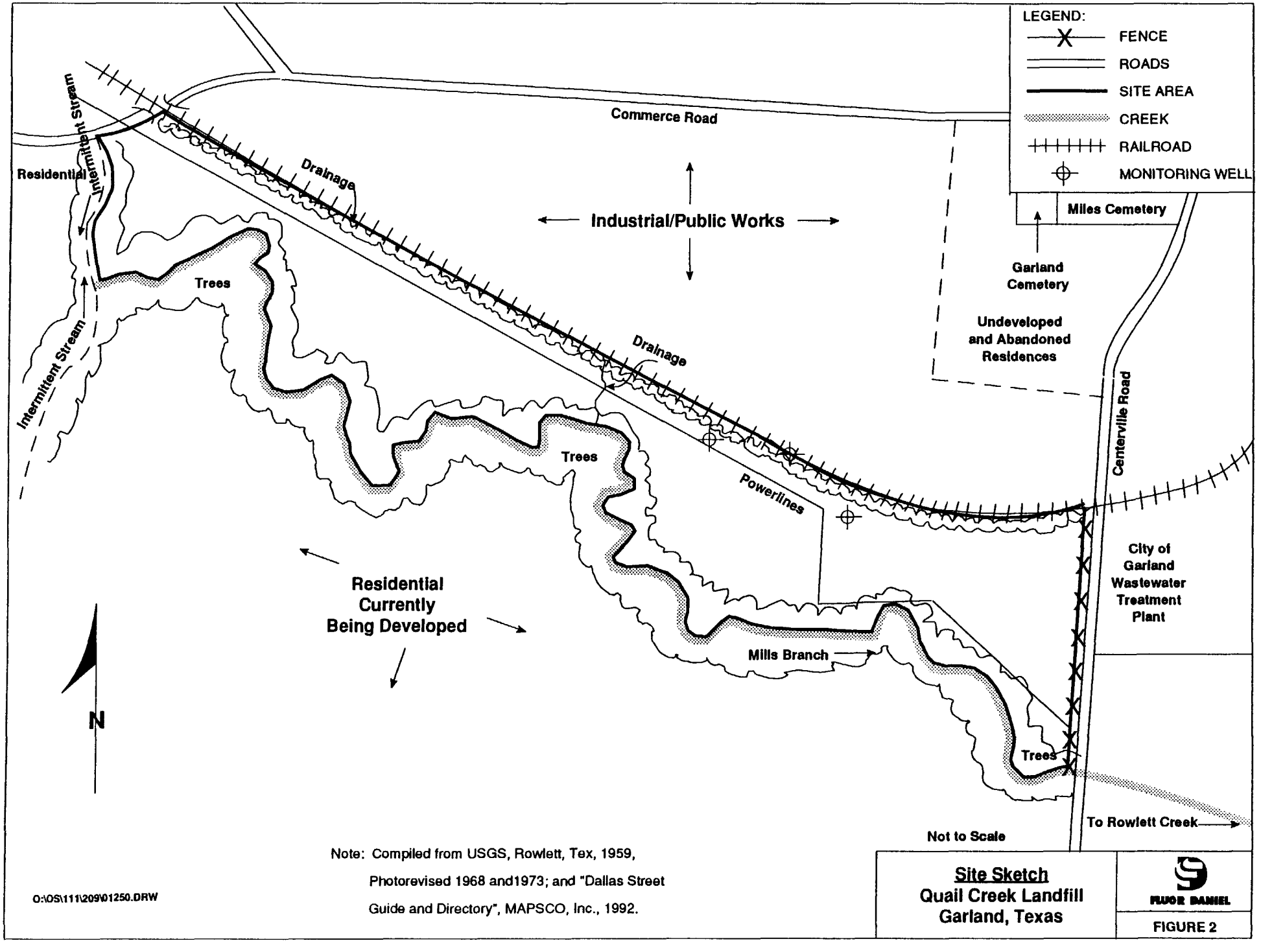
Sampling Location
Quail Creek Landfill
Garland, Texas

FLUOR DANIEL

FIGURE 3

FIGURE 2

SITE SKETCH



Note: Compiled from USGS, Rowlett, Tex, 1959, Photorevised 1968 and1973; and "Dallas Street Guide and Directory", MAPSCO, Inc., 1992.

O:\OS\111\209\01250.DRW

Site Sketch
Quail Creek Landfill
Garland, Texas

FLUOR DANIEL

FIGURE 2

FIGURE 3

SAMPLE LOCATIONS

TABLE 1

NON-SAMPLING DATA GAPS

TABLE 1

NON-SAMPLING DATA GAPS

Landfill Data

- What is the depth of the waste?

- Additional site history would be helpful to fully characterize the site (Were there any other historic activities conducted on this site? Has fuel been stored on-site for the earth moving equipment used at the site?).

- Are there any new or proposed state or local regulations that will impact this site? Will the State of Texas or the City of Garland eventually require leachate collection or soil gas extraction?

Ground Water Pathway Data

- Are there any municipal ground water wells within a four mile radius of the site? If any, what population do they serve? How many private wells are within a four mile radius of the site? Are these private wells used as a resource (i.e. for agriculture, livestock, etc.), as potable water, or both?

- What is the depth to ground water? What is depth of aquifers currently being used within 4 miles of the site? What are the aquifer interconnections?

- What is the soil permeability from the surface to the uppermost used or interconnected aquifer? What is the thickness of the least permeable layer?

- Does ground water connect with surface water within 1 mile of the site?

- Who installed the two monitoring wells found on-site during the site reconnaissance? Is there analytical data available from samples taken from these monitoring wells?

TABLE 1 (cont'd)
NON-SAMPLING DATA GAPS

Surface Water Pathway Data

- What is the flow rate of Mills Branch? What is the flow rate of Rowlett Creek? What is the flow rate of the east fork of the Trinity River south of Lake Ray Hubbard? Are there any resource uses for the water from Mills Branch, Rowlett Creek, or the east fork of the Trinity River within the 15 mile downstream segment?

- Is Mills Branch fished? If yes, what is the fish productivity (pounds per year) from the PPE to Rowlett Creek? Is Rowlett Creek fished? If yes, what is the fish productivity from Mills Branch to Lake Ray Hubbard? What is the fish productivity in Lake Ray Hubbard? Is the east fork of the Trinity River fished? If yes, what is the fish productivity in the east fork of the Trinity River from Lake Ray Hubbard to the end of the 15 mile segment?

- What is the total annual surface water and ground water recharge into Lake Ray Hubbard?

- Where are the water intakes located in Lake Ray Hubbard? What population does Lake Ray Hubbard serve? What kind of water treatment is performed on water taken from the lake prior to its distribution? Is there any available water quality data for hazardous constituents?

- What is the total length of wetlands along the surface water pathway?

- Is the site area in the Mills Branch floodplain?

Air Pathway Data

- Is there any direct evidence of biogas release from the landfill?

- What is the acreage of wetlands within a 4 mile radius of the site?

TABLE 2

SAMPLING LOCATIONS AND RATIONALE

6

TABLE 2
SAMPLING LOCATIONS AND RATIONALE

Sample 1
Low concentration soil sample: Collected from the landfill cell on eastern side of the site near its border with Centerville Road. This is also the QA/QC soil sample.

Rationale: To determine potential contamination on-site (source characterization). Also, to help determine the quality control of the analyses performed on the soil samples taken as part of this SI.

Sample 2
Low concentration soil sample: Duplicate of Sample 1.

Rationale: To determine potential contamination on-site (source characterization). Also, to help determine the quality control of the analyses performed on the soil samples taken as part of this SI.

Sample 3
Low concentration soil sample: Collected from the landfill cell at the northern end of the site between the two on-site monitoring wells.

Rationale: To determine potential contamination on-site (source characterization).

Sample 4
Low concentration soil sample: Collected from the landfill cell at the southern end of the site, south of Sample 3.

Rationale: To determine potential contamination on-site (source characterization).

Sample 5
Low concentration soil sample: Collected from the landfill cell on the north side of the site, approximately 600 feet west of the intermittent stream that runs north-south through the middle of the site.

Rationale: To determine potential contamination on-site (source characterization).

Sample 6
Low concentration soil sample: Collected from the landfill cell on the south side of the site, approximately 600 feet west of the intermittent stream that runs north-south through the middle of the site.

Rationale: To determine potential contamination on-site (source characterization).

Sample 7
Low concentration soil sample: Collected from the landfill cell on the western side of the site, approximately 300 feet southwest of Commerce Road.

Rationale: To determine potential contamination on-site (source characterization).

TABLE 2 (cont'd)
SAMPLING LOCATIONS AND RATIONALE

Sample 8
Low concentration soil/sediment sample: Collected from the northern bank of Mills Branch on its western (upstream) border with the site.

Rationale: To document background soil/sediment concentrations.

Sample 9
Low concentration soil/sediment sample: Collected from the northern bank of Mills Branch on its eastern (downstream) border with the site.

Rationale: To document possible observed release to the surface water.

Sample 10
Low concentration soil sample: Collected from a field across Centerville Road and between the City of Garland water treatment plant on the north and Mills Branch on the south.

Rationale: To document background soil concentrations.

Sample 11
Low concentration soil sample: Collected from a field north of the site, south of Miles Cemetery and west of Centerville Road.

Rationale: To document background soil concentrations.

Sample 12
Low concentration ground water sample: Collected from the eastern monitoring well that was found during the site reconnaissance. This well is located adjacent to the dirt road on the north side of the site between Centerville Road and west of the intermittent stream that runs north-south through the middle of the site.

Rationale: To document possible observed release to the ground water.

Sample 13
Low concentration ground water sample: Duplicate of Sample 12. This sample will also be the QA/QC ground water sample.

Rationale: To document possible observed release to the ground water and to help determine the quality control of the analyses performed on the ground water samples taken as part of this SI.

TABLE 2 (cont'd)
SAMPLING LOCATIONS AND RATIONALE

Sample 14
Trip blank: Taken at the same location as Samples 12 and 13.

Rationale: To help determine the quality control of the analyses performed on the ground water samples taken as part of this SI.

Sample 15
Low concentration ground water sample: Collected from the western monitoring well that was found during the site reconnaissance. This well is located adjacent to the dirt road on the north side of the site between Centerville Road and west of the intermittent stream that runs north-south through the middle of the site.

Rationale: To document possible observed release to the ground water.

ATTACHMENT 1

ADDENDUM TO THE GENERIC HEALTH AND SAFETY PLAN

ADDENDUM TO GENERIC HEALTH AND SAFETY PLAN
FOR SITE INSPECTION
QUAIL CREEK LANDFILL, TXD980697205
WA # 25-6JZZ

1.0 INTRODUCTION

The purpose of this addendum is to identify specific hazards, set action levels, define the levels of protection and to complete emergency response information for reconnaissance and sampling activities at the Quail Creek Landfill Site in Garland, Texas.

2.0 SITE DESCRIPTION

The Quail Creek Landfill Site is an inactive sanitary landfill located in Garland between the UP (formerly M.K.&T.) Railroad tracks on the north and Mills Branch (creek) on the south. The geographical coordinates of the center of the site are North 32°54'19" latitude and West 96°36'24" longitude.

The site encompasses approximately 35-40 acres. The City of Garland disposed of approximately 73000 tons of municipal solid waste into the landfill from May 1972 to March 1975. Only municipal solid waste was accepted at the site, no liquid or hazardous waste was accepted. Two feet of final cover was added to the surface of the landfill at the time of closure. No landfill controls, such as leachate collection or soil gas extraction are known to exist at this site. Two monitoring wells are known to exist on-site.

The site is currently vacant. There are no buildings or other structures on-site. The site is highly vegetated and a considerable amount of illegal dumping (wood waste, tires, garbage, etc.) has occurred on-site. The site access is limited by a fence along the Centerville Road border of the site. No other site fencing exists to limit site access. A dirt road exists on the north border of the site and has an unfenced outlet on the northwest corner of the site.

The site drains south into Mills Branch which is adjacent to the site. Mills Branch drains into Rowlett Creek less than 1 mile from the probable point of entry (PPE). Rowlett Creek then outlets, less than 1/2 mile south, into Lake Ray Hubbard. Lake Ray Hubbard is used as a main water supply for the City of Dallas and other municipalities. Lake Ray Hubbard was formed by damming the east fork of the Trinity River. The 15 mile downstream segment ends on the east fork of the Trinity River south of Lake Ray Hubbard.

3.0 HAZARDS

The following sections will describe, based on available information, the chemical and physical hazards associated with this site.

3.1 Chemical Hazards

This site has not been previously sampled; therefore no data exists to determine contaminants of concern. Two feet of final cover was placed upon the surface of the landfill as part of the site closure. This cover suggests that the chemical exposure hazards will be minimal. However, proper protective equipment will be used to minimize chemical exposure.

3.2 Physical Hazards

The physical hazards are heat stress; and trip/fall hazards. Control of heat stress injuries is described in the appendix of the generic HASP. Severe injuries could occur due to trip/fall hazards on this site. Another hazard that may be encountered at this site is poisonous snakes (rattlesnakes or cottonmouths) and fire ants.

4.0 MONITORING

There is no information to suggest that any particular hazardous constituent exists at the site. The vegetation at the site will severely limit the potential of airborne solids, but there is the potential for volatile organics to be released during the sampling investigation. Therefore, HNu monitoring will be performed to determine if volatile organic hazards may be present.

5.0 PERSONAL PROTECTIVE EQUIPMENT

Workers entering a potentially contaminated area must have protective equipment available for use. Since the existence, types, and concentration of hazardous constituents are not known for this site the level of protection that is required to be available will be Level C Protection and will consist of the following:

- Full face air purifying respirator with a high efficiency particulate filter and protection from acid gases and organic vapors;
- A 10-minute escape pack for each sampler;
- Polyethylene coated Tyvek with hood;
- Inner latex gloves;
- Outer nitrile gloves;
- Chemically resistant boots with steel toe/steel shank; and
- Hard hats.

The Tyvek coveralls, if used, will be taped at the wrists and ankles.

Due to this site being a closed municipal landfill that did not accept large quantities of liquid or hazardous wastes, the level of protection that is assumed to be necessary is Level D. The Site Task Leader will determine whether an upgrade to Level C is necessary during the sampling inspection, by the results of the HNu monitoring.

Decontamination procedures are defined in the body of the generic HASP and in the sampling plan.

6.0 EMERGENCY PROCEDURES

In the event an emergency situation arises, such as injury, illness, or fire, the appropriate immediate response must be taken by the first person to recognize the situation.

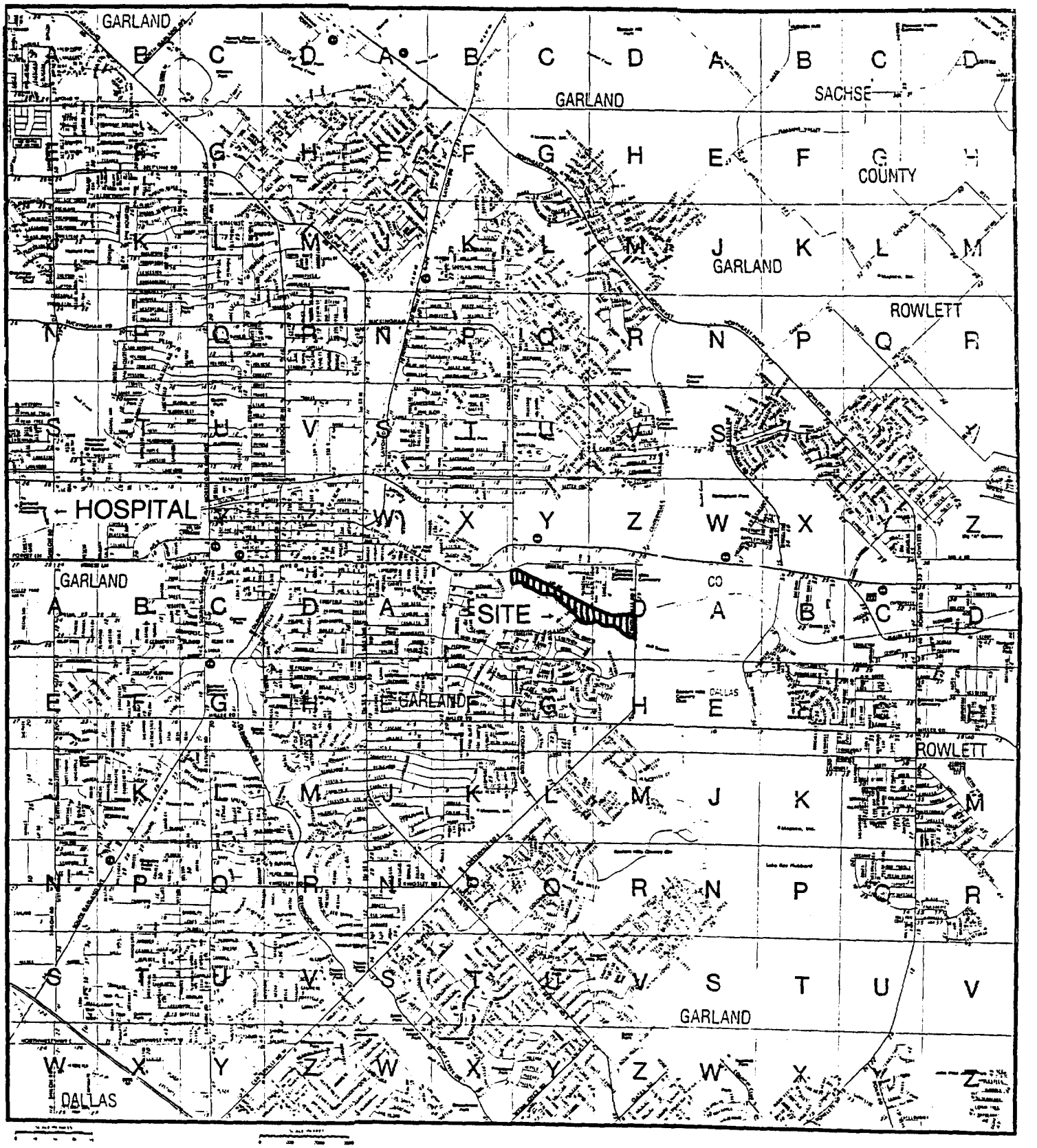
First aid equipment and an emergency eye wash unit will be available on-site. Should a worker be so severely injured that decontamination is not possible, the ambulance crew and hospital will be so notified.

A list of emergency contacts are provided below in order of contact. A route map and verbal route description to the hospital is attached to this addendum and will be posted at the site.

Police, Fire, or Ambulance	**911**
Fluor Daniel Health and Safety Manager	**(214) 450-4100**
EPA Work Assignment Manager	**(214) 655-8374**

OUTE TO GARLAND COMMUNITY HOSPI

276-7116



From Quail Creek Site:

Take Centerville Rd. north and travel approximately 0.5 miles. Turn left (west) on State Highway 66 and proceed for approximately 0.8 miles then turn right (north) on Country Club Rd. Go approximately 0.3 miles then turn left (west) on Walnut St. Proceed on Walnut St. for approximately 3.2 miles then turn left (south) on King St. Garland Community Hospital will be at the end of the driveway. (Alternative hospital is the Memorial Hospital of Garland. Directions are identical through Walnut. Go 2.8 miles on Walnut. Turn right [north] onto Clara Barton and go 0.15 miles to Marie Curie. Memorial Hospital is on the northeast side of the intersection.)

ATTACHMENT 2

BACKGROUND/SAMPLE STRATEGY

BACKGROUND/SAMPLE STRATEGY

Site: Quail Creek Landfill	**Conducted By:** W. Walters
Location: Garland, Texas	**Project Manager:** J. Stewart
Tentative field date: **Recon** 5/12/93	**Sampling** 7/12-7/16/93

PART I

Site Description (size, structures, extent of pavement)

The Quail Creek landfill is a closed municipal landfill used by the City of Garland. The former working area of the landfill is approximately 35-40 acres in size. A total of 73,000 tons of waste were disposed of in this landfill. The site is almost entirely covered in vegetation. No structures or pavement exist on-site. A dirt road runs along the north edge of the site.

Site Activity (years, processes, waste, disposal practices)

Past: This landfill, which only accepted municipal solid wastes, operated between May 1972 and March 1975.

Present: The landfill is currently sitting vacant.

Previous Sampling?	**YES**	**NO**	**COMMENT**
Groundwater	O	X	Monitoring wells exist but no sampling is known to have occurred.
Soil/Sediment	O	X	
Other	O	X	
Have any results been obtained? (Attach on separate page)	O	X	
Did sample analysis include QC/BKGD?	O	X	
Has any remediation occurred?	O	X	
Will samples be collected?	X	O	

H:\635341\230\QUAILCRK.BGD

BACKGROUND/SAMPLE STRATEGY
PART II

Sample Summary and Rationale

MATRIX	# OF SAMPLES	LOCATION	DEPTH	GRAB/COMP.
Soil	7	On-Site	Surface	Grab
Soil	2	Off-Site	Surface	Grab
Sediment	2	Off-Site	Surface	Grab
Groundwater	3	On-Site	TBD	Grab
Trip blank	1			

Sample Analysis

MATRIX			ANALYSIS VOA	SEMI	PCB/PEST	INORG.	OTHER
Soil/Sediment	X	CLP	X	X	X	X	Cyanides
Groundwater	X	CLP	X	X	X	X	Cyanides
	O	CLP	O	O	O	O	_____
	O	CLP	O	O	O	O	_____

COMMENTS: Ten samples will be taken on-site, and four will be taken off-site. Two of the off-site samples are sediment samples along the surface water pathway and two others are background samples (note: on-site is defined as directly on top of areas of waste disposal). Three samples will be from on-site ground water monitoring wells. Additionally, a trip blank is required to be taken.

ATTACHMENT 3

PHOTOLOG

Photo No.

1

Site Name:
Quail Creek Landfill
CERCLIS # TXD980697205
Location:
Garland, Texas
Project #: WA #25-6JZZ

Photographer/Witness William Walters/William Park
Date 5/12/93 Time Afternoon Direction West
Description Panoramic from the eastern border of the site with Centerville Road. (Note: due to the extreme length of the site this photo only shows a small area of the site.)

Photo No.

2

Site Name:
Quail Creek Landfill

CERCLIS # TXD980697205 Photographer/Witness William Walters/William Parks

Location: Date 5/12/93 Time Afternoon Direction South

Garland, Texas Description Photo of extreme west side of site taken from the northwest corner of the site. Dumped materials visible in foreground.

Project #: WA #25-6JZZ

Photo No.

3

Page 2
Of 3

Photographer/Witness William Walters/Keith Westberry

Date 5/11/93 Time Morning Direction South

Description Photo of center area of landfill taken from northside. Dumped tires can be seen in the center of the photo.

Photo No.

4

Site Name:
Quail Creek Landfill

CERCLIS # TXD980697205 Photographer/Witness William Walters/William Park

Location: Garland, Texas Date 5/12/93 Time Afternoon Direction West

Description Photo of Mills Branch from Centerville Road Bridge.

Project #: WA #25-6JZZ

ATTACHMENT 4

CLP SAMPLE REQUEST FORM

ATTACHMENT 5
EVALUATION CHECKLIST

EVALUATION CHECKLIST

NOTE: Information must be referenced; attach a list of references.

Site Name: Quail Creek Landfill, City of Garland
TDD No.: TXD980697205
Reference No.: _____

1. SOURCE AREAS, CONTAINMENT, WASTE QUANTITY

Complete the following for each area where hazardous substances have been deposited, stored, disposed of, or placed, plus those soils that have become contaminated from migration of a hazardous substance.
(refer to Table 1, and Tables 2-5, 3-2, 4-2, 6-3 and 6-9)

Source Area	Containment	Waste Quantity
Landfill	2 feet of soil cover (Ref 1)	73,000 tons (Ref 2)

2. AVAILABLE ANALYTICAL DATA

For the media listed below, note if there is a documented observed release or the potential to release to that media. An observed is noted if a hazardous substance is detected at three times the background sample concentration or background sample quantitation limit. A potential to release is noted if wastes were disposed of in a source area which would allow contaminant migration. (refer to PA Data and Rescoring Record Table for additional criteria).

Media	Potential to Release	Observed Release	Comments
Groundwater	X		
Surface Water	X		
Sediment	X		
Soil < 2 feet deep	X		
Soil > 2 feet deep	X		
Air	X		
Other (specify, e.g., sludge, source)			

3. GROUNDWATER PATHWAY

A. Population served by private wells or drinking water supplies within the designated area rings. Note if the water supplies within that ring are private (P), community (C) or both (B). (reference with water supply distribution maps and topographic maps using the average county population density)

Distance (miles)	Population	Type of Supply (P.C. or B)
0 - 1/4	TBD	
1/4 to 1/2	TBD	
1/2 to 1	TBD	
1 to 2	TBD	
2 to 3	TBD	
3 to 4	TBD	

B. Are any of the supplies to the population noted above contaminated? ____Yes ____No __X__To be determined

If yes:

- What is the location of the well? _____
- What are the contaminants detected? _____
_____
- Are any health-based benchmarks exceeded (e.g., MCLs)?
____Yes ____No

C. What is the distance to the nearest drinking water well?
__TBD__ miles

D. What is the depth to groundwater on the property?
__TBD__ feet

4. SURFACE WATER PATHWAY

A. Identify the surface water bodies and flow rates (cubic feet per second, cfs) along a 15 stream-mile pathway. Identify the uses of each surface water body as:

DW = drinking water
I = irrigation of commercial food crops or commercial forage crops
L = watering of commercial livestock
FP = ingredient in commercial food preparation
R = major or designated recreation area
F = fishery

Surface Water Body	cfs	Use(s)
Mills Branch	TBD	TBD
Rowlett Creek	TBD	F
Lake Ray Hubbard	n/a	DW,I,L,FP,R,F
Trinity River (east fork)	TBD	F

B. Identify the population served by surface water intakes along the 15 stream-mile pathway.

Surface Water Body	cfs	Use(s)
Lake Ray Hubbard	n/a	

C. Are any of the intakes to the population noted above contaminated? ____Yes _X_No

If yes:

- What is the location of the intake?_____
- What are the contaminants detected? _____
_____
- Are any health-based benchmarks exceeded (e.g., MCLs)?
____Yes ____No

D. Are there any fisheries along the 15 stream-mile pathway that are contaminated? ____Yes _X_No

If yes:

- What is the location of the fishery?_____
- What are the contaminants detected? _____
_____
- Are any health-based benchmarks exceeded (e.g., MCLs)?
____Yes ____No

E. Identify sensitive environments noted on PA Table 5, along the 15 stream-mile pathway and note the surface water body it is on.

Sensitive Environment	Surface Water Body
None (Ref 3,4)	

F. Are there any sensitive environments along the 15 stream-mile pathway that are contaminated? ____Yes ____No

If yes:

- What is the location of the sensitive environment?
_____
- What are the contaminants detected? _____
_____

G. What is the distance to nearest surface water body?
_<100__feet (Mills Branch, Ref 5)

H. What is the flood frequency of the nearest surface water body? _TBD____years

5. SOIL EXPOSURE PATHWAY

A. What is the number of people who reside on the property or within 200 feet of contamination who occupy a residence, attend a school, or attend a day care center? 0 (Ref 6)

B. What is the number of workers on the property and at a workplace within 200 feet of contamination? TBD

6. AIR PATHWAY

A. Population residing within the designated area rings. (reference with topographic maps using the average county population density for populations from 0 to 1/2 mile, and with GEMS for 1/2 to 4 miles)

Distance (miles)	Population
0 - 1/4	759 (Ref 6, 7)
1/4 to 1/2	2,052 (interp. Ref 6, Ref 8)
1/2 to 1	7,309 (interp. Ref 6, Ref 8)
1 to 2	25,638 (Ref 8)
2 to 3	29,348 (Ref 8)
3 to 4	44,425 (Ref 8)

B. Determine the wetland acreage for the following rings:

Distance (miles)	Total Wetland Acreage
0 - 1/4	TBD
1/4 to 1/2	TBD
1/2 to 1	TBD

References

1. Record of Telephone Conversation between Tom Casabonne, Fluor Daniel, and Ken Smith, Landfill Director City of Garland Sanitation Department. April 5, 1993.

2. Texas Department of Health, "Potential Hazardous Waste Site Identification and Preliminary Assessment", February 20 1981.

3. Record of Telephone Conversation between Josh Sacker, Fluor Daniel, and Jeff Reed, U.S. Fish & Wildlife Service Ecological Division. April 7, 1993.

4. Record of Telephone Conversation between Josh Sacker, Fluor Daniel, and Dorinda Sullivan, State of Texas Parks & Wildlife. April 7, 1993.

5. U.S. Geological Survey, 7.5 minute topographic map, Rowlett, Tex., 1959 (photorevised 1968 and 1973).

6. Quail Creek Landfill Reconnaissance Field Notebook. William Walters. 5/12/93.

7. County and City Data Book. U.S. Department of Commerce, Bureau of the Census. Pg 715. 1988.

8. Geographic Exposure Modeling System, Census data for the Quail Creek Landfill Site, Garland, Texas. May 13, 1993.

Ref 10

FLUOR DANIEL

RECORD OF TELEPHONE CONVERSATION

FROM: Tom Casabonne TJC

DATE: 4-5-93

LOCATION: Irvine, X6657

TIME: 9:00 am

TO: Ken Smith (214) 205-2713

P.O. NO.

LOCATION: Garland, TX,

OTHER REF. Site access

Mr. Smith said that when a difference occurs between his records and the Dallas County Tax Office records regarding site ownership, he would defer to the county's records. The county had shown different ownership on sites such as Quail Creek, where Mr. Smith's records indicated owners such as Sunbelt Federal Savings. The county shows other owners (refer to my two previous telephone logs with Ken Smith and the County Tax Office). Mr. Smith also said to send letters to him when we request site access. He will also escort Fluor Daniel around the sites when a site visit is made.

He said that the 13 wells around the current site (Castle Drive) are 35 to 50 feet deep. The site has a clay liner which is a minimum of 3 ft. thick, and the state requires soil caps on closed landfills. He also has analytical data from the well monitoring program, although it was too much information for him to fax. All of the other sites in the area just have a natural clay liner, with approximately 2 ft. of topsoil for a cap. At the East Miller Road Site, Mr. Smith said that the Lakeview subdivision is not on the old site–it is approximately 100 ft. south of the site. The City of Dallas owns the land east of the East Miller Road site because it falls within the "take line" for Lake Ray Hubbard.

liners

MEMO TO: FILE

06635341

FILE

The City of Garland Quail Creek Landfill site is comprised of two parcels that are owned by separate parties. The owner of one of the parcels, Millcreek Associates Limited Partnership (agent: Mr. Donald Huffines), has denied access to their property. However, this property does not appear to have been in the area used for waste disposal. This property is south of Mills Branch and, as can be seen in the attached site map, the area south of Mills Branch was not used for waste disposal. Also the approved Work Plan does not include samples to be taken on this property. Therefore, access to this property is not considered necessary.

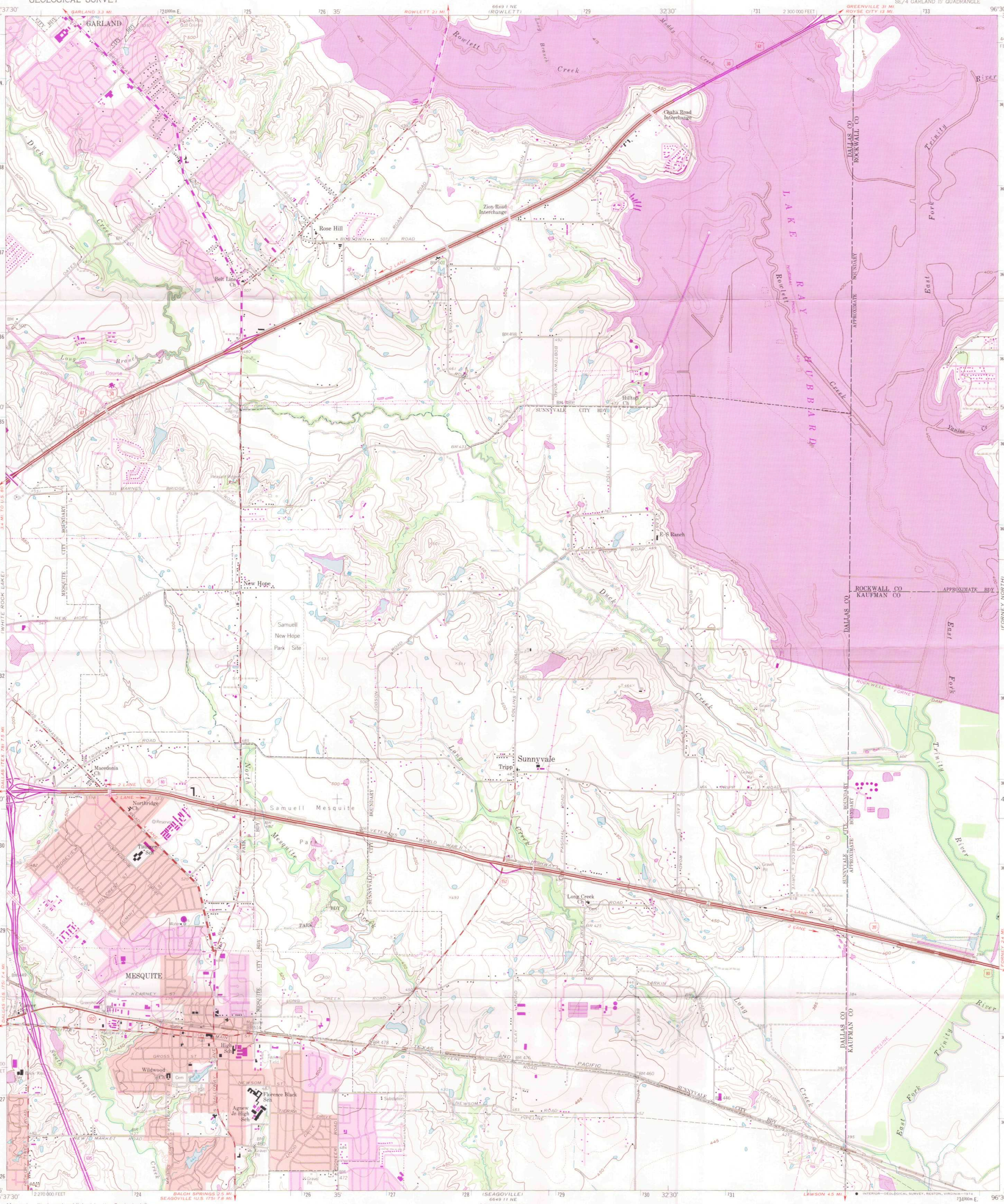
The owner of the other property, the large parcel north of Mills Branch, is four years delinquent in property taxes and has yet to be located. This property owner, noted in the County Tax Records to be Cambridge Consolidated, has yet to be served in the county tax case. The attached information from the City of Garland notes that the property, shown in tax records to be owned by Cambridge Consolidated, may have been quit claimed to one Mr. Joseph E. Casperone. During a discussion with the Dallas County Clerk's Office a quit claim for a road improvement easement was found; however, no quit claim to Joseph Casperone was noted to exist. The quit claim for the road improvement is included in the attached package. The City of Garland tried to contact Mr. Casperone at an Air Force Base in North Carolina, but were unsuccessful. The current address of Mr. Casperone and/or Cambridge Consolidated is not known.

In conclusion, the property owner of the important Quail Creek Landfill parcel is delinquent and efforts to locate the owner have been unsuccessful. We therefore request your authorization to sample this property without a signed access agreement.

REFERENCE 3

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

MESQUITE QUADRANGLE
TEXAS
7.5 MINUTE SERIES (TOPOGRAPHIC)
SE/4 GARLAND 15' QUADRANGLE



Mapped, edited, and published by the Geological Survey

Control by USGS and USC&GS

Topography from aerial photographs by photogrammetric methods
Aerial photographs taken 1956. Field check 1959

Polyconic projection. 1927 North American datum
10,000-foot grid based on Texas coordinate system, north central zone
1000-meter Universal Transverse Mercator grid ticks, zone 14, shown in blue

Red tint indicates areas in which only landmark buildings are shown

Revisions shown in purple compiled from aerial photographs taken 1968 and 1973. This information not field checked

Purple tint indicates extension of urban areas

MN
GN
1°19'
23 MILS
8°
142 MILS

UTM GRID AND 1973 MAGNETIC NORTH DECLINATION AT CENTER OF SHEET

SCALE 1:24 000

1 ½ 0 1 MILE

1000 0 1000 2000 3000 4000 5000 6000 7000 FEET

1 .5 0 1 KILOMETER

CONTOUR INTERVAL 10 FEET
DOTTED LINES REPRESENT 5-FOOT CONTOURS
DATUM IS MEAN SEA LEVEL

THIS MAP COMPLIES WITH NATIONAL MAP ACCURACY STANDARDS
FOR SALE BY U. S. GEOLOGICAL SURVEY, DENVER, COLORADO 80225, OR RESTON, VIRGINIA 22092
A FOLDER DESCRIBING TOPOGRAPHIC MAPS AND SYMBOLS IS AVAILABLE ON REQUEST

TEXAS
QUADRANGLE LOCATION

ROAD CLASSIFICATION

Heavy-duty — Light-duty
Medium-duty — Unimproved dirt
Interstate Route — U.S. Route — State Route

MESQUITE, TEX.
SE/4 GARLAND 15' QUADRANGLE
N3245—W9630/7.5

1959
PHOTOREVISED 1968 AND 1973
AMS 6649 I SE-SERIES

INTERIOR—GEOLOGICAL SURVEY, RESTON, VIRGINIA—1974

~~112560~~

2481

REFERENCE 4

WESTON
MANAGERS DESIGNERS/CONSULTANTS
SUITE 460
70 N.E. LOOP 410
SAN ANTONIO, TEXAS 78216
PHONE (210) 342-7810
FAX: (210) 342-3867

31 October 1994

Ms. Stacey Bennett
Work Assignment Manager
U.S. Environmental Protection Agency
Region VI
1445 Ross Avenue, 6E-SH
Dallas, Texas 75202

RE: ARCS Contract No: 68-W9-0015
Work Assignment 23-6JZZ
Chronology of Attempts to Gain Access
Quail Creek Land Fill Site
Document Control No.: 04603-023-0291

Dear Ms. Bennett:

In pursuant of your request, attached you will find the "attempt to obtain site access chronology" for the Garland Quail Creek Landfill. Documentation supporting the chronology is also attached.

Should you have any questions or require further assistance please contact me at (210) 342-7810.

Very truly yours,

ROY F. WESTON, INC.

ORIGINAL SIGNED

Robert B. Beck, P.E.
Project Manager

wp:arcs:46032330:bennett.o31

ATTEMPTS TO GAIN SITE ACCESS CHRONOLOGY

DATE	ACTION TAKEN
10/11/90	Mr. Brad Neighbor, assistant city attorney for the City of Garland, received a letter from Mr. Dwaine Carr (Carr and Finkbeiner P.A.) stating that Cambridge Consolidated has "no interest in the Quail Creek property in view of the quit claim deed previously made in favor of Joseph Casperone."
10/17/90	Mr. John Driskell, Engineering Director for the City of Garland, wrote a letter to Mr. Casperone asking for his cooperation in gaining access to the Quail Creek property.
3/22-30/93	Mr. Tom Casabonne of Fluor Daniel (FD) obtained records from the tax office of the Garland Independent School District that showed the Quail Creek property to be owned by Millcreek Associates Limited Partnership and Cambridge Consolidated.
4/5/93	Mr. Tom Casabonne telephoned Mr. Ken Smith in Garland to discuss the ownership of the Garland Quail Creek Landfill. His records, which differed from the Dallas County Tax Office records, indicated that Sunbelt Federal Savings owned the property.
4/12/93	Mr. William Walters of FD phoned Mr. Donald Huffines of Millcreek Associates Limited Partnership to discuss the property that his company purchased from Sun Belt Federal Savings. The particular property discussed is property that is west of the Garland Quail Creek Landfill.
8/10/03	Mr. Casabonne telephoned the legal firm handling the Quail Creek property case and spoke with Mr. Herb Flowers. Mr. Flowers informed Mr. Casabonne that Cambridge Consolidated, located at 5823 Edinburgh St., Dallas, TX 78252, were the owners of this site. Mr. Casabonne informed Mr. Flowers that the Edinburgh St. address is not valid, and suggested he speak with the Texas Secretary of State Office. The Secretary's office had no record of Cambridge Consolidated.
8/13/93	Mr. Casabonne telephoned the Dallas County Clerk's Office and spoke with a lady named Audrey in the Deeds Section. Audrey gave Mr. Casabonne a history of the property ownership. The property was previously owned by Cambridge Consolidated at an address that was listed in 1986. On November 16, 1990, the property was quit claimed to the city of Garland.
8/13/93	Mr. Casabonne spoke with Mr. Leon Curtis (City of Garland, Dept. of Engineering) and discovered that his office has no record of the city obtaining ownership of the property.

DATE	ACTION TAKEN
8/17/93	Mr. Casabonne spoke with Darlene of the Dallas County Clerk's office and confirmed what he had been told prior- the Quail Creek property belongs to the City of Garland. It had been quit claimed to the City of Garland in 1990. The quit claim document is attached.
8/19/93	Mr. William Walters of FD sent a letter to Mr. John Driskell, director of Engineering, City of Garland. Mr. Walters explained that FD would be sending an official access letter to the City of Garland.
8/24/93	Mr. John Driskell, engineering director for the City of Garland, sent a letter to Mr. Jonathan Stewart of the U.S. EPA stating that the city of Garland did not own the Quail Creek Landfill property. Quit claim document was also received.
12/9/93	Mr. Walters sent a letter to Mr. Walt Helmick of the U.S. EPA and explained the information obtained from the City of Garland indicating that the property may have been quit claimed to Mr. Joseph E. Casperone. The address of Mr. Casperone was not obtained.
12/15/93	Mr. Walt Helmick (EPA) spoke with and informed Mr. Jon Stewart (FD) that the EPA decided to spend some more time trying to find the owner of the Quail Creek property.
12/27/93	Mr. Jonathan Stewart of FD sent a letter to Mr. Dwaine Carr requesting information regarding Cambridge Consolidated.
12/28/93	Mr. Walters spoke with the Dallas Count Clerk's office and discovered that there was no record of a quit claim in the name of Mr. Joseph Casperone for Quail Creek Landfill property. The records indicated that Cambridge Consolidated owned the property.
1/12/94	Mr. William Walters of FD received a letter from Mr. Dwaine Carr which indicated that the only information he had relative to Cambridge Consolidated is that it was liquidated several years ago.
4/8/94	Mr. Walters contacted the Texas Secretary of State office and verified that there no registration for Cambridge Consolidated existed in corporate records, limited corporation or limited partnership records, or limited liability partnership records. Additionally, no records were found for Dwaine Carr, noted elsewhere as Cambridge Consolidated's agent.

DATE	ACTION TAKEN
4/14/94	Mr. Flowers, who is the attorney handling the county property tax case for the Quail Creek Landfill property, indicated to Mr. Walters of FD that the property owner had not been located to serve papers.
10/28/94	Mr. Billy Cress of Roy F. Weston, Inc. (WESTON) telephoned the Isle of Man newspaper and spoke with Rosy Gotrel. Ms. Gotrel faxed the legal notices section of the December 6, 1991 issue. It confirms the dissolution of Cambridge Consolidated.
10/28/94	Mr. Cress spoke with Mary Anne of the Texas Secretary of State office. Mary Anne faxed a "Certificate of Nonexistence" verifying Cambridge Consolidated is not registered as either a Texas or foreign corporation, limited partnership, or limited liability company.
10/31/94	Mr. Cress submitted a "Notice to Public" regarding the ownership of the Quail Creek property that will be published in both the *Dallas Morning News* and *Garland News* for two weeks starting the week of November 3, 1994.

Attachment 3

LAW OFFICES OF
CARR AND FINKBEINER, P. A.
469 NORTH ORANGE AVENUE
ORLANDO, FLORIDA 32801

DWAINE CARR
FRANK G. FINKBEINER

TELEPHONE (407) 423-0012
FAX (407) 839-5951

October 11, 1990

Brad Neighbor
First Assistant City Attorney
City of Garland
Post Office Box 469002
Garland, Texas 75046-9002

Re: Cambridge Consolidated Ltd.

Dear Mr. Neighbor:

I have signed and returned herewith the Quit Claim Deed on behalf of Cambridge Consolidated Ltd. As I explained to you on the telephone, it is the position of Cambridge that it has no further interest in this property in view of the Quit Claim Deed previously made in favor of Joseph Casperone, a copy of which you have. However, as I said, since it claims no interest, it can give you a Quit Claim Deed, just as it could give you a Quit Claim Deed to the Brooklyn Bridge. This is given solely for the purpose of clearing up the public records, so that the City of Garland may proceed with the road improvements.

Sincerely yours,

Dwaine Carr

DC/df
enclosures

CITY ATTORNEY
10:00 am/pm
OCT 16 1990
CITY OF GARLAND

City of Garland

Post Office Box 469002 / Garland, Texas 75046-9002

October 17, 1990

Mr. Joseph E. Casperone
No. 01996078
Seymour Johnson, A.F.B.
Goldsboro, North Carolina 27531

No reply

Re: Acquisition of Right-of-Way
Canterville Road, Garland, Texas

Dear Mr. Casperone:

The City of Garland, Texas, has begun a project to widen Canterville Road from its present two-lane asphalt configuration to a six-lane concrete thoroughfare.

Our research indicates that you may hold an interest in property that will be used in the widening of Canterville Road. According to the attorneys for Cambridge Consolidated, Ltd., that company quitclaimed its interest in the property to you. However, that quitclaim has not been filed for record in the deed records of Dallas County. Thus, we are unable to determine the exact status of title to the property and Cambridge Consolidated, Ltd. remains the record title holder.

We are asking for your cooperation in the Canterville Road project by executing the enclosed quitclaim. The City will waive all paving assessments that would otherwise be due against the owner of the property for the pro rata share of the cost of widening Canterville Road. Those assessments amount to $113,147.00 and bear interest at 7.118%.

Your assistance will be greatly appreciated. If you have any questions or if I can otherwise be of any help, please let me know.

Sincerely,

John G. Driskill

John G. Driskill, P.E.
Director of Engineering
(214) 205-2173
(214) 205-2474 FAX

JGD:ks
Enclosure

101790.21m.bn.ks

An Equal Opportunity Employer

CORD OF TELEPHONE CONVERSAT.

pg 1

FROM: Tom Casabonne TJC

LOCATION: Irvine, 552M

TO: Dallas County Tax Office

LOCATION: (214) 653-7811 (3) (1)

DATE: March 22-30, '93

TIME:

P.O. NO.

OTHER REF. Legal descriptions and owners

Before calling the Dallas County Tax Office, I first obtained tax account numbers for the various plots by calling the tax office of the Garland Independent School District at (214) 494-8570. Lisa Freeman looked up the sites on the plats in that office and faxed me the maps that we needed along with tax account numbers for each plot. She also sent me the most current owner information that she had. I verified and corrected that data by calling the Dallas County Tax Office and getting the information over the telephone. That information is shown below:

Miles Rd.

Tax Account No. 6502258010230001, located at 23 Miles Rd.
Legal Description: Abst 225, pg 580, Tr 23 [29.71 ac]
Owner: Joel Vaughn McCallum (9214 Miles Rd., Rowlett, TX 75088)

Castle & Miles

Tax Account No. 65022558010210000
Legal Description: Abst 225, pg 580, Tr 21 [59.92 ac]
Owner: City of Garland

Castle Drive

Tax Account No. 65022558010170000
Legal Description: Abst 225, pg 580, Tr 17 [127.50 ac]
Owner: City of Garland

Tax Account No. 65022558010150000
Legal Description: Abst 225, pg 580, Tr 15 [19.82 ac]
Owner: City of Garland

Tax Account No. 65022558010160000
Legal Description: Abst 225, pg 580, Tr 16 [2.0 ac]
Owner: City of Garland

The following parcels are small, adjacent plots which all belong to the City of Garland. The legal descriptions were not verified with the Dallas County Tax Office:

Tax Account No. 65095209 110500, located at 1100 State Hwy L
Legal Description: Abst 952, pg 090, Tr 11.5 [8.319 ac]
Owner: Millcreek Associates Limited Partnership (216 W. Main, Lewisville, TX 75057)

Tax Account No. 65095209010010000, located at 1520 Commerce.
Legal Description: Abst 952, pg 90, Tr 1 [49.9816 ac]
Owner: Cambridge Consolidated (5823 Edinburgh St., Dallas, TX 75252). The county Law Office is suing the owner to recover $19,806.82 in back taxes, which are owed from 1988-92. For more information, call the master court at (214) 653-6010 and ask about case no. 93-30070TA.

East Miller Rd.

Tax Account No. 65076136310370000
Legal Description: Abst 761, pg 363, Tr 37 [13.016 ac]
Owner: Oleta Mae Cannaday (301 Edgefield, Garland, TX 75040)

Tax Account No. 65076136310380000
Legal Description: Abst 761, pg 363, Tr 38 [1.0 ac]
Owner: F. T. Drum (2110 E. Miller Rd., Garland, TX 75043)

Tax Account No. 65168138010010000
Legal Description: Abst 1681, pg 380, Tr 1 [5.49 ac]
Owner: F. T. Drum (2110 E. Miller Rd., Garland, TX 75043)

Tax Account No. 65098225010010000
Legal Description: Abst 982, pg 250, Tr 1 [3.56 ac]
Owner: F. T. Drum (2110 E. Miller Rd., Garland, TX 75043)

FLUOR DANIEL

RECORD OF TELEPHONE CONVERSATION

FROM: William Walters, FD

LOCATION: Irvine, CA

TO: Deeds Section, Dallas County Clerk
(214) 653-7102

LOCATION: Dallas, TX

DATE: December 28, 1993

TIME: 1:00 pm PST

P.O. NO. 06635341

OTHER REF. Quail Creek Landfill

Subject: Property Owner of Quail Creek Landfill Site

The Dallas County Clerk's office could not find a quit claim in the name of Joseph Casperone for the Quail Creek Landfill property (Abstract 952, pg 90, Tr 1), that is noted in the tax records as being owned by Cambridge Consolidated. They did note that there were other properties quit claimed to a Mr. Joseph Casperone, but not the property in question.

QUAILCRK.TC2

Ref 10

FLUOR DANIEL

RECORD OF TELEPHONE CONVERSATION

FROM: Tom Casabonne TJC

DATE: 4-5-93

LOCATION: Irvine, X6657

TIME: 9:00 am

TO: Ken Smith (214) 205-2713

P.O. NO.

LOCATION: Garland, TX,

OTHER REF. Site access

Mr. Smith said that when a difference occurs between his records and the Dallas County Tax Office records regarding site ownership, he would defer to the county's records. The county had shown different ownership on sites such as Quail Creek, where Mr. Smith's records indicated owners such as Sunbelt Federal Savings. The county shows other owners (refer to my two previous telephone logs with Ken Smith and the County Tax Office). Mr. Smith also said to send letters to him when we request site access. He will also escort Fluor Daniel around the sites when a site visit is made.

He said that the 13 wells around the current site (Castle Drive) are 35 to 50 feet deep. The site has a clay liner which is a minimum of 3 ft. thick, and the state requires soil caps on closed landfills. He also has analytical data from the well monitoring program, although it was too much information for him to fax. All of the other sites in the area just have a natural clay liner, with approximately 2 ft. of topsoil for a cap. At the East Miller Road Site, Mr. Smith said that the Lakeview subdivision is not on the old site–it is approximately 100 ft. south of the site. The City of Dallas owns the land east of the East Miller Road site because it falls within the "take line" for Lake Ray Hubbard.

liners

FLUOR DANIEL

RECORD OF TELEPHONE CONVERSATION

FROM:	William Walters, FD	DATE:	April 12, 1993
LOCATION:	Irvine, CA	TIME:	4:30 pm PST
TO:	Donald Huffines (214) 420-1952	P.O. NO.	06635341
LOCATION:	Lewisville, TX	OTHER REF.	Quail Creek Landfill

Subject: **Access for property on Quail Creek**

After discussing the scope of the site reconnaissance inspection/sampling inspection Mr. Huffines gave verbal approv for access to ~~her~~ his property for the site reconnaissance. Mr. Huffines noted that they (Millcreek Associates Limite Partnership) bought several tracts from Sun Belt Federal Savings (noted by Ken Smith at City of Garland Sanitatic Department to be the current property owner). They are selling this land in individual plots to builders of the tract we of the landfill. Mr. Huffines noted that they had a Phase II assessment performed, on the section of property they a selling, and no problems were found. Mr. Huffines believes the piece of property we will be investigating is east the property they are selling. He noted that this particular piece of property was not salable for housing and they ha no purpose in mind for it at this time. Mr. Huffines asked if we could send the access letter to his business addres

1278 FM407 Suite 109
Lewisville, TX 75067

FLUOR DANIEL

RECORD OF TELEPHONE CONVERSATION

FROM: Tom Casabonne

DATE: Aug. 10, 1993

LOCATION: Irvine, 552M

TIME: 14:30

TO: Herb Flowers

P.O. NO.

LOCATION: Dallas, TX

OTHER REF. Cambridge Consolidated

Mr. Flowers works for the legal firm handling the Quail Creek property case (no. 93-30070TA). When I asked him wha his file shows for the name of the property owner, he gave me "Cambridge Consolidated," located at 5823 Edinburg St., Dallas, TX, 75252. When I told him that the Edinburgh St. address isn't valid, he looked further in the file. The have attempted to serve papers against Cambridge for the lawsuit (taxes haven't been paid on the property sinc 1989) but his file shows that Cambridge has still not been served, apparently because they cannot be locatec Eventually, the county may take possession of the property and sell it to pay off the taxes.

Mr. Flowers gave me the number of the Texas Secretary of State office in Austin, which is (512) 463-5555. When called them, they looked up "Cambridge Consolidated" but it wasn't listed in their files. Since they don't have it listec they also don't have an agent for it. (An agent is named for a firm which is incorporated, such as a limited partnershi or corporation. Those types of firm are listed at the state level, while general partnerships, joint ventures, an proprietorships are listed at the county tax appraiser offices, where we have already looked and found this firm liste at the Edinburgh St. address.) They gave me one more place to look in Dallas – the County Clerk's office. I trie calling that office but no one would answer the phone after my call was forwarded from the switchboard to the Deec Section. Since they closed at 4:30 pm (2:30 pm Pacific Standard Time), they can no longer be reached today. If th firm isn't listed by that office, the Secretary of State's office suggested that I call their Corporation Section at (512) 46: 5586 and speak to one of their attorneys for more advice.

FLUOR DANIEL

RECORD OF TELEPHONE CONVERSATION

FROM: Tom Casabonne TJC

DATE: Aug. 13, 1993

LOCATION: Irvine, 552M

TIME: 08:00

TO: Dallas County Clerk's Office

P.O. NO.

LOCATION: Dallas (214) 653-7131

OTHER REF. Cambridge Consolidated

I talked to a lady named Audrey in the Deeds Section. When I gave her the legal description of the Quail Creek property (refer to my phone log of March 22-30, '93), she was able to give me the history of the property ownership. She said that the property had belonged to Cambridge Consolidated, whose address was listed at 2550 Diamond Shamrock Tower, Lockbox 66, Dallas, TX, 75201. This address was listed in 1986, so I suspect that it was prior to the firm's address at Edinburgh Street in Dallas, which is the address given by the Tax Appraisal District.

On Nov. 16, 1990, the property was "quick-claimed" to the City of Garland. Audrey told me that the Tax Appraisal District doesn't like quick-claim deeds, although they <u>are</u> legal. That might explain why the Tax Appraisal District still lists Cambridge Consolidated as the owner, and they are still trying to collect back taxes from that year forward. She suggested that I call the Engineer's Office at the City of Garland. When I called their Right-of-Way office at (214) 205-2175, I was referred to Leon Curtis. He spoke to Ken Smith about it, but Ken thought the city had only leased the property. When I told Leon that the County Clerk's office had recorded the quick-claim in 1990, he said he would do more research on the property and get back to me by Monday evening (Aug. 16).

FLUOR DANIEL

RECORD OF TELEPHONE CONVERSATION

FROM: Leon Curtis

DATE: Aug. 13, '93

LOCATION: City of Garland

TIME: 14:45 PST

TO: Tom Casabonne TJC

P.O. NO.

LOCATION: Irvine, 552M

OTHER REF. Cambridge Consolidated

I had talked to Mr. Curtis [City of Garland, Dept. of Engineering, (214) 205-2175] earlier in the day regarding ownership of the Quail Creek site. The Dallas County Clerk had told me that Cambridge Consolidated no longer owned the property because it had been quick claimed to the City of Garland. After asking about it in his office, Leon called to say that they have no record of taking the property. He asked that we write them a letter stating who we are and why we need access to the property. The letter should go to:

John G. Driskill, PE
Director of Engineering, City of Garland
P.O. Box 469002
Garland, TX 75046-9002

In the letter, we should refer to the information obtained from the County Clerk's office.

FLUOR DANIEL

RECORD OF TELEPHONE CONVERSATION

FROM: Tom Casabonne

DATE: Aug. 17, 1993

LOCATION: Irvine, 552M

TIME: 12:30

TO: Dallas County Clerk's Office

P.O. NO.

LOCATION: Dallas (214) 653-7131

OTHER REF. Quail Creek

I spoke with a woman named Darlene in the Deeds Section [(214) 653-7248] of the County Clerk's Office. Sh confirmed what I had already been told last week: the Quail Creek property belongs to the City of Garland, havin been "quick claimed" to the city by Cambridge Consolidated in 1990. We can obtain a copy of the quick-claim dee by sending $2.00 to:

Dallas County Clerk's Office
509 Main Street
Dallas, TX 75202

Attn: Index Dept.

In the letter, we must also give the legal description of the property (Abst 952, pg 90, Tr 1) and the reference for th quickclaim deed (Vol 90226, pg 1385).

FLUOR DANIEL ARCS TEAM

Members: Fluor Daniel, Inc.
I.T. Corporation
PEI Associates, Inc.
Life Systems, Inc.

Program Office:
12790 Merit Drive
Suite 200, LB 169
Dallas, TX 75251
Tel (214) 450-4100
Fax (214) 450-4101

August 19, 1993

FDI/ARCS # 2169

John G. Driskill, PE
Director of Engineering, City of Garland
P.O. Box 469002
Garland, TX 75046-9002

CONTRACT NO. 68-W9-0013
SITE INSPECTIONS
QUAIL CREEK LANDFILL
WA #25-6JZZ

Dear Mr. Driskill:

Under a contract with the Alternative Remedial Contracting Strategy (ARCS) program of the U.S. Environmental Protection Agency, Fluor Daniel has been conducting field sampling for site assessments of sanitary landfills in the Garland area. Prior to working on any site, we must obtain permission from the property owners to gain access to the property.

One of the properties involved is located at 1520 Commerce Street, also known as the Quail Creek site (Legal Description: Abst 952, pg 90, Tr 1 [49.9816 acres]). According to the Tax Appraisal District, the property is owned by Cambridge Consolidated, 5823 Edinburgh Street, Dallas, TX 75252. We have not been able to locate this firm to obtain permission to work on the site. The Tax Appraisal District is also trying to locate Cambridge Consolidated because they are owed taxes on the property. Taxes were last paid in 1989.

In an attempt to locate Cambridge Consolidated we contacted the Deeds Section of the Dallas County Clerk's office (653-7131). We were told that the property was quit claimed to the City of Garland on November 16, 1990. Therefore, we will send the official access letter to the City of Garland within the next two weeks. Please call me, at (714) 975-2822, or Jonathan Stewart at (214) 450-4100 if you have any questions or comments regarding this property ownership determination.

Sincerely,

Jonathan Stewart

for William Walters
ARCS Task Manager

Jonathan Stewart

Jonathan Stewart
ARCS Project Manager

City of Garland

Post Office Box 469002 / Garland, Texas 75046-9002

August 24, 1993

Mr. Jonathan Stewart
ARCS Project Manager
12790 Merit Drive
Suite 200, LB 169
Dallas, TX 75251

Re: Site Inspection - Quail Creek Landfill - WA #25-6JZZ

Dear Mr. Stewart:

This responds to your letter of August 19, 1993 on this subject and confirms our telephone conversation of earlier today.

I do not believe that the City of Garland is the owner of the property located at 1520 Commerce Street, also known as the Quail Creek site.

A portion of that property was quit claimed to the City in November, 1990. A copy of the quit claim deed is attached. Dedications were for right-of-way, a slope easement, and a pedestrian and utility easement for a major paving and drainage project.

Also attached for your information is a letter from an attorney representing Cambridge, as well as a City of Garland letter to Mr. Joseph E. Casperone. Cambridge claims it had previously quit claimed the property to Mr. Casperone.

Please contact me at 205-2173 if there are questions on this or if I may be of further assistance in this matter.

Sincerely,

ENGINEERING AND STREET SERVICES

John G. Driskill

John G. Driskill, P.E.
Managing Director

cc: Brad Neighbor, First Assistant City Attorney
Lynn Norton
Ken Smith

QUITCLAIM

STATE OF TEXAS §
§ KNOW ALL MEN BY THESE PRESENTS
COUNTY OF DALLAS §

That CAMBRIDGE CONSOLIDATED LIMITED, a limited corporation organized under the laws of the United Kingdom and authorized to conduct business in the State of Texas, for and in consideration of Ten Dollars ($10.00), the receipt and sufficiency of which are hereby acknowledged, has QUITCLAIMED and by these presents does QUITCLAIM forever unto the City of Garland, Texas, its successors and assigns, all of its right, title and interest in and to those certain lots, tracts or parcels of land situated in Dallas County, Texas, and more particularly described in Exhibits "A," "B" and "C" and incorporated herein for all purposes.

EXECUTED this 10th day of October, 1990.

CAMBRIDGE CONSOLIDATED LIMITED

By: [signature]

Title: Attorney-in-Fact

ACKNOWLEDGMENT

STATE OF Florida §
§
COUNTY OF Orange §

The foregoing instrument was acknowledged before me on the 10th day of October, 1990, by Downing Carr, Attorney-in-Fact of Cambridge Consolidated Limited, a United Kingdom limited corporation authorized to do business in Texas, on behalf of the corporation.

[signature]
Notary Public in and for
the State of [illegible]

[illegible]
Printed Name of Notary

My Commission Expires: [illegible]

Exhibit "A"

RIGHT-OF-WAY FOR CENTERVILLE ROAD

Being a tract of land situated in the EDWARD MILLS SURVEY, ABSTRACT NO. 952 in the City of Garland, Dallas County, Texas and being a part of that land conveyed to David B. McKinnon and Claude L. Gilmore by Deed recorded in Volume 85089, Page 2743 of the Deed Records of Dallas County, Texas and being more particularly described as follows:

BEGINNING at the intersection of the South line of the Missouri-Kansas-Texas Railroad (100' R.O.W.) and the West line of Centerville Road (80' R.O.W.);

THENCE S 0° 11' 59" E, 1060.61 feet along the present West line of Centerville Road to a point in the center of Mills Branch for corner;

THENCE S 87° 42' 39" W, 20.01 feet upstream in Mills Branch to a point for corner;

THENCE N 0° 11' 59" W, 1057.44 feet parallel to and 50.00 feet West of the centerline of Centerville Road to a point in the South line of the Missouri-Kansas-Texas Railroad for corner;

THENCE Easterly along the South line of the Missouri-Kansas-Texas Railroad and along a curve to the left, said curve having a chord which bears N 78° 46' 31" E, 20.38 feet, a central angle of 0° 35' 44" and a radius of 1959.86 feet, for an arc distance of 20.38 feet to the point of beginning and containing 21,180 square feet or 0.486 acres of land more or less.

Exhibit "B"

Being a tract of land situated in the EDWARD MILLS SURVEY, ABSTRACT NO. 952 in the City of Garland, Dallas County, Texas and being a part of that land conveyed to David B. McKinnon and Claude L. Gilmore by Deed recorded in Volume 85089, Page 2743 of the Deed Records of Dallas County, Texas and being more particularly described as follows:

BEGINNING at the intersection of the South line of the Missouri-Kansas-Texas Railroad (100' R.O.W.) and the new West line of Centerville Road (100' R.O.W.);

THENCE S 0° 11' 59" E, 1057.44 feet along the new West line of Centerville Road to a point in the center of Mills Branch for corner;

THENCE S 87° 42' 39" W, 50.61 feet upstream in the center of Mills Branch to a point for corner;

THENCE N 0° 59' 32" W, 392.46 feet to a point for corner;

THENCE N 4° 41' 58" E, 351.28 feet to a point for corner;

THENCE N 8° 10' 10" W, 100.98 feet to a point for corner;

THENCE N 0° 11' 59" W, 209.72 feet to a point in the South line of the Missouri-Kansas-Texas Railroad for corner;

THENCE Easterly along the South line of the Missouri-Kansas-Texas Railroad and along a curve to the left, said curve having a chord which bears N 79° 40' 01" E, 40.63 feet, a central angle of 1° 11' 17" and a radius of 1959.86 feet, for an arc distance of 40.64 feet to the point of beginning and containing 47,043 square feet of land more or less.

Exhibit "C"

Being a tract of land situated in the EDWARD MILLS SURVEY, ABSTRACT NO. 952 in the City of Garland, Dallas County, Texas and being a part of that land conveyed to David B. McKinnon and Claude L. Gilmore by Deed recorded in Volume 85089, Page 2743 of the Deed Records of Dallas County, Texas and being more particularly described as follows:

BEGINNING at the intersection of the South line of the Missouri-Kansas-Texas Railroad (100' R.O.W.) and the new West line of Centerville Road (100' R.O.W.);

THENCE S 0° 11' 59" E, 1057.44 feet along the new West line of Centerville Road to a point in the center of Mills Branch for corner;

THENCE S 87° 42' 39" W, 10.01 feet upstream in the center of Mills Branch to a point for corner;

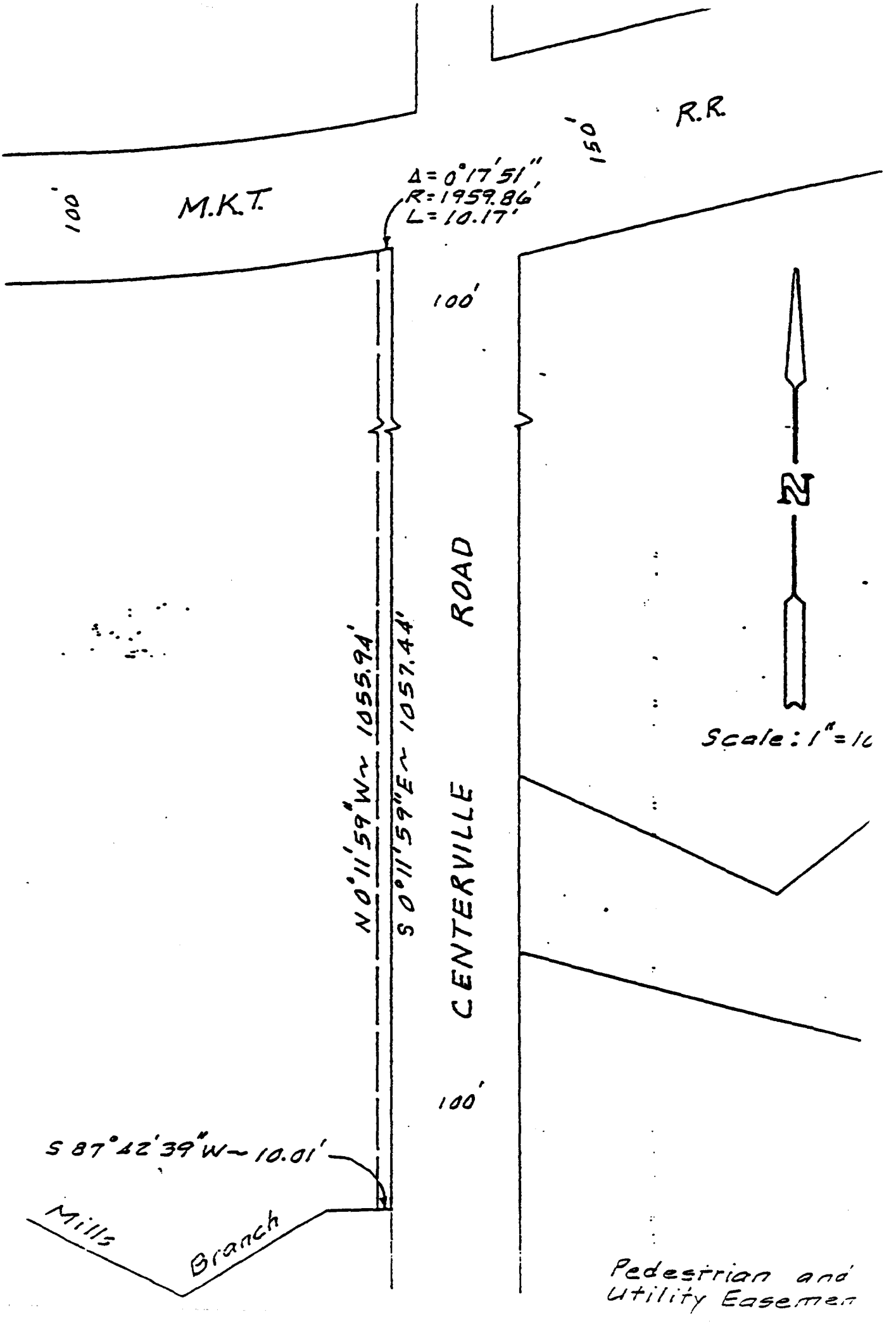
THENCE N 0° 11' 59" W, 1055.94 feet to a point in the South line of the Missouri-Kansas-Texas Railroad for corner;

THENCE Easterly along the South line of the Missouri-Kansas-Texas Railroad and along a curve to the left, said curve having a chord which bears N 79° 13' 18" E, 10.17 feet, a central angle of 0° 17' 51" and a radius of 1959.86 feet, for an arc distance of 10.17 feet to the point of beginning and containing 10,567 square feet of land more or less.

Right-of-Way

Mills Branch
S87°42'39"W ~ 20.01'
60'
Scale: 1" = 100'
N
N 0°11'59"W ~ 1057.44'
S 0°11'59"E ~ 1060.61'
21,180 S.F.
CENTERVILLE ROAD
80'
M.K.T.
100'
Δ = 0°35'44"
R = 1959.86'
L = 20.38'
RR.
150'

Δ=1°11'7"
R=1959.6'
L=40.64'
100'
N 0°11'59"W
209.72'
N 8°10'10"W
100.98'
N 4°41'58"E ~ 351.28'
S 0°11'59"E ~ 1057.44'
CENTERVILLE ROAD
47,043 S.F.
N 0°59'32"W ~ 392.46'
S 87°42'39"W ~ 50.61'
100'
Mills Branch
Rowlett Creek Plant
Addition
City of Garland
N
Scale: 1" = 100'
Slope Easement


R.R.
150'
100'
M.K.T.
Δ = 0°17'51"
R = 1959.86'
L = 10.17'
100'
N
ROAD
N 0°11'59"W ~ 1055.94'
S 0°11'59"E ~ 1057.44'
CENTERVILLE
Scale: 1" = 10
100'
S 87°42'39"W ~ 10.01'
Mills
Branch
Pedestrian and
Utility Easemen

FLUOR DANIEL ARCS TEAM

Members: Fluor Daniel, Inc.
I.T. Corporation
PEI Associates, Inc.
Life Systems, Inc.

Program Office:
12790 Merit Drive
Suite 200, LB 169
Dallas, TX 75251
Tel (214) 450-4100
Fax (214) 450-4101

December 9, 1993

FDI/ARCS # 2394

U.S. Environmental Protection Agency
Attn: Walt Helmick (6E-SH)
Work Assignment Manager
Region VI
1445 Ross Avenue
Suite 1000
Dallas, Texas 75202

CONTRACT NO. 68-W9-0013
GARLAND QUAIL CREEK LANDFILL
EPA I.D. #TXD980697205
WA # 25-6JZZ

Dear Mr. Helmick:

The City of Garland Quail Creek Landfill site is comprised of two parcels that are owned by separate parties. The owner of one of the parcels, Millcreek Associates Limited Partnership (agent: Mr. Donald Huffines), has denied access to their property. However, this property does not appear to have been in the area used for waste disposal. This property is south of Mills Branch and, as can be seen in the attached site map, the area south of Mills Branch was not used for waste disposal. Also, the approved Work Plan does not include samples to be collected from this property. Therefore, access to this property is not considered necessary.

The owner of the other property, the large parcel north of Mills Branch, is four years delinquent in property taxes and has yet to be located. This property owner, noted in the County Tax Records to be Cambridge Consolidated, has yet to be served in the county tax case. The attached information from the City of Garland notes that the property owned by Cambridge Consolidated may have been quit claimed to Mr. Joseph E. Casperone. During a discussion with the Dallas County Clerk's Office, a quit claim for a road improvement easement was found (attached); however, no quit claim to Joseph Casperone was noted to exist. The City of Garland tried to contact Mr. Casperone at an Air Force Base in North Carolina, but were unsuccessful. The current address of Mr. Casperone and/or Cambridge Consolidated is not known.

In conclusion, the property owner of the pertinent Quail Creek Landfill parcel is delinquent and efforts to locate the owner have been unsuccessful. We therefore request your authorization to sample this property without a signed access agreement.

Sincerely,

William Walters
ARCS Environmental Scientist

Jonathan Stewart
ARCS Project Manager

pc: Project File

RECORD OF TELEPHONE CONVERSATION

From: Walt Helmick **Date:** 12-15-93

Location: EPA, Dallas 655-8373 **Time:** 10:15

Subject: Quail Creek Landfill

To: Jonathan Stewart **P.O. Number:**

Location: Fluor Daniel, Dallas

Other Ref.: (915) 684-5698

Mr. Helmick called concerning the status of Quail Creek Landfill. He said EPA decided to spend some more time to try find the owner of the property. The EPA attorney suggested to track thru the military–the Base Commander. They want us to try to find out where he was transferred. Keep track of the hours expended in doing this effort.

If we can't find the owner we (EPA) will have to publish a public notice in the Garland paper. Document everything we do.

FLUOR DANIEL ARCS TEAM

Members: Fluor Daniel, Inc.
I.T. Corporation
PEI Associates, Inc.
Life Systems, Inc.

Program Office:
12790 Merit Drive
Suite 200, LB 169
Dallas, TX 75251
Tel (214) 450-4100
Fax (214) 450-4101

December 27, 1993

FDI/ARCS #2438

Carr & Finkbeiner P.A.
Attention: Dwaine Carr
469 North Orange
Orlando, FL 32801

RELEASE OF INFORMATION
GARLAND LANDFILL QUAIL CREEK
GARLAND, DALLAS COUNTY, TEXAS
CERCLIS ID#TXD980697205

Dear Mr. Carr:

The purpose of this letter is to request the voluntarily release of information to the U.S. Environmental Protection Agency (EPA), and/or it's contractor, Fluor Daniel, Inc. (FDI) authorized by the EPA under Contract Number 68-W9-0013.

Specifically, FDI has been requested by the EPA, Region 6 to enforce the provisions of the Comprehensive Environmental Responsibility Compensation and Liability Act (CERCLA), as amended, 42 U.S.C. § 9601 et seq.. by conducting a Site Investigation at this site to further assess the degree of risk to the public health, welfare, and environment related to hazardous substances, pollutants or contaminants that may be present. Based on preliminary file information, EPA finds it necessary to perform this investigation pursuant to 40 CFR 300.400 Subpart E.

It is EPA policy to seek voluntary cooperation from the public when possible. Consequently, EPA is making this request for information regarding the property mentioned above. EPA hopes that you will voluntarily comply with this request by providing the address of Cambridge Consolidated in order to accomplish it's goals.

Please release any information you might have regarding the Cambridge Consolidated owned site to Mr. William Walters. This information may be disclosed via facsimile transmission to 714-975-2260.

Sincerely,

Jonathan Stewart
ARCS Project Manager

for Mark L. deLorimier, P.E.
ARCS Program Manager

cc: Ed Sierra (6H-MA) Superfund Chief, Region 6

FLUOR DANIEL

RECORD OF TELEPHONE CONVERSATION

FROM: William Walters, FD

LOCATION: Irvine, CA

TO: Deeds Section, Dallas County Clerk
(214) 653-7102

LOCATION: Dallas, TX

DATE: December 28, 1993

TIME: 1:00 pm PST

P.O. NO. 06635341

OTHER REF. Quail Creek Landfill

Subject: Property Owner of Quail Creek Landfill Site

The Dallas County Clerk's office could not find a quit claim in the name of Joseph Casperone for the Quail Creek Landfill property (Abstract 952, pg 90, Tr 1), that is noted in the tax records as being owned by Cambridge Consolidated. They did note that there were other properties quit claimed to a Mr. Joseph Casperone, but not the property in question.

QUAILCRK.TC2

Attachment 2

LAW OFFICES OF
CARR AND FINKBEINER, P. A.
SUITE [illegible]
[illegible] EAST ROBINSON STREET
ORLANDO, FLORIDA 32801

DWAINE CARR
FRANK G. FINKBEINER

TELEPHONE (407) 483-0012
FAX (407) 839-5861

January 12, 1994

VIA FACSIMILE TRANSMISSION

Mr. William Walters
FLUOR DANIEL ARCS TEAM
12790 Merit Drive
Suite 200, LB 169
Dallas, TX 75251

RE: GARLAND LANDFILL QUAIL CREEK
GARLAND, DALLAS COUNTY, TEXAS
CERCLIS ID #TXD980697205

Dear Mr. Walters:

The only information I have relative to Cambridge Consolidated is that it was liquidated several years ago. Accordingly, its last known address was c/o The Registrar of Corporations, Douglas Isle of Man.

Sincerely yours,

Dwaine Carr

DC:sld

FLUOR DANIEL

RECORD OF TELEPHONE CONVERSATION

FROM:	William Walters	DATE:	April 8, 1994
LOCATION:	Irvine, CA	TIME:	8:00 a.m. PST, 9:00 a.m. PST
TO:	Secretary of State, Texas (512) 463-5555, -5582, -5586 County of Dallas, County Clerk Recording Department (214) 653-7011	P.O. NO.	06635341
		OTHER REF.	Cambridge Consolidated state registration (Quail Creek Landfill)
LOCATION:	Austin, TX		

The Texas Secretary of State's office was contacted to determine the registration status of Cambridge Consolidated. No registration for Cambridge Consolidated was found to exist in corporate records (463-5555), limited corporation or limited partnership records (463-5582), or limited liability partnership records (463-5586). Additionally, no records were found for Dwaine Carr, noted elsewhere as Cambridge Consolidated's agent, as a registered agent. The records at the Secretary of State's office go back to the 1800's.

Dallas County's County Clerk Recording Department was contacted to determine if Cambridge Consolidated was registered as a general partnership. No records were found for Cambridge Consolidated or Dwaine Carr as agent. The County records go back to 1977.

FLUOR DANIEL

RECORD OF TELEPHONE CONVERSATION

FROM:	William Walters	DATE:	April 14, 1994
LOCATION:	Irvine, CA	TIME:	8:00 a.m. PST
TO:	Herb Flowers (214) 880-0089	P.O. NO.	06635341
LOCATION:	Dallas, TX	OTHER REF.	Quail Creek Landfill Tax Suit Status

Mr. Flowers is the attorney handling the county property tax case (93-30070TA) for the property that comprises the Quail Creek Landfill. Mr. Flowers indicated that to date no action has been taken (i.e. property auction, etc.). He also indicated that the property owner has not been located to serve papers.

WESTON

Billy Cress
Originator

PHONE CONVERSATION RECORD

Conversation with:

Name Mary Anne

Company Texas Sec'y of State

Address Austin, Tx.

Phone 512-463-5578

Date ~~28~~ 10 / 28 / 94

Time 10:00 AM/PM

☒ Originator Placed Call

☐ Originator Received Call

W.O. NO.

Subject Certificate of Non-existance for Cambridge Consolidated.

Notes: I spoke with Mary Anne and she is faxing and sending by mail a certificate of non-existance for Cambridge Consolidated. (Attached

☐ File

☐ Tickle File ___/___/___

☐ Follow-Up By:

☐ Copy/Route To:

Follow-Up-Action:

Originator's Initials RBC.

The State of Texas

SECRETARY OF STATE

I, RONALD KIRK, Secretary of State of Texas, DO HEREBY CERTIFY that a diligent search of the active and inactive records of this office reveals no filing by a Texas corporation, limited partnership, or limited liability company under the exact name of CAMBRIDGE CONSOLIDATED.

IT IS FURTHER CERTIFIED that a diligent search of the active and inactive records of this office reveals no filing by a foreign corporation, limited partnership, or limited liability company under the above name for purposes of transacting business in Texas.

IN TESTIMONY WHEREOF, I have hereunto signed my name officially and caused to be impressed hereon the Seal of State at my office in the City of Austin, on October 28, 1994.

THE STATE OF TEXAS

Ronald Kirk PH

Secretary of State

WESTON

Killy Cress
Originator

PHONE CONVERSATION RECORD

Conversation with:

Name Rosé Gotrel

Company Isle of Man Newspaper

Address England

Phone 0024-623451

Date 10 / 28 / 94

Time 10:30 AM/PM

☑ Originator Placed Call

☐ Originator Received Call

W.O. NO.

Subject Obtaining a copy of 12/6/91 ad in Legal Notices.

Notes: I spoke with Rosé and she is faxing and mailing an article titled "Notice of Disillusion" that documents the dissolution of Cambridge Consultants. The article appeared on 12/6/91. (ATTACHED)

☐ **File**

☐ **Tickle File** / /

☐ **Follow-Up By:**

☐ **Copy/Route To:**

Follow-Up-Action:

Originator's Initials RKC

THE LICENSING ACTS 1961 TO 1967

Mrs Maureen Mary Camp, of the Bay View Hotel, Peveril Buildings, Loch Promenade, Douglas (formerly known as The Oban) will apply to the Special Session of the Licensing Court Sitting at Douglas on 12th December, 1991, for a variation in the terms of the residential licence held in respect of the above premises to permit various specified structural alterations.

Signed
MAUREEN CAMP
of the Bay View Hotel

RESOLUTIONS: MEMBERS' VOLUNTARY WINDING-UP

Company No. 23113
Registered in Isle of Man

THE COMPANIES ACTS 1931-1986

RESOLUTIONS OF SARASIN (ISLE OF MAN) LIMITED

Passed on 3rd December, 1991
(Pursuant to Section 117)

NOTICE IS HEREBY GIVEN that an extraordinary general meeting of the members of SARASIN (ISLE OF MAN) LIMITED DULY convened and held at 27 Athol Street, Douglas, Isle of Man on the 3rd day of December, 1991, the following resolutions were passed: No. 1 as a special resolution, No. 2 as an ordinary resolution and No. 3 as an extraordinary resolution:

RESOLUTIONS.

1. That the company be wound up voluntarily.
2. That Colin James Coates of Bank of Scotland House, Prospect Hill, Douglas, Isle of Man, or failing him, a partner in the firm of Touche Ross & Co be and is hereby appointed Liquidator for the purposes of such winding up.
3. That, in accordance with the provisions of the Company's Articles of Association, the Liquidator be and is hereby authorised to divide amongst the members in specie all or any part of the assets of the Company.

Dated this 3rd day of December, 1991.

THE ISLE OF MAN COMPANIES ACTS 1931-1986

BILLY FORREST ISLE OF MAN ENTERTAINMENTS LIMITED

IN THE MATTER OF ASHENNA LIMITED (IN VOLUNTARY LIQUIDATION) AND IN THE MATTER OF THE COMPANIES ACTS 1931 TO 1986

NOTICE IS HEREBY GIVEN pursuant to Section 224 of the Companies Act 1931 that a General Meeting of the Members of the above named Company will be held at Castle House, Summerhill Road, Onchan, Isle of Man on 10th January, 1992 for the purpose of having an account laid before them and to receive the Liquidators' report showing how the winding up of the Company has been conducted and its property disposed of and of hearing any explanation that may be given by the Liquidators and also of determining by Extraordinary Resolution the manner in which the books, accounts, papers and documents of the Company and of the Liquidators thereof shall be disposed of.

Any member entitled to attend and vote at the above mentioned meeting may appoint a proxy to attend and vote instead of him and such proxy need not also be a member.

Dated the 28th day of November, 1991.

J. W. H. BROWN
Liquidator
S. W. C. PILE
Liquidator

ISLE OF MAN COMPANIES ACTS 1931-1986

BRABYVEGE LIMITED

NOTICE IS HEREBY GIVEN in accordance with Section 273A of the Isle of Man Companies Acts 1931 to 1986, that the Company proposes to apply to the Registrar for a Declaration of Dissolution and that unless written objection is made to the Registrar within 30 days of the date of this notice the Registrar may dissolve the Company.

Dated this 3rd day of December, 1991.

M. L. BREARD
For and on behalf of the Directors

THE COMPANIES ACTS 1931-1986

NOTICE OF DISSOLUTION OF A COMPANY
(In accordance with Section 273A of the 1931-1986 Acts)

NARMAN LIMITED

NOTICE IS HEREBY GIVEN that Narman Limited proposes to apply to the Registrar for a Declaration of Dissolution of the Company and that, unless written objection is made to the Registrar within 30 days of the date this Notice was posted, the Registrar may dissolve the Company.

FOR AND ON BEHALF OF CHARLES CAIN & CO (Secretaries) LTD

Dated 2nd December, 1991.

Registered Office:
36 Finch Road,
Douglas,
Isle of Man.

No of Company: 47729

THE COMPANIES ACTS 1931-1986

NOTICE OF DISSOLUTION OF A COMPANY
(In accordance with Section 273A)

NOTICE IS HEREBY GIVEN that CHINOOK ADMINISTRATORS LIMITED proposes to apply to the Registrar for a Declaration of Dissolution of the Company and that, unless written objection is made to the Registrar within 30 days of the date this Notice was posted, the Registrar may dissolve the Company.

Signed:
CHRISTINE LOWRY,
Director

Date: 27 November, 1991.

Registered Office:
33 Scarlett Road
Castletown, IoM.

IN THE MATTER OF THE COMPANIES ACTS 1931-1986
(Pursuant to Section 273A

ROTAY LIMITED

I, Derek Roy Kelly of 10 Marathon Avenue, Douglas, Isle of Man being a Member of Rotay Limited whose registered office is at 11 St George's Street, Douglas, Isle of Man hereby give notice that I intend to apply to the Chief Registrar for a Declaration of Dissolution of the Company in accordance with Section 273A of the Companies Acts 1931 to 1986.

Objections to the said application must be made in writing and delivered to the Chief Registrar, Companies Registry, Finch Road, Douglas, Isle of Man within thirty days of this Notice.

Dated this 27th day of November 1991.

D. R. KELLY
Member.

COMPANY NUMBER: 36465

COMPANIES ACTS 1931-1986

SHINTY (INVESTMENTS) LIMITED

NOTICE IS HEREBY GIVEN that in pursuance of Section 273(A) of the Companies Act 1931-1986 the undersigned proposes to apply to the Registrar of Companies for a Declaration of Dissolution of the Company. Unless written objection is made to the said Registrar within thirty days of this Notice being posted the Registrar may dissolve the Company.

DAVID JOHN MORGAN
Director

This Notice was posted on 29th November, 1991.

Government Notices

ISLE OF MAN

THE COMPANIES ACTS 1931 TO 1986

NOTICE OF REMOVAL OF COMPANIES FROM THE REGISTER

NOTICE IS HEREBY GIVEN, pursuant to section 273 (subsection 3) of the Companies Act 1931, that at the expiration of three months from the date hereof, the names of the of the undermentioned Companies, will, unless cause be shown to the contrary, be struck off the Register and such Companies dissolved:-

025426C — A.O.S. Engineering Services Limited
027912C — ADC — Advanced Design Consultants Limited
027565C — Accord Investments Limited
027697C — Acticroissance Conseil) Limited
026302C — Advanced Mercantile Limited

026706C — Beacon Trading Company Limited
026450C — Beckett Investments Limited
027787C — Belfast Limited
025855C — Benef Limited
027022C — Bengal Limited
026876C — Bessmore Investments Limited
026826C — Beswick Limited,
027316C — Blount (Developments) Limited
026916C — Bonavista Limited
026025C — Bond Holdings Limited
025295C — Borlum Properties Limited
025874C — Bramham Limited
025113C — Brayfield Trading Limited
025212C — Brentwood Limited
027475C — Britannia Developments Limited
026804C — Buffs Limited
026928C — Bulk Cargo Services Limited
025842C — Bumiputra Ibrahimi Company Limited
027582C — Business Mailing Services Limited
025245C — C.B.T. Limited
025242C — C.L.S. Limited
027363C — C.W. Shipping Company Limited
026234C — CBM Limited
025847C — CKS Investments Limited
027149C — Cadenetta Limited
025484C — Cambridge Consolidated Limited
026367C — Campsie Properties Limited
026520C — Cameron Limited
025958C — Carefree Times Limited
025301C — Carne Limited
026996C — Cartmel Trading Limited
026430C — Casevent Investments Limited
025350C — Castle Properties Limited
027518C — Cedar Trading Limited
026084C — Cedarlodge Limited
026814C — Chadmore Investments Limited
026309C — Chase Investments Limited
025213C — Chesterwood Limited
027115C — Chestwood Limited
027029C — Cleaver & Walkingshaw Limited
026459C — Cleeslake Limited
025077C — Coline Limited
027169C — Commercial) Extruded Metals Company Limited
026244C — Comp-Future Limited
026303C — Complete Oilfield Consultants Limited
027464C — Continental Leisure Limited
026848C — Continental Management Services Limited
025116C — Coppins Investments Limited
027833C — Corinthian Commodities Limited
025876C — Costello Investments Limited
026183C — Cosmopolitan Developments Limited
027820C — Cosmopolitan Oil and Lubricants Industries Limited
027133C — Cosmopolitan Resources Limited
026046C — Crestfield Limited
027830C — Crows Nest (I.O.M.) Limited
025691C — Crypton Investments Limited
025302C — Dale Limited
026647C — Dawlish Engineering Limited
026469C — Dawleigh Limited
026940C — Delta Consultants Limited
025033C — Demolition and Crane Hire Limited
025397C — Dixon Salt Overseas Limited
026871C — Discovery Research Limited
027351C — Dolmens Limited
026217C — Dolphin Trading Limited
025569C — Dosier Limited
026245C — Dovish Limited
027059C — Downs Road Limited
025438C — Dothan Trading Limited
025097C — Douglas Carpets Limited
027152C — Dow Investments Limited
025304C — Durand Limited
027254C — Ebson Limited
025430C — Elsworth Trading Limited
027207C — El Palmar Holiday Management Limited
027898C — Elford Limited
025117C — Elmhurst Trading Limited
026279C — Energy Capital Limited
025220C — Engineering and Electrical Services (E.E.S.) Limited
025830C — Entertainment Equipment Hire Limited
025134C — Equity and Exchange Securities Limited
025216C — Fairhaven Trading Limited
026112C — Farnbrow Limited
027117C — Feldspar Limited
025471C — Felton Investments Limited
025773C — Ferngian Investments Limited
025305C — Fieldwork Limited
027157C — Fin-Tec Services (Overseas) Limited

025269C — Harbour Bistro (Serv
025271C — Harbour Bistro (T.E.
025272C — Harbour Bistro (T.N
025263C — Harbour Bistro Lim
025706C — Harbourmaster Limited
025080C — Harpley Investments
026221C — Harvel Limited
025799C — Hathersham Investm
027980C — Havana (Properties)
027638C — Hamilton Limited
026036C — Hemingway Limited
026400C — Hutton Investments
027906C — Hutton Limited
026992C — I B T Management
025921C — Inlost Limited
025436C — Inox Construction I
027709C — Inger Limited
026307C — Integrated Microproc Systems Limited
026343C — Intertown Marketing
027267C — Interocean Limited
025228C — Intratec Limited
027915C — Invicta Managemen Limited
027280C — Isle Marine Limited
026537C — Island Gardening S
025999C — Island Yacht Char
026340C — Istana Limited
027072C — I. and O. Riley Lin
026976C — Jaguar Investments
025672C — Jamaica Limited
025308C — Japonais Limited
025281C — Jigsaw Properties I
026671C — Joyous Good Limi
027080C — Jorgen's Restaura
026884C — K.H.C. Investmen
027682C — K.T.S. Overseas L
025858C — Kala Limited
025280C — Kaleidoscope Investr
027738C — Kayleigh Trading
026874C — Keyano Limited
026575C — Kilchoan Limited
026793C — Kirkdell Limited
025440C — Koan Limited
025709C — Kommandeur Lim
025708C — Kralstone Limited
027327C — L.O.B.O. (Isle of
027185C — Lakeland Propert
025077C — Lambe Manageme
025334C — Landmead Limit
027492C — Langold Limited
027259C — Leisure Consultan
026458C — Levens Limited
027477C — Liberty American
027884C — Linmar Limited
027132C — Lindenhall Estat
025300C — Lissey Chine (M
026151C — Longsight Invest
027598C — Lotus Engineerin Limited
027090C — Lotus Limited
026308C — Lowmead Invest
026638C — Lynn Limited
026472C — Lytham Investm
025059C — M.S.A. Piping &
025221C — Madigan Financ
026086C — Madison Manag Limited
027110C — Magnum Financ
027528C — Maidstone Limite
025931C — Major Investme
025884C — Mandell Limited
027976C — Manhattan Lim
026228C — Manx Vineyards
025387C — Marietta Limite
025595C — Marine Marketi
025230C — Marine Midlan
027779C — Marjax Limited
027919C — Marrash Limit
025254C — Medix Investm
025258C — Master Mould
027345C — Medical, Techn Limited
025384C — Mercantile Ma
027154C — Meridian Inve
025474C — Middleton & C
027481C — Millbrook Inve
026417C — Mimosa Beac Limited
026385C — Min-y-Don Es
026676C — Mistral Trade
026106C — Mocassin Lim
027637C — Minster Inves
027381C — Monterey Inv
026125C — Moore-Associ
025444C — Morand Limit
027623C — Multex Inves
027841C — Multicar Lim
025638C — Multichem L

with Section 273A, Subsection (3)(a) of the Isle of Man Companies Act 1931 THAT BILLY FORREST ISLE OF AN ENTERTAINMENTS LIMITED of Capital House, 5 Hill Street, Douglas, Isle of Man, incorporated in the Isle of Man (No. 7666) proposes to apply to the Registrar for a declaration of dissolution of the Company, and that unless written objection is made to the Registrar within 30 days of the date of publication of this Notice, the Registrar may dissolve the Company.

Dated this 29 day of November, 1991.

W. F. FORREST
Director.

THE COMPANIES ACTS 1931-1986

PIQUANT LIMITED

NOTICE IS HEREBY GIVEN that in pursuance of Section 273A (3) of the Companies Act 1931-1986 the above Company proposes to apply to the Registrar of Companies for a Declaration of Dissolution. Unless written objection is made to the said Registrar within 30 days of this Notice being posted the Registrar may dissolve the Company.

Dated this 2nd day of December, 1991.

CALIBRE LIMITED
Secretary

027[illegible]C — Agro-[illegible]
07[illegible] — Allwyn Investments Limited
0[illegible] — Allcroft Investments Limited
027[illegible]C — Amwal American Investments Limited
025241C — Apricot Limited
027031C — Archimedes Overseas Limited
025939C — Arctic Gulf Limited
026896C — Argonaut Resources Limited
025792C — Ashburton Investments Limited
027434C — Ashview Limited
025829C — Atlantic Oil Limited
027658C — Atlantic Travel Limited
026800C — Atlantic Securities Limited
026338C — Ayton Investments Limited
025617C — Azriel Establishment Limited
026741C — B.I. Limited
026019C — B.O.T.C. Berry Overseas Trading Consulting Limited
027275C — B.S.I. Developments Limited
025785C — Becking Limited
026455C — Barmer Trading Limited

026663C — F[illegible]nd Investments Limited
025331C — I[illegible]ge Investments Limited
025697C — F[illegible] Trading Limited
026433C — G M A Limited
025047C — Gale Investments Limited
025412C — Generator Specialists Limited
027183C — Gerdins Properties Limited
026980C — Glenfey Consultants Limited
027147C — Goldleaf Investments Limited
026374C — Goodwill Company Limited
025194C — Goodwill Investments Limited
026848C — Greencastle Limited
025344C — Group Rea Limited
025407C — Guardian Associates Limited
026501C — Hanover Zenith Limited
025264C — Harbour Bistro (E.T.) Limited
025266C — Harbour Bistro (F.R.) Limited
025267C — Harbour Bistro (N.E.) Limited
025268C — Harbour Bistro (O.B.) Limited
025270C — Harbour Bistro (S.X.) Limited

026998C — Navicula Limited
027051C — Netherbridge Lim
027484C — Netherley Investm
027878C — Ninemile Limited
025936C — Ninetoon Twenty Limited
025707C — Nix Limited
026353C — Nai Limited
027193C — Needle Assets Tr
026987C — Norfolk Propert
025486C — North Atlantic S
025345C — North Sea Techn Limited
026122C — Northern Tradin
026768C — Nulighan Limite
027880C — Numis Limited
027852C — Oakridge Limite
026588C — Oil Industry Ho
026871C — Ozona Investme

WESTON

Billy Cress
Originator

PHONE CONVERSATION RECORD

Conversation with:

Name Vicki

Company Garland News

Address Garland, TX

Phone 214-640-7400

Date 10 / 31 / 94

Time 10:20 AM/PM

☒ Originator Placed Call

☐ Originator Received Call

W.O. NO.

Subject Cambridge Consolidated "Notice To Public."

Notes: Spoke with Vicki concerning "Notice To Public." I will fax the letter to her and it will run from 11/3/94 to 11/17/94.

☐ File

☐ Tickle File ___/___/___

☐ Follow-Up By:

☐ Copy/Route To:

Follow-Up-Action:

Originator's Initials BBC

WESTON

Killy Cress
Originator

PHONE CONVERSATION RECORD

Conversation with:

Name ~~Mr. Kline~~ Mr. Louis Kline

Company Dallas Morning News

Address Dallas, TX

Phone 214-977-7814

Date 10/31/94

Time 10:15 AM/PM

☒ Originator Placed Call

☐ Originator Received Call

W.O. NO.

Subject Cambridge Consolidated "Notice To Public"

Notes: Mr Kline will run the ad from 11/1/94 to 11/15/94. I told him I will fax the letter to him this morning. Fax #: 214-977-8638.

☐ File

☐ Tickle File ___/___/___

☐ Follow-Up By:

☐ Copy/Route To:

Follow-Up-Action:

Originator's Initials KKC

WESTON

Killy Cress
Originator

PHONE CONVERSATION RECORD

Conversation with:

Name ~~Mr. Kline~~ Mr. Louis Kline

Company Dallas Morning News

Address Dallas, TX

Phone 214-977-7814

Date 10/31/94

Time 10:15 AM/PM

☒ Originator Placed Call

☐ Originator Received Call

W.O. NO.

Subject Cambridge Consolidated "Notice To Public"

Notes: Mr Kline will run the ad from 11/1/94 to 11/15/94. I told him I will fax the letter to him this morning. Fax #: 214-977-8638.

☐ File

☐ Tickle File ___/___/___

☐ Follow-Up By:

☐ Copy/Route To:

Follow-Up-Action:

Originator's Initials KKC

WESTON
MANAGERS DESIGNERS/CONSULTANTS
SUITE 460
70 N.E. LOOP 410
SAN ANTONIO, TEXAS 78216
PHONE (210) 342-7810
FAX: (210) 342-3867

31 October 1994

Ms. Stacey Bennett (6E-SH)
Work Assignment Manager
U.S. Environmental Protection Agency
1445 Ross Avenue, Suite 1200
Dallas, Texas 75202

RE: 2-WEEK PUBLIC NOTICE
GARLAND QUAIL CREEK LANDFILL
SITE INSPECTION

Dear Ms. Bennett:

Transmitted herein is the draft 2-Week Public Notice for property ownership regarding the Garland Quail Creek Landfill. Upon EPA approval, the following notice will be published in *The Dallas Morning News* and *Garland News* for the required 2 weeks. The notice will be as follows:

> *"Notice to Public". An EPA Contractor, under contract to the Environmental Protection Agency Region 6 has been tasked to perform soil and water sampling in conjunction with the* ***GARLAND QUAIL CREEK LANDFILL*** *located at 1520 Commerce Street, Garland, Dallas County, Texas. Be it known to all as by this "Notice to Public" that after the limits of this notice and no known ownership of record in the aforementioned property is confirmed, the EPA intends to use its authority under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA), 42 U.S.C. § 9601, et.seq., which may include the issuance of warrants, to obtain access to this property for soil and water sampling and analysis activities to determine the need for a response action. Ownership or knowledge of said ownership should, within the 2-week period from November 3rd to November 17th, be confirmed by the notification of the following EPA Region 6 contact:*
>
> *U.S. Environmental Protection Agency*
> *Ms. Stacey Bennett (6E-SH)*
> *1445 Ross Avenue*
> *Suite 1200*
> *Dallas, Texas 75202*
> *(214) 665-8374*

If approval is granted today, the notice will run beginning Thursday, 3rd November 1994. Please call to confirm you receipt and approval if acceptable.

Very truly yours,
ROY F. WESTON, INC.

Robert B. Beck, P.E.
Project Manager

REFERENCE 5

TEXAS DEPARTMENT OF HEALTH

EPA

POTENTIAL HAZARDOUS WASTE SITE
FINAL STRATEGY DETERMINATION

REGION	SITE NUMBER
6	TX07064

File this form in the regional Hazardous Waste Log File and submit a copy to: U.S. Environmental Protection Agency; Site Tracking System; Hazardous Waste Enforcement Task Force *(EN-335)*; 401 M St., SW; Washington, DC 20460.

I. SITE IDENTIFICATION

A. SITE NAME	B. STREET	
Quail Creek Landfill-#05/50585	Centerville Rd., South of M-K-T RR.	
C. CITY	**D. STATE**	**E. ZIP CODE**
Garland [redacted]	Texas	75041

[redacted] 697208

II. FINAL DETERMINATION

Indicate the recommended action*(s)* and agency*(ies)* that should be involved by marking 'X' in the appropriate boxes.

RECOMMENDATION	MARK 'X'	ACTION AGENCY: EPA	STATE	LOCAL	PRIVATE
A. NO ACTION NEEDED	XXX				
B. REMEDIAL ACTION NEEDED, BUT NO RESOURCES AVAILABLE *(If yes, complete Section III.)*					
C. REMEDIAL ACTION *(If yes, complete Section IV.)*					
D. ENFORCEMENT ACTION *(If yes, specify in Part E whether the case will be primarily managed by the EPA or the State and what type of enforcement action is anticipated.)*					

E. RATIONALE FOR FINAL STRATEGY DETERMINATION

As this site accepted only municipal solid waste and as ade quate control over site access and operation was probably exercised by the city, no hazardous waste problem is anticipated.

F. IF A CASE DEVELOPMENT PLAN HAS BEEN PREPARED, SPECIFY THE DATE PREPARED *(mo., day, & yr.)*	G. IF AN ENFORCEMENT CASE HAS BEEN FILED, SPECIFY THE DATE FILED *(mo., day, & yr.)*

H. PREPARER INFORMATION

1. NAME	2. TELEPHONE NUMBER	3. DATE *(mo., day, & yr.)*
Rex H. Hunt Rex H. Hunt, P.E.	817/460-3032	02/24/81

III. REMEDIAL ACTIONS TO BE TAKEN WHEN RESOURCES BECOME AVAILABLE

List all remedial actions, such as excavation, removal, etc. to be taken as soon as resources become available. See instructions for a list of Key Words for each of the actions to be used in the spaces below. Provide an estimate of the approximate cost of the remedy.

A. REMEDIAL ACTION	B. ESTIMATED COST	C. REMARKS
	$	
	$	
	$	
	$	
	$	
	$	
	$	
	$	
D. TOTAL ESTIMATED COST	$	

SUPERFUND FILE
JUN 15 1992
REORGANIZED

Larry Wright DATE 6-19-81

EPA Form T2070-5 (10-79)

Continue On Reverse

Continued From Front

IV. CHARACTERIZATION OF SITE ACTIVITY

Indicate the major site activity(ies) and details relating to each activity by marking 'X' in the appropriate boxes.

'X'	A. TRANSPORTER	'X'	B. STORER	'X'	C. TREATER	'X'	D. DISPOSER
	1. RAIL		1. PILE		1. FILTRATION	XX	1. LANDFILL
	2. SHIP		2. SURFACE IMPOUNDMENT		2. INCINERATION		2. LANDFARM
	3. BARGE		3. DRUMS		3. VOLUME REDUCTION		3. OPEN DUMP
	4. TRUCK		4. TANK, ABOVE GROUND		4. RECYCLING/RECOVERY		4. SURFACE IMPOUNDMENT
	5. PIPELINE		5. TANK, BELOW GROUND		5. CHEM./PHYS. TREATMENT		5. MIDNIGHT DUMPING
	6. OTHER (specify):		6. OTHER (specify):		6. BIOLOGICAL TREATMENT		6. INCINERATION
					7. WASTE OIL REPROCESSING		7. UNDERGROUND INJECTION
					8. SOLVENT RECOVERY		8. OTHER (specify):
					9. OTHER (specify):		

E. SPECIFY DETAILS OF SITE ACTIVITIES AS NEEDED

this site was used only for municipal solid waste. No hazardous waste was disposed of at this site.

V. WASTE RELATED INFORMATION

A. WASTE TYPE

[ ] 1 UNKNOWN [ ] 2. LIQUID [XX] 3. SOLID [ ] 4. SLUDGE [ ] 5. GAS

B. WASTE CHARACTERISTICS

[ ] 1 UNKNOWN [ ] 2. CORROSIVE [ ] 3. IGNITABLE [ ] 4. RADIOACTIVE [ ] 5 HIGHLY VOLATILE
[ ] 6. TOXIC [ ] 7 REACTIVE [ ] 8 INERT [ ] 9 FLAMMABLE

XXX
XXX 10. OTHER (specify): Municipal solid waste only

C. WASTE CATEGORIES

1. Are records of wastes available? Specify items such as manifests, inventories, etc. below.

no records available

2. Estimate the amount (specify unit of measure) of waste by category; mark 'X' to indicate which wastes are present.

a. SLUDGE	b. OIL	c. SOLVENTS	d. CHEMICALS	e. SOLIDS	f. OTHER
AMOUNT	AMOUNT	AMOUNT	AMOUNT	AMOUNT 73000	AMOUNT
UNIT OF MEASURE	UNIT OF MEASURE	UNIT OF MEASURE	UNIT OF MEASURE	UNIT OF MEASURE tons	UNIT OF MEASURE
'X' (1) PAINT, PIGMENTS	'X' (1) OILY WASTES	'X' (1) HALOGENATED SOLVENTS	'X' (1) ACIDS	'X' (1) FLYASH	'X' (1) LABORATORY PHARMACEUT.
(2) METALS SLUDGES	(2) OTHER (specify):	(2) NON-HALOGNTD. SOLVENTS	(2) PICKLING LIQUORS	(2) ASBESTOS	(2) HOSPITAL
(3) POTW		(3) OTHER (specify):	(3) CAUSTICS	(3) MILLING/ MINE TAILINGS	(3) RADIOACTIVE
(4) ALUMINUM SLUDGE			(4) PESTICIDES	(4) FERROUS SMLTG. WASTES	(4) MUNICIPAL
(5) OTHER (specify):			(5) DYES/INKS	(5) NON-FERROUS SMLTG. WASTES	(5) OTHER (specify):
			(6) CYANIDE	XX (6) OTHER (specify): Municipal solid waste. Amount estimated based on an average population of 43000 served. Remainder of population served by Miles Road Landfill.	
			(7) PHENOLS		
			(8) HALOGENS		
			(9) PCB		
			(10) METALS		
			(11) OTHER (specify)		

Continued From Page 2

V. WASTE RELATED INFORMATION *(continued)*

3. LIST SUBSTANCES OF GREATEST CONCERN WHICH MAY BE ON THE SITE *(place in descending order of hazard)*.

As this site accepted only municipal solid waste and as adequate control over site access and operation was probably exercised by the city, no hazardous waste problem is anticipated

4. ADDITIONAL COMMENTS OR NARRATIVE DESCRIPTION OF SITUATION KNOWN OR REPORTED TO EXIST AT THE SITE.

VI. HAZARD DESCRIPTION

A. TYPE OF HAZARD	B. POTENTIAL HAZARD *(mark 'X')*	C. ALLEGED INCIDENT *(mark 'X')*	D. DATE OF INCIDENT *(mo., day, yr.)*	E. REMARKS
1. NO HAZARD	XXXXXX			
2. HUMAN HEALTH				
3. NON-WORKER INJURY/EXPOSURE				
4. WORKER INJURY				
5. CONTAMINATION OF WATER SUPPLY				
6. CONTAMINATION OF FOOD CHAIN				
7. CONTAMINATION OF GROUND WATER				
8. CONTAMINATION OF SURFACE WATER				
9. DAMAGE TO FLORA/FAUNA				
10. FISH KILL				
11. CONTAMINATION OF AIR				
12. NOTICEABLE ODORS				
13. CONTAMINATION OF SOIL				
14. PROPERTY DAMAGE				
15. FIRE OR EXPLOSION				
16. SPILLS/LEAKING CONTAINERS/ RUNOFF/STANDING LIQUIDS				
17. SEWER, STORM DRAIN PROBLEMS				
18. EROSION PROBLEMS				
19. INADEQUATE SECURITY				
20. INCOMPATIBLE WASTES				
21. MIDNIGHT DUMPING				
22. OTHER *(specify)*:				

 Continue On Reverse

Continued From Front

VII. PERMIT INFORMATION

A. INDICATE ALL APPLICABLE PERMITS HELD BY THE SITE.

NONE

☐ 1. NPDES PERMIT ☐ 2. SPCC PLAN ☐ 3. STATE PERMIT *(specify)*: _____

☐ 4. AIR PERMITS ☐ 5. LOCAL PERMIT ☐ 6. RCRA TRANSPORTER

☐ 7. RCRA STORER ☐ 8. RCRA TREATER ☐ 9. RCRA DISPOSER

☐ 10. OTHER *(specify)*: _____

B. IN COMPLIANCE?

XX 1. YES ☐ 2. NO ☐ 3. UNKNOWN

4. WITH RESPECT TO *(list regulation name & number)*: _____

VIII. PAST REGULATORY ACTIONS

XX A. NONE ☐ B. YES *(summarize below)*

IX. INSPECTION ACTIVITY *(past or on-going)*

XX A. NONE ☐ B. YES *(complete items 1,2,3, & 4 below)*

1. TYPE OF ACTIVITY	2. DATE OF PAST ACTION *(mo., day, & yr.)*	3. PERFORMED BY: *(EPA/State)*	4. DESCRIPTION

X. REMEDIAL ACTIVITY *(past or on-going)*

XX A. NONE ☐ B. YES *(complete items 1, 2, 3, & 4 below)*

1. TYPE OF ACTIVITY	2. DATE OF PAST ACTION *(mo., day, & yr.)*	3. PERFORMED BY: *(EPA/State)*	4. DESCRIPTION

NOTE: Based on the information in Sections III through X, fill out the Preliminary Assessment *(Section II)* information on the first page of this form.

REFERENCE 6

PROPERTY
OF
U.S. GOVERNMENT

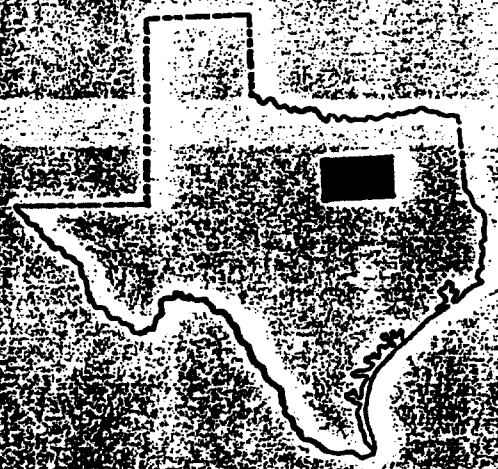
BUREAU OF ECONOMIC GEOLOGY
THE UNIVERSITY OF TEXAS AT AUSTIN
AUSTIN, TEXAS 78713-7508

W. L. FISHER, *Director*

GEOLOGIC ATLAS OF TEXAS

Dallas Sheet

Scale: 1:250,000



1972

Upper Cretaceous

Lower Cretaceous

CRETACEOUS

Ko

Ozan Formation ("lower Taylor marl")

Clay, calcareous, silt and sand content increases upward, montmorillonitic, blocky, conchoidal fracture, medium gray; some glauconite, phosphate pellets, hematite nodules, and pyrite nodules; some very thin limestone lenses locally in lower part; weathers light brownish gray with poor fissility, grades upward to Wolfe City Formation; marine megafossils; thickness 500± feet

Kau

Austin Chalk

Upper and lower parts, chalk, mostly microgranular calcite, massive, some interbeds and partings of calcareous clay, thin bentonitic beds locally in lower part, lower part forms westward-facing scarp; light gray. Middle part, mostly thin-bedded marl with interbeds of massive chalk, locally burrowed, marcasite-pyrite nodules common, light gray. Weathers white, marine megafossils scarce, thickness 300–500 feet, thins southward

Kef

Eagle Ford Group undivided

North of Hill County, shale, sandstone, and limestone; shale, bituminous, selenitic, with calcareous concretions and large septaria; sandstone and sandy limestone in upper and middle parts, platy, burrowed, medium to dark gray; in lower part bentonitic; hard limestone bed marks base in Ellis and Johnson Counties; locally forms low cuesta; thickness 200–300 feet

Kwb

Woodbine Formation

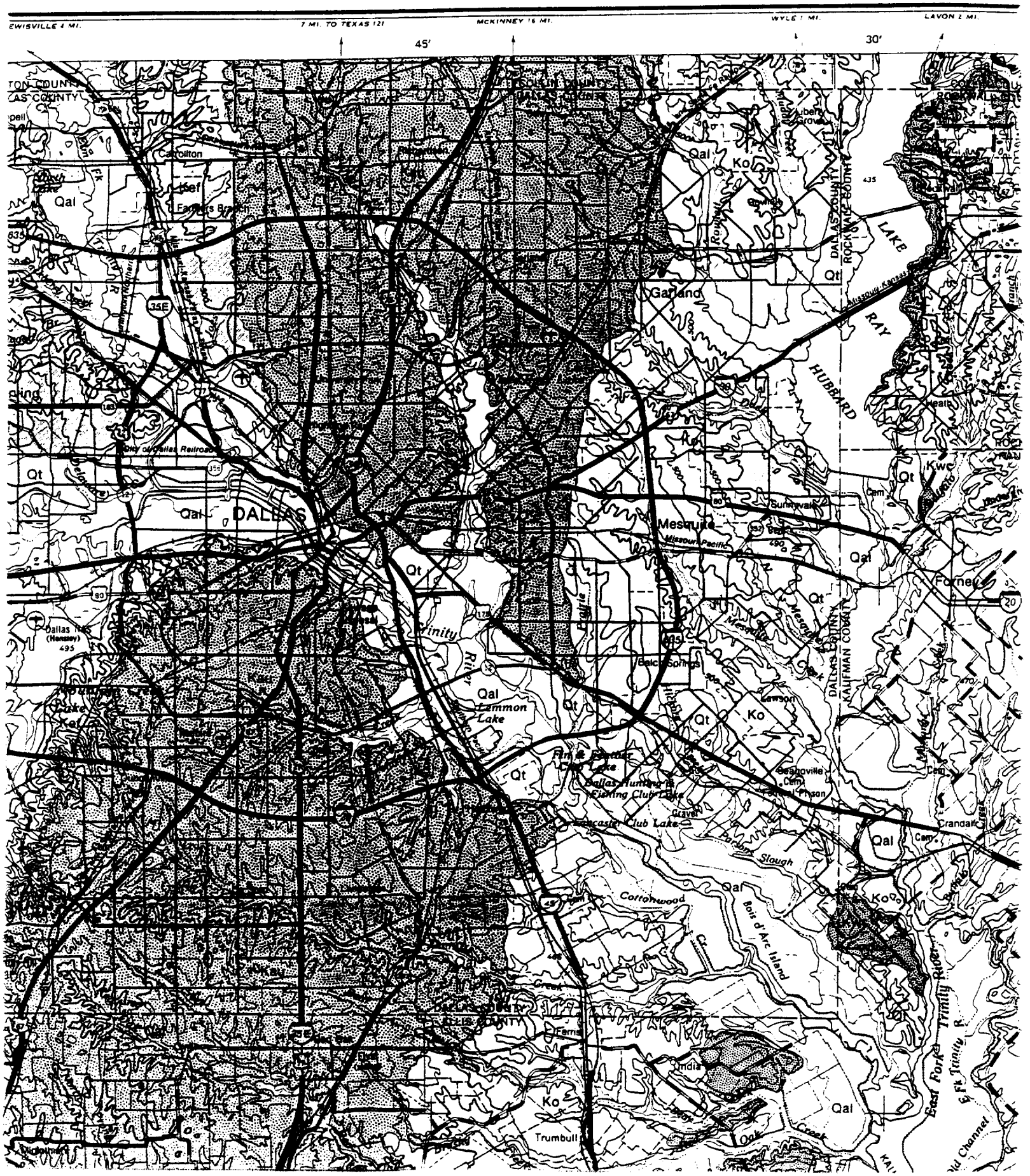
Sandstone, some clay and shale. Upper part, mostly sandtone, fine grained, well sorted, in part tuffaceous, ripple marked, large scale cross-bedding, reddish brown; near top some sandstone with large discoid concretions, medium to coarse grained, friable; some shale, jarositic, gray, fissile; some marine megafossils, oyster reefs locally. Middle part, mostly sandstone, fine grained, cross-bedded; some interbeds of clay, carbonaceous, in part sandy, gray to brown. Lower part, interbedded sandstone and clay; sandstone, fine grained, very thinly bedded to massive, some beds of ironstone and ironstone conglomerate, white, red, brown; clay, sandy, gray to brown; channeled locally. Thickness 175–250 feet, thickens northward

Kgm

Grayson Marl and Main Street Limestone undivided

Mostly Grayson Marl, *mostly calcareous clay and marl, blocky, yellowish gray and medium gray; some 0.25–1.0-foot limestone beds in upper one-third, very fine grained, fossiliferous; weathers yellowish brown, forms gentle slope; thickness 60–100 feet, thins northward*

Main Street Limestone, *medium grained, chalky, some 6–8-foot units of calcareous shale, thin bedded to massive, distinctly bedded to wavy bedded and nodular, yellowish gray; weathers light gray to white; thickness 20–35 feet, thins northward*



EWISVILLE 4 MI.
7 MI. TO TEXAS 121
MCKINNEY 16 MI.
WYLE 1 MI.
LAVON 2 MI.
45'
30'
Carrollton
Farmers Branch
Qal
Ko
Qt
Garland
LAKE
RAY
HUBBARD
DALLAS COUNTY
ROCKWALL COUNTY
Missouri-Kansas
City of Dallas Railroad
DALLAS
Mesquite
Missouri Pacific
Sunnyvale
Forney
Kwc
Heath
Dallas Hills (Hensley)
495
Trinity
River
Balch Springs
Lemmon Lake
Lawson
Mesquite Creek
KAUFMAN COUNTY
Fin & Feather Club Lake
Dallas Hunting & Fishing Club Lake
Lancaster Club Lake
Beaugoville Cem
Federal Prison
Crandall
Parsons Slough
Cottonwood
Bois d'Arc Island
Creek
Ferris
India
Trumbull
Oak Creek
East Fork Trinity River
E Fk Trinity R
Old Channel

VISVILLE 4 MI.
7 MI. TO TEXAS 121
MCKINNEY 16 MI.
WYLE 1 MI.
LAVON 2 MI.
45'
30'
Qal
Ko
Qt
Garland
LAKE
RAY
HUBBARD
DALLAS COUNTY
ROCKWALL COUNTY
DALLAS
Mesquite
Forney
Trinity
River
Lemmon Lake
Balch Springs
Lawson
Crandall
Cottonwood
Bois d'Arc Island
Slough
Trumbull
East Fork Trinity River
Oak Creek
Channel

REFERENCE 7

FLUOR DANIEL

RECORD OF TELEPHONE CONVERSATION

FROM: William Walters (FD)

DATE: August 24, 1993

LOCATION: Irvine, CA

TIME: 7:45 a.m. PST

TO: Junior Garza, City of Rowlett, Public Utilities (214) 475-1314

P.O. NO. 06635336-41

OTHER REF. City of Garland Landfill Site Investigations

LOCATION: Rowlett, TX

I discussed the public supply well shown to be in the City of Rowlett by the North Central Texas Council of Government's well location maps produced for the City of Garland Landfill Sites. Mr. Garza noted that the pumping and distribution equipment for this artesian well had been removed and the well capped some years ago. Mr. Garza indicated that the City of Rowlett was exclusively using water supplied from Lake Levon.

ROWLETT.WEL

REFERENCE 8

Quail Creek Landfill
Net Annual Precipitation Calculation

Month	Precipitation (inches)	Temperature (degrees F)	Factor	Evaporation (inches)	Net Precipitation (inches)
Jan	1.78	45.5	0.85	0.33	1.45
Feb	2.05	49.6	0.92	0.61	1.44
Mar	2.56	56.8	1.00	1.35	1.21
Apr	4.81	66.4	1.08	2.89	1.92
May	4.16	74.0	1.16	4.70	0.00
Jun	3.01	81.7	1.19	6.87	0.00
Jul	1.94	86.0	1.18	8.07	0.00
Aug	2.14	85.5	1.12	7.52	0.00
Sep	3.77	78.2	1.03	5.11	0.00
Oct	3.88	67.9	0.95	2.79	1.09
Nov	2.69	55.8	0.87	1.09	1.60
Dec	2.27	48.3	0.83	0.47	1.80
				Annual Net Precipitation	***10.51 inches***

$$a = 6.75e\text{-}7\, I^3 - 7.71e\text{-}5\, I^2 + 1.79e\text{-}2\, I + 0.49$$

$$I = \sum_{i=1}^{12} (T_i/5)^{1.5}$$

$$E_i = 1.6F_i(10T_i / I)^a$$

E_i = Monthly potential evapotranspiration in inches for month i.
F_i = Monthly latitude adjusting value for month i.
T_i = Mean monthly temperature in degrees Celsius for month i.

Source: Dunne, T. and Leopold, L.B. 1978. Water in Environmental Planning. W.H. Freeman and Company, New York.

REFERENCE 9

FLUOR DANIEL

RECORD OF TELEPHONE CONVERSATION

FROM: Josh Sacker

DATE: 4/8/93

LOCATION: Environmental Services

TIME:

TO: Project Files - ARCS

P.O. NO.

LOCATION:

OTHER REF. ARCS Hazardous Ranking System

Conversation with Jack May, Chief of City of Garland Water Department (214) 205-3200.

There are no municipal wells in Garland, it is all surface water for city distribution. Surface water source for Garland is Lake Levon, approximately 25 miles northeast of the city. The water is carried by pipeline. Lake Levon is a U.S. Army Corps of Engineer reservoir. Garland used a number of wells (about five) prior to 1960 for water supply, however, these were ineffective due to depth (approximately 3,200 below ground surface) and high water temperatures. They were abandoned in accordance with Texas State law and filled with sand and concrete. They were located in Central Garland (near the intersections of Main and Commerce streets), some were located farther to the northwest). He said there may be some shallow water locally, but yields are not adequate for municipal purposes. The city does not have information on the location of private wells. Treated waste water was previously discharged to Lake Ray Hubbard. This treatment plant is owned by the City of Garland and serves the cities of Rowlett, Garland, and Sachse. The treatment effluent has been re-routed into another basin and is no longer discharged to Lake Ray Hubbard.

JS4-9-93C.II

REFERENCE 10

North Central Texas Council Of Governments

July 16, 1993

Jonathan Stewart
Fluor Daniel
12790 Merit Drive, Suite 200
Dallas, Texas 75252

Dear Mr. Stewart:

I am providing the Geographic Information System maps which you requested several weeks ago. The original request was for GIS plots of the areas surrounding 6 landfill sites, the available information on area water wells within a 4-mile radius. Information was also requested on surface water intake locations.

As I indicated during our phone conversation, NCTCOG's well coverage is adapted from Texas Water Development Board data, and NOT a complete database. Most of the wells are more significant public supply wells. The following wells are within the area of interest:

3303601	City of Garland - Plugged		
3303901	City of Garland - Plugged		
3303902	City of Garland - Plugged		
3303903	City of Garland - Plugged		
3303904	City of Garland - Plugged		
3303905	City of Garland - Plugged		
3303801	City of Garland - Plugged		
3304101	Owner unknown	Woodbine	Depth=1388 ft
3304801	City of Rowlett	Paluxy	Depth = 2658 ft

All of the Garland wells are shown as plugged. The status of the other two wells is unknown, and there is no information on how many people are served. It is likely that the well with the unknown owner is some sort of private well. The Rowlett well can be check with city staff to determine its status.

To our knowledge there is only surface water intake on Lake Ray Hubbard near Forney Dam. Dallas withdraws water for treatment at the Dallas Eastside Water Treatment Plant and it passes into the Dallas distribution system. Dallas is authorized to divert 80.1 MGD, with 54.1 MGD considered a dependable yield. The entire Dallas system serves 1.7 million customers, with the water from Lake Ray Hubbard blended with other sources during distribution. You might calculate a rough estimate by dividing the volume withdrawn by a gallons per capita per day figure, but it would be difficult to determine the number of persons served.

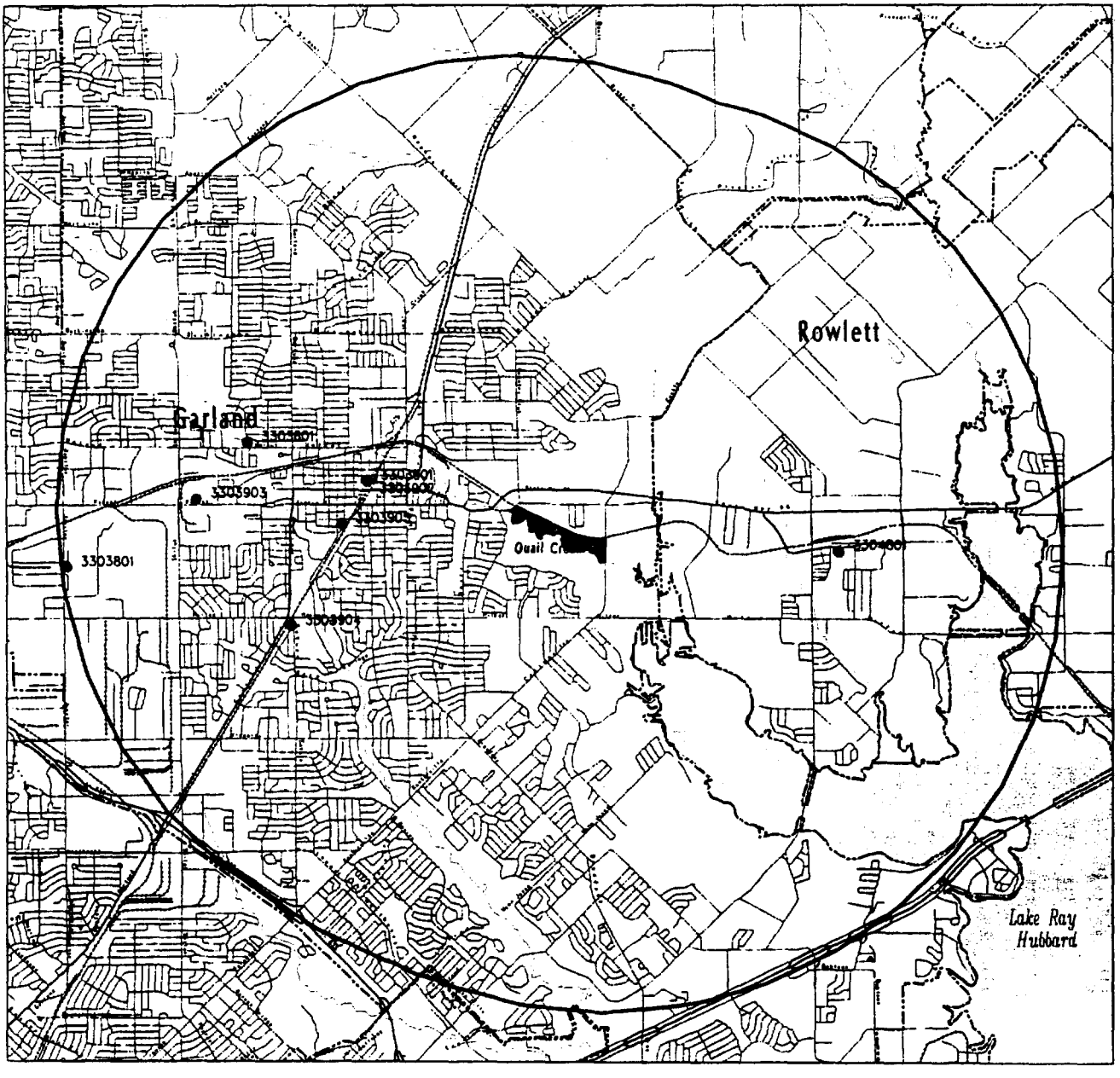
I hope that this information proves useful. Please contact me if there are any questions.

Sincerely,

Samuel W. Brush

616 Six Flags Drive, Centerpoint Two
P. O. Box 5888, Arlington, Texas 76005-5888
(817) 640-3300 FAX: 817-640-7806 recycled paper

WELL LOCATIONS NEAR THE QUAIL CREEK LANDFILL



City Boundaries
Primary Roads
Other Roads
Streams/Shorelines
Railways
Four Mile Buffer Boundary

Public Supply Wells
- Active
- Inactive
- Plugged
- Abandoned
- Status Under Review

Other Wells
- Active
- Inactive
- Plugged
- Abandoned
- Status Under Review

North Central Texas Council of Governments
Department of Environmental Resources

FLUOR DANIEL

RECORD OF TELEPHONE CONVERSATION

FROM: William Walters, FD

DATE: August 31, 1993

LOCATION: Irvine, CA

TIME: 10:50 a.m. PST

TO: Ken Smith, Landfill Director City of Garland Sanitation Department (214) 205-2713

P.O. NO. 635336-41

OTHER REF. City of Garland Landfill SIs

LOCATION: Garland, TX

Mr. Smith answered the following questions in regards to the City of Garland Landfills:

1) What is the depth of the waste at the landfills?

~~Miles~~ Road Landfill	- 10-15 feet from grade
Miller Road Landfill	- 10-15 feet from grade
E. Garland Road Landfill	- 10-15 feet from grade
~~Miller Road~~ Landfill	- 10-15 feet from grade
Castle Drive Landfill	- 15-20 feet from grade
Castle Drive & Miles Road Landfill	- 15-20 feet from grade

Quail Creek

2) What is the estimated quantity of waste for the Castle Drive and Castle Drive & Miles Road Landfill?

From the 1992 annual operating report submitted to the State of Texas the total landfill complex estimated waste quantity is 8,231,399 cubic yards. The proportion that has been disposed at each site is not available.

3) What is the acreage of the area used as landfill at the operating landfill complex?

The operating landfill complex is 191 acres, and an additional 30 acres will not be used as landfill.

landfill.dph

REFERENCE 11

GEOSOURCE INCORPORATED

ENVIRONMENTAL DATA, RESEARCH & MAPPING SERVICES

WATER WELL REVIEW

SITE:

QUAIL CREEK LANDFILL
GARLAND, TEXAS

CLIENT:

WESTON

Geosource Incorporated • 1000 West Ave., Suite A, Austin, Texas 78701 • ph (512)474-6721 fax (512)474-5428

Geosource Incorporated

January 30, 1997

Troy Hile
Weston
70 NE Loop 410
San Antonio, TX 78216

In re: Water well search for a site in Dallas County: Quail Creek Landfill, Garland, Texas.

Dear Mr. Hile,

Geosource Incorporated (GI) has performed a water well search for a site in Dallas County. GI utilized the following steps for this project:

1. Locate all located and plotted water wells on TWDB (Texas Water Development Board) County highway maps onto a map provided by GI within the area of review (AOR).

   Locate all located water wells on TWDB USGS (United States Geological Survey) 7.5 minute topo maps onto the map provided by GI.

2. Research well schedules within the unnumbered county water well files.

3. Research well schedules of located and plotted wells found on the TWDB water well maps at the TNRCC (Texas Natural Resources Conservation Commission) central records. Monitor well files found within the plotted well file are not included in the report or location map.

4. Research well schedules of partially numbered water wells within the plotted water well files at the TNRCC central records within the AOR.

Note: A set of files named "unplotted wells" exist for every county. Within these files are well logs which have no location information. The TWDB does not assign a state id. no. to these wells considering that location information is not available. These files date back to 1966. GI did not search through these files due to the fact that many of the logs have little or no location information. if you feel that these files should be examined, GI will search the files per your request.

GI has enclosed the map and well records for your review. The following is a brief explanation of terms:

Plotted water wells - wells whose location has been taken from water well drillers logs. Since June of 1986 the TWDB has stopped locating these wells on their county highway maps. The accuracy of the location for these wells was dependent on the driller. Drillers logs that are currently being processed are given a partial well number where by the well is identified within a 2.5 minute quadrangle (within a 7.5 minute topo). There are also wells which have duplicate well numbers. These wells are supposedly in or around the original well location. (Examples; of a plotted well number is 10-10-5A, of a partial well number 10-10-4)

1000 WEST AVENUE · SUITE A · AUSTIN, TEXAS 78701-2019
512-474-6721 · FAX: 512-474-5428

Located water wells - wells whose location has been verified on site by a TWDB or USGS staff member. Often times when a well is located on the ground it ends up being a plotted well. In such cases the plotted water well becomes located well. (Example of a located well number is 12-34-654)

GI identified four plotted wells within a 1.0 mile radius of the site. Following is a listing of the wells:

STATE ID NO.

33-04-7A
33-04-7D
33-04-7E
33-04-7H

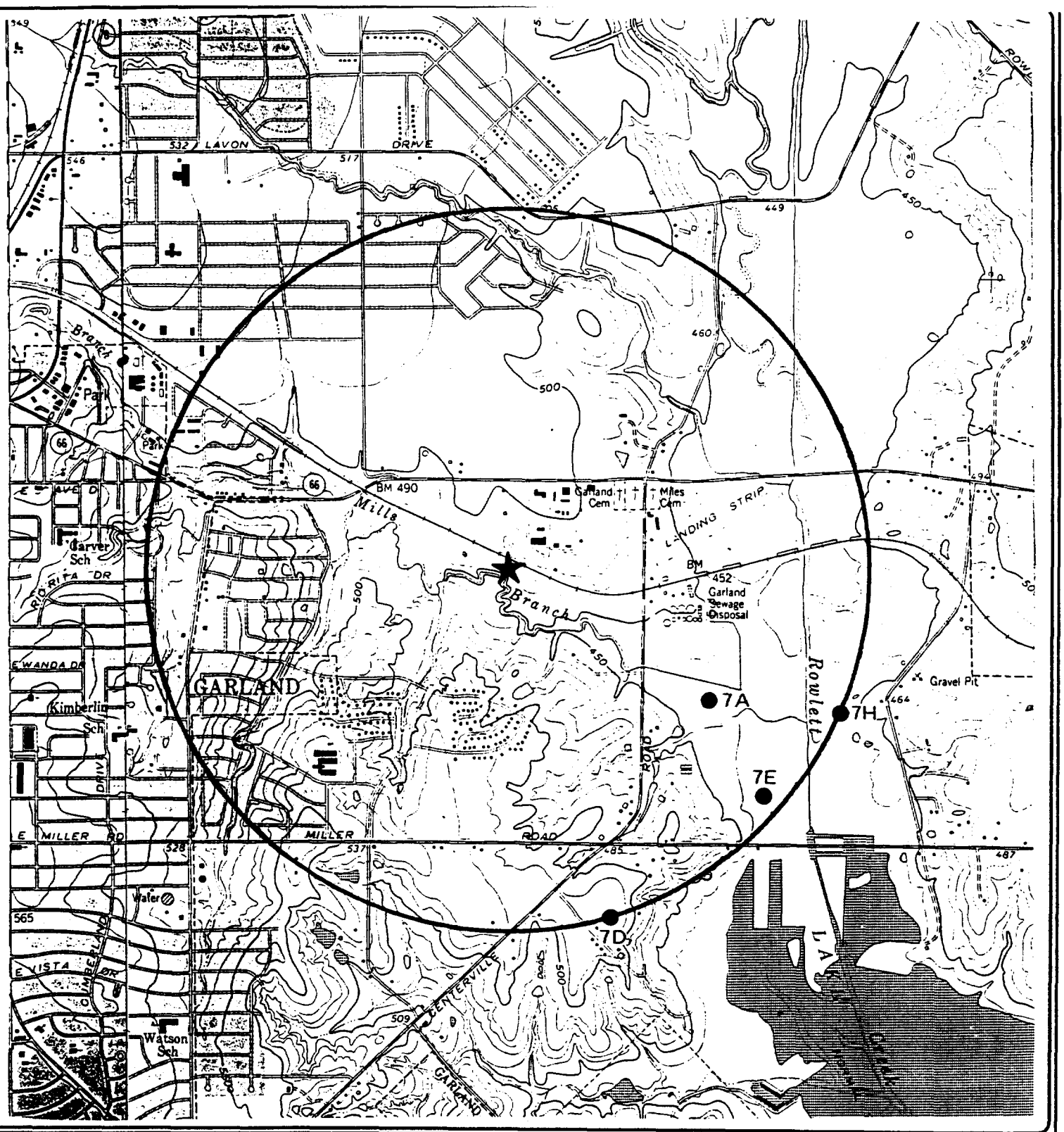
Note: The location map will have four well locations.

GI's research of water wells within the AOR was a search of the maps at the TWDB and the records within the TNRCC central records files at the time of the search. GI may not be able to account for logs not within the files of the TNRCC central records files. Also, due to the fact that some water well logs are not submitted by drillers and the unaccountability of privately drilled water wells, GI is unable to provide 100% of the data in the AOR.

If you have any questions concerning this project or need additional information, please call me at 512 474 6721.

Sincerely,

Eloy Del Bosque
Enclosures



LEGEND

- ● WELL LOCATION
- ★ SITE LOCATION

APPROXIMATE LOCATIONS ONLY

WATER WELL LOCATION MAP
WELLS WITHIN A 1.0 MILE RADIUS

QUAIL CREEK LANDFILL
GARLAND, TEXAS
DALLAS COUNTY

USGS 7.5 MINUTE QUADRANGLE

GARLAND (PR 1973)
ROWLETT (PR 1973)

Geosource, Inc.
ENVIRONMENTAL DATA and RESEARCH

1000 WEST AVE., SUITE A
AUSTIN, TEXAS 78701
512-474-6721 FAX: 512-474-5428

WELL RECORDS
QUAIL CREEK LANDFILL
GARLAND, TEXAS

7A

File original copy with
Texas Water Commission
P. O. Box 2311, Capitol Station
Austin 11, Texas

State of Texas

DRILLERS LOG AND WELL DATA REPORT

For use by TWC only
Well No. 33-04-704
Located on map 4W
By W Date 7-15-82
Map no. 5-7-1.1

1) Well Owner: Mr Bill Mays (Name) Route (Street or RFD) Garland, Texas (City, State)

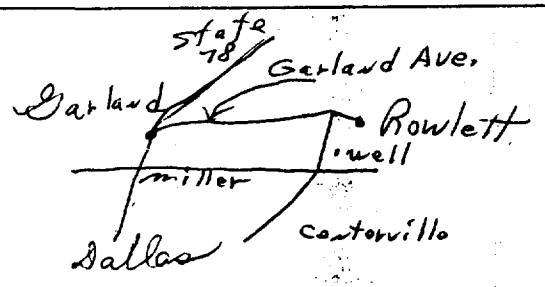
2) Land Owner: Same (Name) (Street or RFD) (City) (State)

3) Intended use: Industrial ☐ Municipal ☐ Irrigation ☐ Other Stable use

4) Location of well: County Dallas Labor _____ League _____ Abstract No. _____

NW¼ NE¼ SW¼ SE¼ of Section _____ Block No. _____ Survey _____
(Circle as many as are known)

_____ miles in _____ direction
NE, SW, etc.
from _____
Town



Sketch map of well location with distances from two section or survey lines, and to landmarks, roads, and creeks.

DRILLERS LOG OF WELL

Method of drilling: Rotary Diameter of hole 36 in. Date drilled 4-27-63

All measurements made from 0 ft. above ground level.

From (ft)	To (ft)	Description and color of formation material	From (ft)	To (ft)	Description and color of formation material
1	3	Black Topsoil			
3	8	Brown Clay			
8	35	Yellow clay			
35	50	Blue Shale			
					(Use continuation sheets if necessary)

COMPLETION DATA

COMPLETION

Straight wall ☑
Under reamed ☐
Gravel packed ☐
Open hole ☐
Other _____

CASING

Type: Old ☐ New ☑
Cemented from _____ ft.
to _____ ft.

Diameter (inches)	Setting from (ft)	Setting to (ft)
30 ID	1	50
Concrete		

SCREEN

Type _____
Perforated ☐ Slotted ☐

Diameter (inches)	Setting from (ft)	Setting to (ft)

I hereby certify that this well was drilled by me (or under my supervision) and that each and all of the statements herein are true to the best of my knowledge and belief.

George Combs (Signature) COMBS DRILLING SERVICE (Company Name) Reg. No. _____
DVEE

Please attach electric log, chemical analysis, and other pertinent information if available.

If well was tested by your company or if you installed the permanent pump please complete the following:

WATER LEVEL AND PUMP DATA

Static water level _____
ft. below _____

Pumping level feet	hours	gpm

Pump type _____
Designed pumping rate _____ gpm ☐ gph ☐
Type power unit _____
Horsepower _____
Depth to bowls, cylinder, jet, etc. _____ ft. below pump base.

Name of contractor testing well or installing permanent pump if other than your company: _____

C-34 (62-4)

70

File original copy with
Texas Water Commission
P. O. Box 2311, Capitol Station
Austin 11, Texas

State of Texas

DRILLERS LOG AND WELL DATA REPORT

For use by TWC only
Well No. 33-01-70
Located on map yes
By dlc Date 1-76
Map no.

1) Well Owner: Sam Shipley (Name) Route 1 (Street or RFD) Garland, Tex. (City, State)

2) Land Owner: Same (Name) (Street or RFD) (City, State)

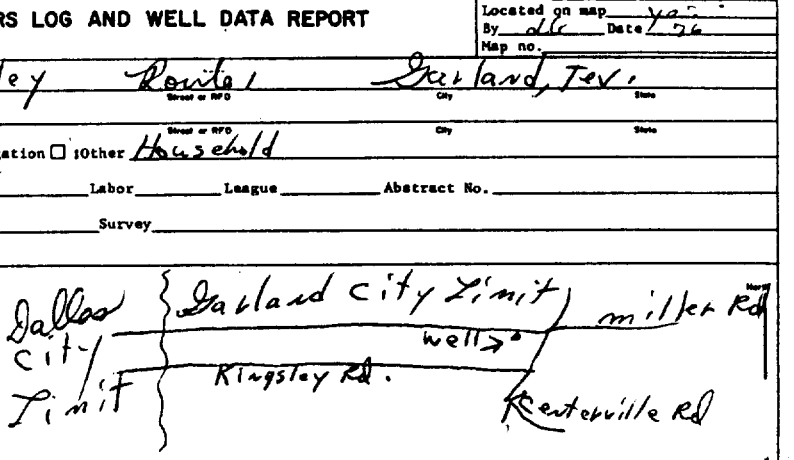
3) Intended use: Industrial ☐ Municipal ☐ Irrigation ☐ Other Household

4) Location of well: County Dallas Labor ____ League ____ Abstract No. ____

NW¼ NE¼ SW¼ SE¼ of Section ____ Block No. ____ Survey ____
(Circle as many as are known)

____ miles in ____ (NE, SW, etc) direction
from ____ (Town)

E side of Garland



Sketch map of well location with distances from two section or survey lines, and to landmarks, roads, and creeks.

DRILLERS LOG OF WELL

Method of drilling: Rotary Diameter of hole 36 in. Date drilled 5-23-6x

All measurements made from 0 ft. above ground level.

From (ft)	To (ft)	Description and color of formation material	From (ft)	To (ft)	Description and color of formation material
1	5	Black Topsoil			
5	17	Yellow Clay			
17	32	Yellow Soapstone			
32	35	White Rock			
35	50	Blue Rock			
					(Use continuation sheets if necessary)

COMPLETION DATA

COMPLETION

Straight wall ☑
Under reamed ☐
Gravel packed ☐
Open hole ☐
Other ____

CASING

Type: Old ☐ New ☑
Cemented from ____ ft.
to ____ ft.

Diameter (inches)	Setting from (ft)	Setting to (ft)
30 ID	1	50

SCREEN

Type ____
Perforated ☐ Slotted ☐

Diameter (inches)	Setting from (ft)	Setting to (ft)

I hereby certify that this well was drilled by me (or under my supervision) and that each and all of the statements herein are true to the best of my knowledge and belief.

George Combs (Signature) By EE — COMBS DRILLING SERVICE (Company Name) Reg. No. ____

Please attach electric log, chemical analysis, and other pertinent information if available.

If well was tested by your company or if you installed the permanent pump please complete the following:

WATER LEVEL AND PUMP DATA

Static water level ____
ft. below ____

Pumping level

feet	hours	gpm

Pump type ____
Designed pumping rate ____ gpm ☐ gph ☐
Type power unit ____
Horsepower ____
Depth to bowls, cylinder, jet, etc., ____ ft. below pump base.

Name of contractor testing well or installing permanent pump if other than your company: ____

C-34 (62-4)

7E

File original copy with
Texas Water Commission
P. O. Box 2311, Capitol Station
Austin 11, Texas

State of Texas

DRILLERS LOG AND WELL DATA REPORT

For use by TWC only
Well No. 33-14-7E
Located on map yes
By dk Date 76
Map no.

1) Well Owner: George Cheisa (Name) Route (Street or RFD) Garland (City) Texas (State)

2) Land Owner: " (Name) (Street or RFD) (City) (State)

3) Intended use: Industrial ☐ Municipal ☐ Irrigation ☐ Other Household

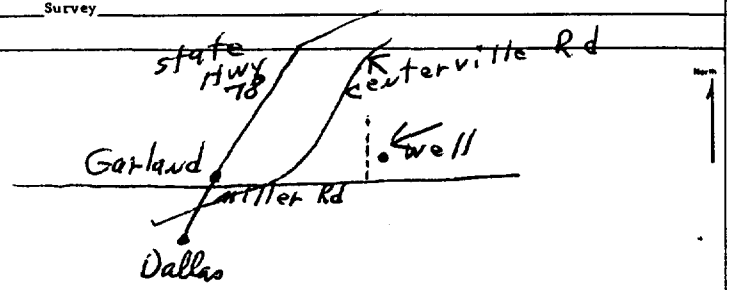
4) Location of well: County Dallas Labor ____ League ____ Abstract No. ____

NW¼ NE¼ SW¼ SE¼ of Section ____ Block No. ____ Survey ____
(Circle as many as are known)

____ miles in ____ (NE, SW, etc.) direction

from ____ (Town)

On Miller Rd



Sketch map of well location with distances from two section or survey lines, and to landmarks, roads, and creeks.

DRILLERS LOG OF WELL

Method of drilling: Rotary Diameter of hole 36 in. Date drilled 3-10-62

All measurements made from 0 ft. above ground level.

From (ft)	To (ft)	Description and color of formation material	From (ft)	To (ft)	Description and color of formation material
1	6	Black Topsoil			
6	30	Yellow clay			
30	40	Sandy clay (yellow)			

(Use continuation sheets if necessary)

COMPLETION DATA

COMPLETION

Straight wall ☑
Under reamed ☐
Gravel packed ☐
Open hole ☐
Other ____

CASING

Type: Old ☐ New ☑
Cemented from ____ ft.
to ____ ft.

Diameter (inches)	Setting from (ft)	Setting to (ft)
30 FO	1	40

SCREEN

Type ____
Perforated ☐ Slotted ☐

Diameter (inches)	Setting from (ft)	Setting to (ft)

I hereby certify that this well was drilled by me (or under my supervision) and that each and all of the statements herein are true to the best of my knowledge and belief.

Combs Drilling Service (Signature) George Combs (Company Name) Reg. No. ____
BYEE

Please attach electric log, chemical analysis, and other pertinent information if available.

If well was tested by your company or if you installed the permanent pump please complete the following:

WATER LEVEL AND PUMP DATA

Static water level 25
ft. below surface

Pumping level

feet	hours	gpm

Pump type ____
Designed pumping rate ____ gpm ☐ gph ☐
Type power unit ____
Horsepower ____
Depth to bowls, cylinder, jet, etc., ____ ft. below pump base.

Name of contractor testing well or installing permanent pump if other than your company: ____

C-34 (62-4)

7H

Send original copy by certified mail to the Texas Water Development Board
P. O. Box 12386
Austin, Texas 78711

State of Texas

WATER WELL REPORT

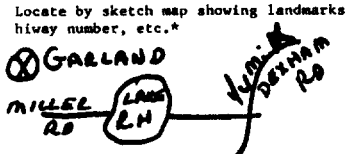
For TWDB use only
Well No. 33-04-7H
Located on map Yes
Received:

1) OWNER:
Person having well drilled Nell Plummer Range (Name) Address Rt. 2, Box 198, Garland, Texas (Street or RFD) (City) (State)

Landowner Same (Name) Address Same (Street or RFD) (City) (State)

2) LOCATION OF WELL:
County Dallas, 5½ miles in S. E. (N.E., S.W., etc.) direction from Garland (Town)

Locate by sketch map showing landmarks, roads, creeks, hiway number, etc.*



North

(Use reverse side if necessary)

or

Give legal location with distances and directions from adjacent sections or survey lines.

Labor _____ League _____

Block _____ Survey _____

Abstract No. _____

(NW¼ NE¼ SW¼ SE¼) of Section _____

3) TYPE OF WORK (Check):
New Well X Deepening
Reconditioning Plugging

4) PROPOSED USE (Check):
Domestic Industrial Municipal
Irrigation X Test Well Other

5) TYPE OF WELL (Check):
Rotary X Driven Dug
Cable Jetted Bored

6) WELL LOG:
Diameter of hole 36" in. Depth drilled 35 ft. Depth of completed well 37½' ft. Date drilled 9/22/70

All measurements made from 0 ft. above ground level.

From (ft.)	To (ft.)	Description and color of formation material
1	4	Dark Brown clay
4	18	Light brown clay
18	28	Light brown sandy clay
28	37½	Very sandy light brown clay

(Use reverse side if necessary)

9) Casing:
Type: Old New Steel Plastic Other concrete x
Cemented from _____ ft. to _____ ft.

Diameter (inches)	Setting From (ft.)	Setting To (ft.)	Gage
30"	2" above G. L.	37½'	2½"

10) SCREEN:
Type none
Perforated Slotted

Diameter (inches)	Setting From (ft.)	Setting To (ft.)	Slot Size
½"	27'	35'	

7) COMPLETION (Check):
Straight wall Gravel packed XX Other
Under reamed Open Hole

8) WATER LEVEL:
Static level _____ ft. below land surface Date _____
Artesian pressure _____ lbs. per square inch Date _____
Depth to pump bowls, cylinder, jet, etc., _____ ft. below land surface.

11) WELL TESTS:
Was a pump test made? Yes No X If yes, by whom?
Yield: _____ gpm with _____ ft. drawdown after _____ hrs.
Bailer test _____ gpm with _____ ft. drawdown after _____ hrs.
Artesian flow _____ gpm
Temperature of water _____

12) WATER QUALITY:
Was a chemical analysis made? Yes No X
Did any strata contain undesirable water? Yes No
Type of water? _____ depth of strata _____

I hereby certify that this well was drilled by me (or under my supervision) and that each and all of the statements herein are true to the best of my knowledge and belief.

NAME Liberty Foundation Drilling Co., Inc. (Type or Print) Water Well Drillers Registration No. 1142

ADDRESS 211 N. Galloway, (Street or RFD) Mesquite (City) Texas (State)

(Signed) C. S. Singleton (Water Well Driller) Liberty Foundation Drilling Co., Inc. (Company Name)

Please attach electric log, chemical analysis, and other pertinent information, if available.

*Additional instructions on reverse side.

TWDBE-GW-53

REFERENCE 12

FLUOR DANIEL

RECORD OF TELEPHONE CONVERSATION

FROM: William Walters, FD

DATE: October 5, 1993

LOCATION: Irvine, CA

TIME: 2:00 p.m. PST

TO: David Terry, Texas Water Commission (512) 475-4610

P.O. NO. 635336-41

OTHER REF. City of Garland Landfill SIs

LOCATION: Austin, TX

Mr. Terry indicated that there were no Wellhead Protection Areas in eastern Dallas County or in any part of Collin County. Mr. Terry indicated that the Wellhead Protection Areas in Dallas County were exclusively in western Dallas County (i.e. Grand Prairie and Irving).

REFERENCE 13

32096-E1-TM-100
2-04972

30X60 MINUTE SERIES (TOPOGRAPHIC)

Dallas
TEXAS

1:100 000-scale *metric* topographic map

30 X 60 MINUTE QUADRANGLE SHOWING

- Contours and elevations in meters
- Highways, roads and other manmade structures
- Water features
- Woodland areas
- Geographic names

U.S. DEPARTMENT OF THE INTERIOR — GEOLOGICAL SURVEY

1986

Produced by the United States Geological Survey
Compiled from USGS 1:24 000-scale topographic maps dated 1958–1980. Planimetry revised from aerial photographs taken 1981 and other source data
Revised information not field checked
Map edited 1986

Projection and 10 000-meter grid, zone 14
Universal Transverse Mercator
25 000-foot grid ticks based on Texas coordinate system, north central zone. 1927 North American Datum
To place on the predicted North American Datum 1983 move the projection lines 11 meters south and 25 meters east

There may be private inholdings within the boundaries of the National or State reservations shown on this map

CONTOUR INTERVAL 10 METERS
NATIONAL GEODETIC VERTICAL DATUM OF 1929
ELEVATIONS SHOWN TO THE NEAREST METER

THIS MAP COMPLIES WITH NATIONAL MAP ACCURACY STANDARDS

FOR SALE BY U.S. GEOLOGICAL SURVEY
DENVER, COLORADO 80225, OR RESTON, VIRGINIA 22092

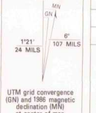
CONVERSION TABLE

Meters	Feet
1	3.2808
2	6.5617
3	9.8425
4	13.1234
5	16.4042
6	19.6850
7	22.9659
8	26.2467
9	29.5276
10	32.8084

To convert meters to feet multiply by 3.2808

To convert feet to meters multiply by 0.3048

DECLINATION DIAGRAM



UTM grid convergence (GN) and 1986 magnetic declination (MN) at center of map
Diagram is approximate

ADJOINING MAPS

1	2	3
4		5
6	7	8

1 Denton
2 McKinney
3 Sulphur Springs
4 Fort Worth
5 Mineola
6 Cleburne
7 Corsicana
8 Tyler

ISBN 0-607-54029-X

Topographic Map Symbols

Primary highway, hard surface
Secondary highway, hard surface
Light duty road, principal street, hard or improved surface
Other road or street; trail
Route marker: Interstate; U. S.; State
Railroad: standard gage; narrow gage
Bridge; overpass; underpass
Tunnel: road; railroad
Built up area; locality; elevation
Airport; landing field; landing strip
National boundary
State boundary
County boundary
National or State reservation boundary
Land grant boundary
U. S. public lands survey: range, township; section
Range, township; section line: protracted
Power transmission line; pipeline
Dam; dam with lock
Cemetery; building
Windmill; water well; spring
Mine shaft; adit or cave; mine, quarry; gravel pit
Campground; picnic area; U. S. location monument
Ruins; cliff dwelling
Distorted surface: strip mine, lava; sand
Contours: index; intermediate; supplementary
Bathymetric contours: index; intermediate
Stream, lake: perennial; intermittent
Rapids, large and small; falls, large and small
Area to be submerged; marsh, swamp
Land subject to controlled inundation; woodland
Scrub; mangrove
Orchard; vineyard

A pamphlet describing topographic maps is available on request

SCALE 1:100 000
1 CENTIMETER ON THE MAP REPRESENTS 1 KILOMETER ON THE GROUND
CONTOUR INTERVAL 10 METERS

DALLAS, TEXAS
32096-E1-TM-100
1986

REFERENCE 14

U.S. DEPARTMENT OF COMMERCE
Lewis L. Strauss, Secretary

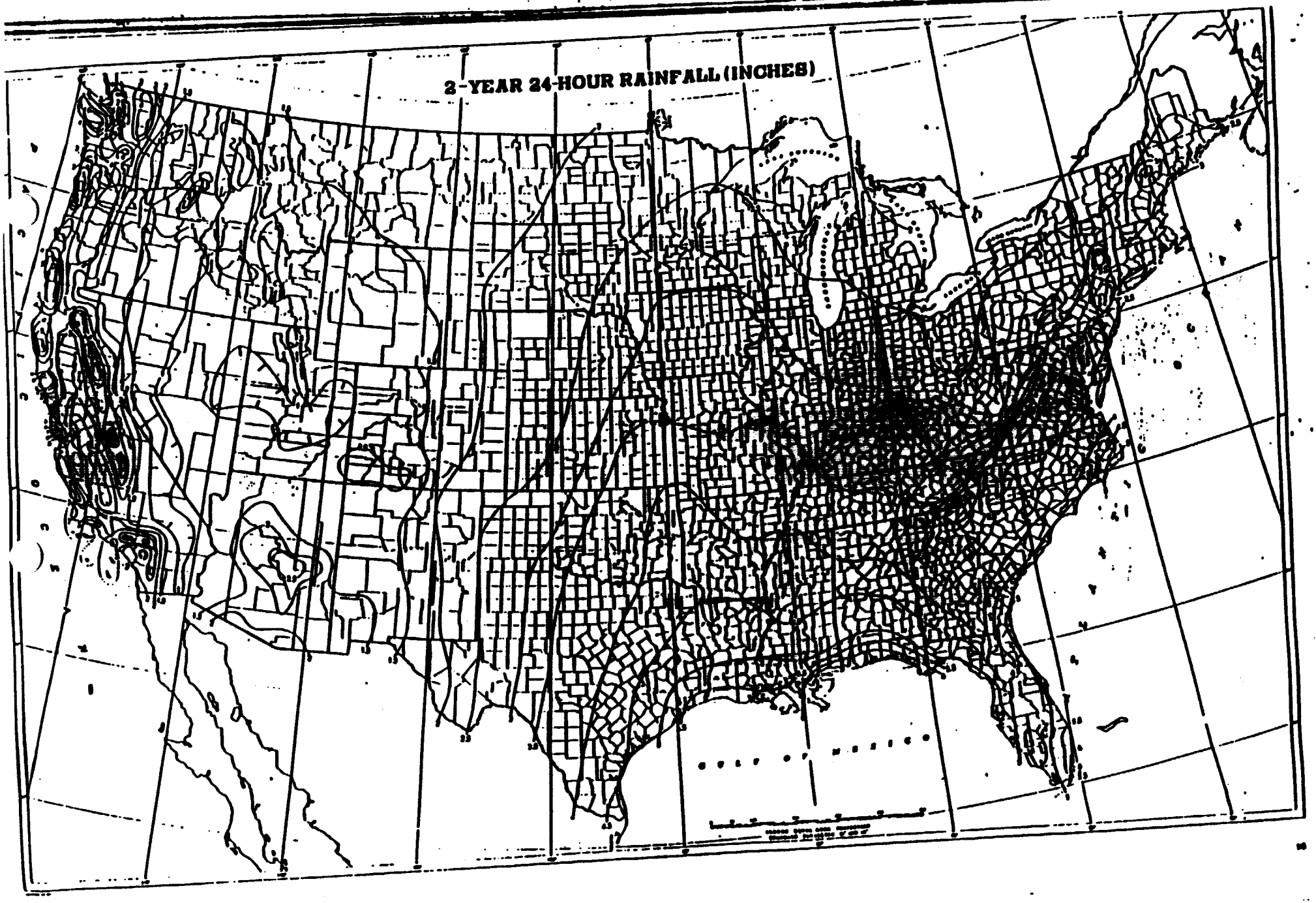
WEATHER BUREAU
F. W. Reichelderfer, Chief

TECHNICAL PAPER NO. 40

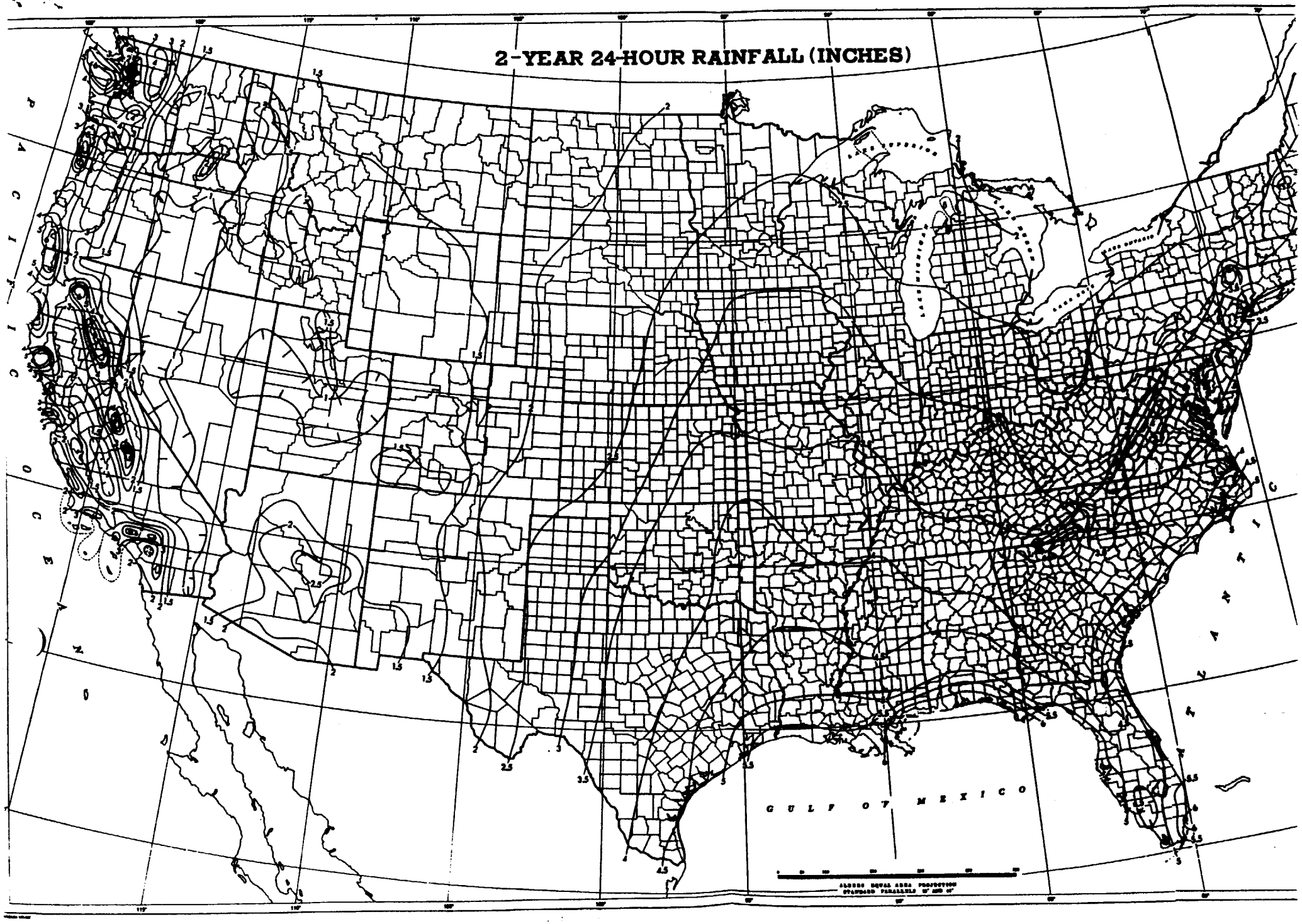
RAINFALL FREQUENCY ATLAS OF THE UNITED STATES

for Durations from 30 Minutes to 24 Hours and Return Periods from 1 to 100 Years

Prepared by
DAVID M. HERSHFIELD
Cooperative Studies Section, Hydrologic Services Division
for
Engineering Division, Soil Conservation Service
U.S. Department of Agriculture


2-YEAR 24-HOUR RAINFALL (INCHES)

2-YEAR 24-HOUR RAINFALL (INCHES)



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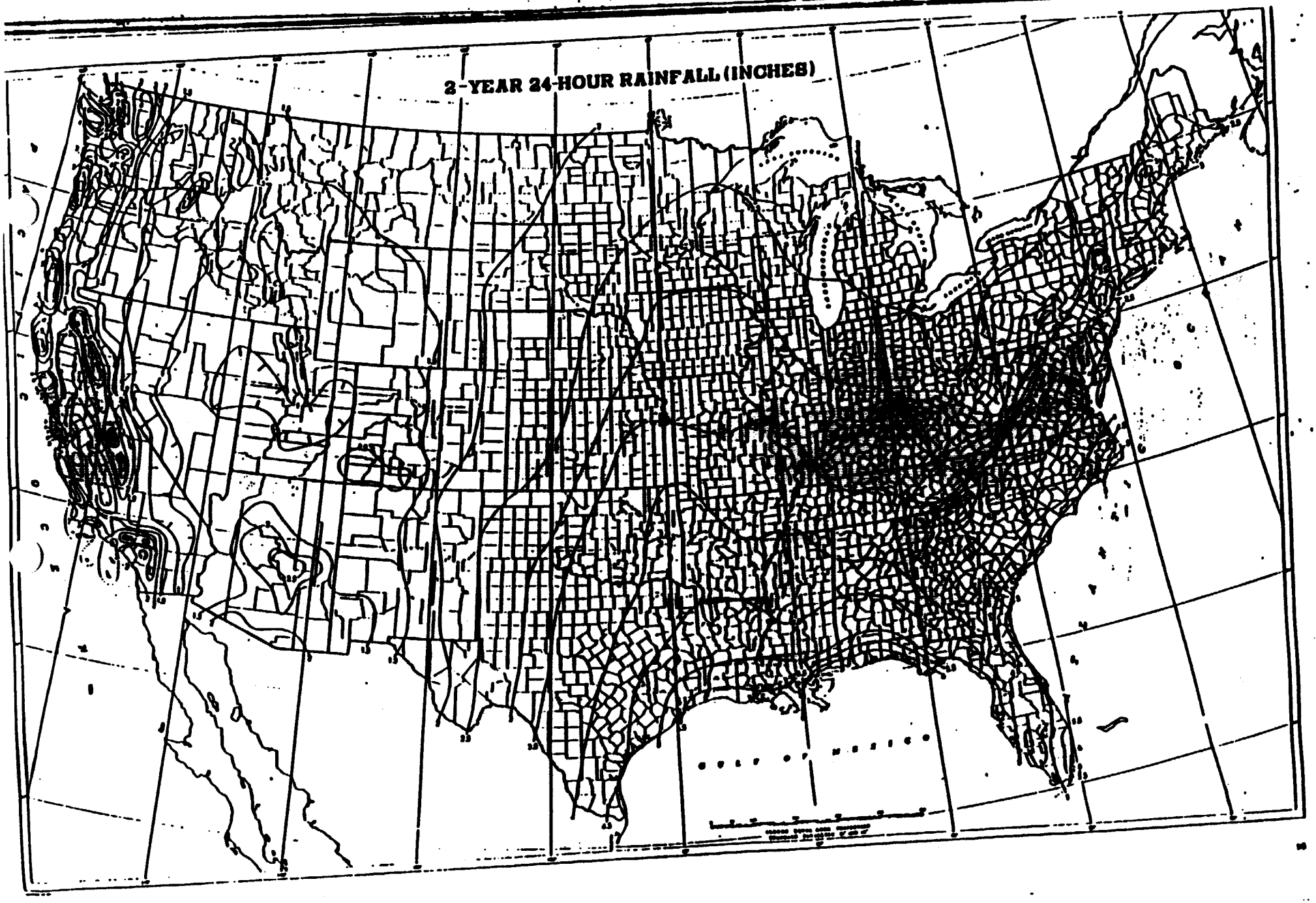
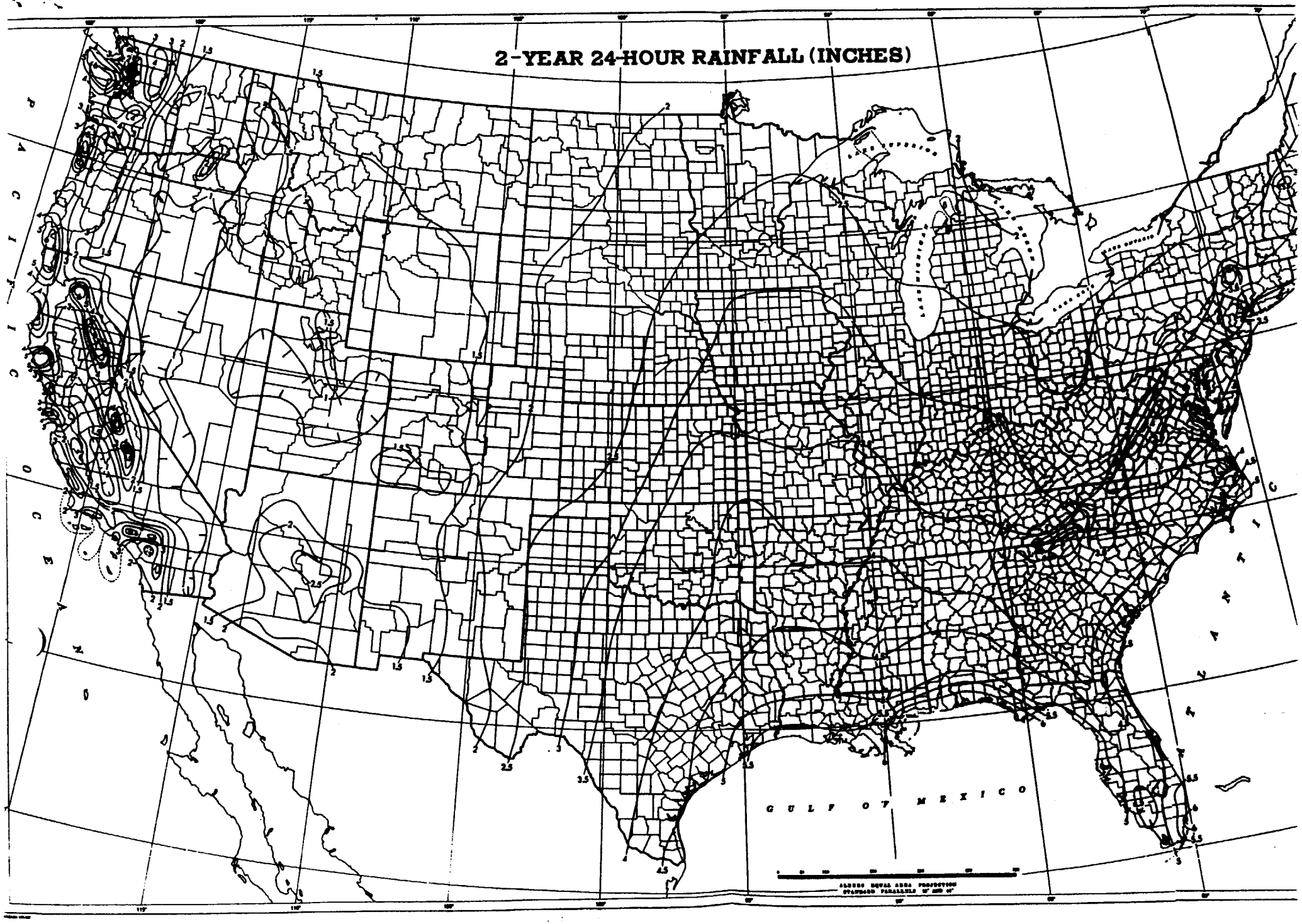

2-YEAR 24-HOUR RAINFALL (INCHES)

2-YEAR 24-HOUR RAINFALL (INCHES)



REFERENCE 15

FLUOR DANIEL

RECORD OF TELEPHONE CONVERSATION

FROM: Tom Casabonne TJC

LOCATION: Irvine, 552M

TO: Terry Hodgins, Watershed Management Group

LOCATION: Dallas, (214) 245-2946

DATE: 5-27-93

TIME: 14:00

P.O. NO.

OTHER REF. Lake Ray Hubbard

I was trying to reach Rene Caraveo (Environmental Monitoring Supervisor) but he is on vacation until next week. Terry Hodgins took the call and told me that the City of Dallas has a water intake on the southwest corner of Lake Ray Hubbard, at the dam. He didn't know how many people were served by water from the lake, but he will try to find out and send me the information. He will also send a map with the take line on it.

Water from the lake is used primarily by residences, although some industries also use the water. A powerplant also takes up water and discharges it back into the lake. Terry didn't know how much surface water and groundwater recharges into the lake, but he will get information on the lake's "Surface Yield," which he will send to us along with the take line map and other info. he can obtain on water usage.

Terry said they would be interested in splitting samples with us when we are sampling in Garland. They had heard that Fluor Daniel was in that area a couple of weeks ago, and they are also gathering more info. I told him to get back to Will Walters on that.

Terry also gave me the number of Bob Parlin, Supervisor of the Purification Department, (214) 670-0919. Mr. Parlin stops work at 4:00 pm, but a lab worker said he would send us a pamphlet with information on their water quality tests.

Separately, I called the USGS at (210) 873-3000. They said that the person to speak to about flow rates is there from 7:30 to 11:00 am on weekdays. His name is Bill Reeves and his direct line is (210) 873-3027.

I also called Wayne McCasland (City of Garland, Engineering Supervisor, (214) 205-2186) about monitoring well locations at the Quail Creek Site. He said that if Ken Smith doesn't have that information, he doesn't have it either. He remembered staking in the locations 10 to 15 years ago, but that was the extent of his involvement. He will send a map showing the location of old landfill cells.

Site Data

REFERENCE 16

FLUOR DANIEL

RECORD OF TELEPHONE CONVERSATION

FROM: Josh Sacker

DATE: 4/7/93

LOCATION: Environmental Services

TIME:

TO: Project Files - ARCS

P.O. NO.

LOCATION:

OTHER REF. ARCS Haz. Ranking System

Conversation with Ms. Dorinda Sullivan who is with the State of Texas Parks & Wildlife at (512) 448-4311.

Ms. Sullivan stated that there were no known endangered or threatened species in the landfill areas or drainage pathways from these landfills all the way to, and including, Lake Ray Hubbart. Of possible environmental sensitivity are rookeries (bird nesting grounds) for Cattle Egrets and Little Blue Herons, neither of which is threatened or endangered, however, she said he did not believe the lake was a locality for Bald Eagles or Whooping Cranes. However, the State's effort regarding the Bald Eagle has been deficient recently. The Texas Garder Snake is listed by the State in Category 2, which indicates that available information suggests there may be reason to warrant listing as threatened or endangered, but that additional information needs to be collected before final determination can be made.

There are no sensitive habitats (such as parks or wildlife sanctuaries) in the area according to Ms. Sullivan, with the possible exception of wetlands. There may be some significant woodland areas near Lake Ray Hubbart (Sugarberry-Elm or Texas Oak Series), but the State has not identified these as sensitive ares. Plant species in and around landfill are not endangered and include common grasses such as Little Blue Stem and Indian Grass Stem. If previously undisturbed areas are to be disturbed during landfill closure then "Native Prairie Remanents" requirements may take effect. For additional information particularly in regard to migratory birds, call Mark Mitchell in Lolita, Texas at (512) 874-4401 (he may work out of his home).

JS4-9-93A.II

FLUOR DANIEL

RECORD OF TELEPHONE CONVERSATION

FROM: Josh Sacker

DATE: April 7, 1993

LOCATION: Irvine, 552M

TIME:

TO: Project File

P.O. NO.

LOCATION:

OTHER REF. ARCS 06/635336
Haz Ranking System

Conversation with Jeff Reed, U.S. Fish & Wildlife Service Ecological Division, Arlington, TX (817) 887-7830 Contact Ref. No. 2-12-93-P-128 (to be used in any future request or contact). Mr. Reed stated that there were no anticipated federally listed threatened or endangered species within the landfills (terrestrial), or within drainage pathways (aquatic species) leading from these landfills. I provided the location of the landfills as within 2 or 3 miles from the intersection of Route 66 and Centerville Road. He said he was very familiar with this area. Mr. Reed considered the possibility of bird species using habitats within the landfills or drainage pathways that are covered under the Migratory Bird Treaty Act. However, he concluded that, due to the urban/developed nature of the general vicinity, endangered or threatened species (including the whooping crane, bald eagle, cormorants, water turkeys) would not be expected in these areas. Various non-threatened species of ducks or geese are found in these areas. Mr. Reed stated that no federally listed species are expected to be at risk in these areas. He stated some of Rowlett Creek has been acquired by the City of Garland or County with state matching funds and is a wildlife/recreational sanctuary. He referred to the County (Dallas?) Open Space Plan regarding this issue. He also stated that there were no Federally Designated Sensitive Habitats in the area. He qualified this by saying Federally Designated Habitats includes many things, but that there were no federal habitats of concern in the area, other than the possible exception of wetlands. He said to contact Texas State Parks & Wildlife regarding State Listed Species at (512) 448-4311 (Austin, TX).

Action Items: Call Mr. Reed back

Questions:

1. Does lack of endangered or threatened species apply to Lake Ray Hubbard?

2. Does lack of endangered or threatened species apply to plant species?

3. Can you respond to this telephone conversation in writing.

JS4793A.II

REFERENCE 17

REFERENCE 18

REFERENCE 19

nited States Department of Agriculture
oil Conservation Service
cooperation with
exas Agricultural Experiment Station

soil survey of

Dallas County, Texas

grass. The yield of forage is good if the soil is properly managed. This soil has low potential for use as cropland because of the severe hazard of erosion. The use of close-growing crops and keeping crop residue on the soil help to control runoff and erosion and to maintain tilth and productivity. This soil is well suited to use as rangeland. The climax plant community consists of tall and mid grasses.

This soil has low potential for urban uses. The very high shrink-swell potential, corrosivity, and low strength of the soil and the severe hazard of erosion are limitations. In addition, the walls of cuts and excavations tend to cave in or slough. These limitations can be overcome through good design and careful installation. The clayey surface texture is a limitation to the use of this soil for camp and picnic areas. The slope is a limitation to playground uses.

This soil is in capability subclass IIIe and in the Blackland range site.

43—Houston Black clay, 0 to 1 percent slopes. This is a deep, moderately well drained, nearly level soil on smooth uplands. The areas are irregular in shape and range from 10 to a few hundred acres in size.

Typically, the surface layer is moderately alkaline, very dark gray clay 6 inches thick. To a depth of 38 inches, the soil is moderately alkaline, black clay. To a depth of 52 inches, it is moderately alkaline, very dark gray clay. To a depth of 70 inches, the soil is moderately alkaline, dark grayish brown clay that has many light olive brown mottles.

Permeability is very slow, and the available water capacity is high. Runoff is slow, and the hazard of erosion is slight.

Included in mapping are small areas of Branyon and Burleson soils and small areas of gently sloping Houston Black soils. The included soils make up less than 10 percent of any one mapped area.

This soil is used mainly as cropland, for which it has high potential. The yield of crops commonly grown in the county is good if the soil is properly managed. Leaving crop residue on the surface helps to maintain tilth and productivity. This soil has high potential for use as pasture. It is well suited to improved bermudagrass.

This soil has low potential for urban uses. The very high shrink-swell potential, corrosivity, and low strength of the soil are limitations. In addition, the walls of cuts and excavations tend to cave in or slough. These limitations can be overcome through good design and careful installation. The clayey surface texture is a limitation to recreation uses.

This soil is in capability subclass IIw and in the Blackland range site.

44—Houston Black clay, 1 to 3 percent slopes. This is a deep, moderately well drained, gently sloping soil on smooth uplands. The areas are oblong or irregular in shape and range from 10 to several hundred acres in size.

Typically, the surface layer is moderately alkaline, very dark gray clay 6 inches thick. To a depth of 38 inches, the soil is moderately alkaline, black clay, and to a depth of 52 inches, it is moderately alkaline, very dark gray clay. To a depth of 70 inches, the soil is moderately alkaline, dark grayish brown clay that has many light olive brown mottles.

Permeability is very slow, and the available water capacity is high. Runoff is medium, and the hazard of erosion is moderate.

Included in mapping are small areas of Burleson, Dalco, and Heiden soils. The included soils make up less than 10 percent of any one mapped area.

This soil is used mainly as cropland, for which it has high potential. The yield of crops commonly grown in the county is good if the soil is properly managed. Leaving crop residue on or near the surface helps to control runoff and to maintain tilth and productivity. Terraces and contour farming help to control runoff and erosion. This soil has high potential for use as pasture. It is well suited to improved bermudagrass.

This soil has low potential for urban uses. The very high shrink-swell potential, corrosivity, and low strength of the soil and the hazard of erosion are limitations. In addition, the walls of cuts and excavations tend to cave in or slough. These limitations can be overcome through good design and careful installation. The clayey surface texture is a limitation to recreation uses.

This soil is in capability subclass IIe and in the Blackland range site.

45—Houston Black-Urban land complex, 0 to 4 percent slopes. This complex is made up of deep, moderately well drained, nearly level and gently sloping soils and areas of Urban land. The areas are mainly oval and oblong and range from 20 to several hundred acres.

The Houston Black soil makes up about 40 percent of this complex, and Urban land, which consists of areas covered with buildings and pavement, makes up 35 percent. Minor soils make up the rest. In many places, excavation for service lines has altered the soil. In some yards, a layer of loamy or sandy topsoil 2 or 3 inches thick has been spread over the surface. The Houston Black soil and Urban land are so intermingled that it was not practical to separate them in mapping at the scale used.

Typically, the surface layer of the Houston Black soil is moderately alkaline, very dark gray clay 6 inches thick. To a depth of 38 inches, the soil is moderately alkaline, black clay, and to a depth of 52 inches, it is moderately alkaline, very dark gray clay. To a depth of 70 inches, the soil is moderately alkaline, dark grayish brown clay that has light olive brown mottles.

Permeability is very slow, and the available water capacity is high. Runoff is medium, and the hazard of erosion is moderate.

Included in mapping are small areas of Burleson, Dalco, Heiden, and Wilson soils. Some of the included

TABLE 1.--TEMPERATURE AND PRECIPITATION

[Recorded in the period 1951-74 at Dallas, Texas]

Month	Temperature						Precipitation				
	Average daily maximum	Average daily minimum	Average daily	2 years in 10 will have-- Maximum temperature higher than--	2 years in 10 will have-- Minimum temperature lower than--	Average number of growing degree days[1]	Average	2 years in 10 will have-- Less than--	2 years in 10 will have-- More than--	Average number of days with 0.10 inch or more	Average snowfall
	°F	°F	°F	°F	°F	Units	In	In	In		In
January----	55.6	35.4	45.5	82	11	58	1.78	.72	2.63	4	1.3
February---	60.1	39.0	49.6	84	17	98	2.05	.91	2.98	4	.5
March------	67.7	46.0	56.8	91	23	278	2.56	.75	4.02	4	.2
April------	76.7	56.0	66.4	92	35	492	4.81	2.09	7.01	6	.0
May--------	83.9	64.1	74.0	97	45	744	4.16	2.10	5.84	6	.0
June-------	91.4	71.9	81.7	101	58	951	3.01	1.00	4.61	4	.0
July-------	95.8	76.2	86.0	106	65	1,116	1.94	.37	3.17	3	.0
August-----	95.7	75.3	85.5	106	64	1,101	2.14	.53	3.41	3	.0
September--	88.2	68.1	78.2	101	50	846	3.77	1.58	5.58	5	.0
October----	78.5	57.2	67.9	94	38	555	3.88	.88	6.23	4	.0
November---	66.0	45.4	55.8	85	25	204	2.69	1.15	3.93	4	.0
December---	58.3	38.3	48.3	82	16	87	2.27	.74	3.48	4	.2
Year-----	76.5	56.1	66.3	107	11	6,530	35.06	26.55	43.03	51	2.2

[1]A growing degree day is a unit of heat available for plant growth. It can be calculated by adding the maximum and minimum daily temperatures, dividing the sum by 2, and subtracting the temperature below which growth is minimal for the principal crops in the area (50° F).

REFERENCE 20

U.S. Department of Commerce
Economics and Statistics Administration
BUREAU OF THE CENSUS

1990 CP-1-45

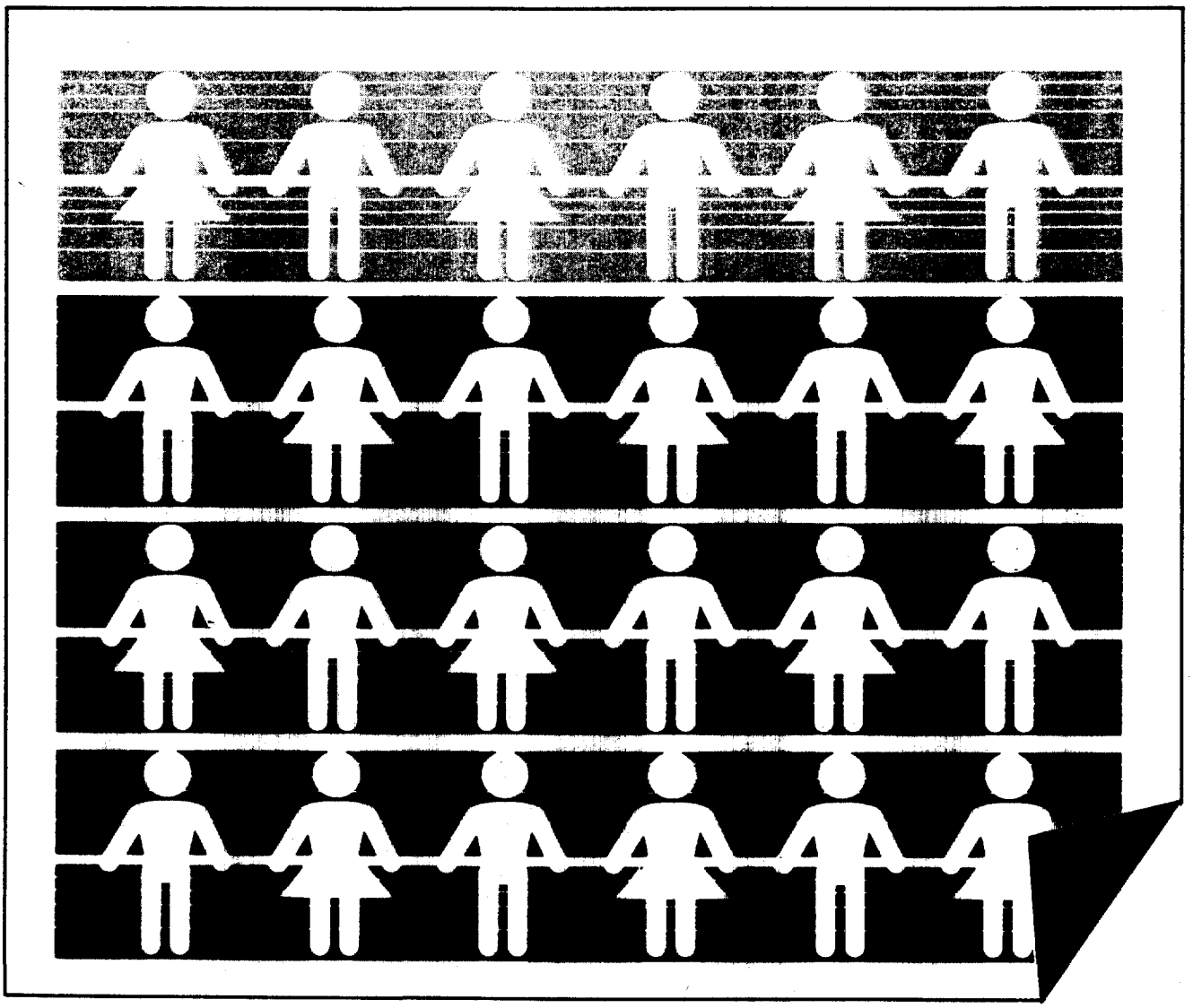
1990 Census of Population

General Population Characteristics

Texas

Section 1 of 2

CENSUS '90



Summary of General Characteristics of Persons: 1990—Con.

[Explanation of terms and meanings of symbols, see text]

Urban and Rural and Size of Place Inside and Outside Metropolitan Area County Place and [In Selected States] County Subdivision [1,000 or More Persons]	All persons	Percent of all persons: Under 5 years	Under 18 years	18 to 24 years	25 to 44 years	45 to 64 years	65 years and over	80 years and over	Median age	Persons 18 years and over—Males per 100 females	Percent of all persons in households: In families	Non-family householders and non-relatives of householder	In group quarters	Persons in group quarters: Total	Percent institutionalized
PLACE AND COUNTY SUBDIVISION—Con.															
Bangs city	1 555	6.2	25.0	8.0	24.4	16.9	25.7	9.4	38.7	73.1	80.1	14.6	5.3	82	100.0
Barrett CDP	3 052	8.1	30.5	11.9	28.7	19.9	9.0	1.5	30.2	88.4	92.5	7.5	-	-	-
Bartlett city	1 439	9.0	27.2	9.0	21.2	16.2	26.4	9.8	38.0	78.8	80.4	14.0	5.6	80	100.0
Bastrop city	4 044	7.6	27.1	8.8	30.4	16.4	17.3	5.2	33.9	81.5	83.4	14.4	2.2	89	93.3
Batesville CDP	1 313	10.5	40.1	12.3	26.1	13.3	8.2	2.1	23.5	100.8	95.2	4.8	-	-	-
Bay City city	18 170	9.1	31.7	9.3	32.4	15.9	10.6	2.6	30.0	90.4	85.4	13.6	1.0	177	100.0
Bayou Vista village	1 320	4.8	14.5	6.7	34.8	30.3	13.6	1.1	42.0	102.9	83.3	16.7	-	-	-
Baytown city	63 850	8.9	30.7	11.4	32.3	15.9	9.7	2.1	29.4	94.5	86.4	12.8	.8	538	79.7
Beaumont city	114 323	7.5	26.8	10.4	30.8	18.3	13.8	3.4	32.8	85.9	81.7	15.2	3.1	3 554	62.8
Bedford city	43 762	7.1	25.7	10.3	40.5	18.8	4.7	1.0	32.0	93.8	83.2	16.3	.5	225	100.0
Beeville city	13 547	8.8	32.8	11.3	28.5	15.6	11.8	2.9	28.7	86.8	85.6	12.8	1.6	214	68.7
Bellaire city	13 842	7.8	21.8	5.2	40.2	18.3	14.5	2.7	36.3	86.3	82.3	17.6	-	2	100.0
Bellmead city	8 336	7.6	27.8	11.6	28.8	17.6	14.2	3.0	31.0	98.0	82.5	16.9	.7	56	100.0
Bellville city	3 378	7.7	25.2	7.7	25.3	17.4	24.4	8.7	37.5	79.5	79.4	15.0	5.6	189	100.0
Belton city	12 476	8.7	29.0	13.5	28.7	15.7	13.2	3.6	29.5	89.2	79.2	12.2	8.6	1 079	62.7
Benavides city	1 788	7.8	29.0	9.2	24.7	19.6	17.6	4.9	33.2	83.9	90.2	9.8	-	-	-
Benbrook city	19 564	6.9	23.0	8.6	36.4	22.4	9.7	2.1	34.1	97.5	85.0	14.1	.9	180	100.0
Beverly Hills city	2 048	7.6	27.7	10.4	32.4	18.8	10.6	1.3	30.9	96.0	85.4	14.6	-	-	-
Bevil Oaks town	1 350	6.2	25.3	7.0	31.6	27.3	8.9	1.0	37.4	101.6	94.0	6.0	-	-	-
Big Lake city	3 672	10.2	38.2	8.9	30.9	14.1	8.0	1.8	26.8	94.8	92.1	6.6	1.3	49	100.0
Big Sandy town	1 185	8.9	29.7	8.2	28.9	14.8	18.4	5.1	31.9	79.5	85.1	14.9	-	-	-
Big Spring city	23 093	7.9	26.7	9.2	28.8	19.4	15.9	3.9	33.9	95.5	79.6	12.4	8.0	1 836	87.1
Bishop city	3 337	7.0	30.2	10.5	27.8	18.5	13.0	2.8	31.1	92.6	92.2	7.8	-	-	-
Blanco city	1 238	7.1	22.8	8.9	22.4	19.6	26.3	10.2	40.8	71.0	76.7	15.3	8.0	99	100.0
Bloomington CDP	1 888	9.4	34.1	9.5	28.4	18.9	9.1	1.8	29.2	95.1	93.6	6.4	-	-	-
Blossom city	1 440	6.6	28.5	11.3	27.8	17.5	14.9	2.9	32.1	86.8	89.2	10.8	-	-	-
Blue Mound city	2 133	6.8	34.1	9.6	33.1	17.6	5.6	.5	29.2	95.8	92.5	7.5	-	-	-
Boerne city	4 274	8.3	28.5	8.4	28.8	16.9	17.3	6.7	34.0	79.6	83.7	11.3	4.9	211	92.9
Bogata town	1 421	4.6	19.2	7.4	20.2	19.9	33.3	13.2	47.3	72.4	74.7	16.5	8.9	126	100.0
Boling-Iago CDP	1 119	7.9	29.3	8.9	26.4	19.1	16.3	3.0	34.2	91.5	87.4	12.6	-	-	-
Bonham city	6 686	6.1	22.9	7.6	23.8	19.1	26.6	7.7	41.1	86.7	76.5	16.5	7.0	467	100.0
Booker town	1 236	9.4	35.3	7.4	30.2	16.2	10.9	1.9	29.5	99.0	89.4	10.6	-	-	-
Borger city	15 675	7.2	28.0	8.5	27.9	18.9	16.7	3.5	34.1	92.6	85.2	13.1	1.7	263	51.0
Bovina city	1 549	8.8	34.7	11.8	26.5	15.6	11.3	2.4	27.4	99.8	89.9	10.1	-	-	-
Bowie city	4 990	6.7	24.3	7.8	24.0	18.2	25.7	9.2	39.7	79.0	81.2	14.3	4.5	225	100.0
Boyd town	1 041	8.1	30.7	8.5	29.5	18.6	12.6	3.0	31.9	85.3	89.1	10.9	-	-	-
Brachetville city	1 740	7.4	30.3	9.1	26.9	18.4	15.2	2.8	33.6	97.4	86.3	12.4	1.3	22	100.0
Brady city	5 946	7.3	28.0	8.0	23.7	17.0	23.3	8.1	36.4	80.6	82.8	14.1	3.0	181	98.9
Brazoria city	2 717	7.5	30.8	8.9	31.2	18.2	10.9	2.4	31.6	90.0	89.2	10.8	-	-	-
Breckenridge city	5 665	7.3	29.3	7.2	27.7	18.3	17.6	4.8	34.5	84.0	85.2	13.8	1.0	56	100.0
Bremond city	1 110	8.1	26.5	7.4	24.4	15.2	26.5	10.0	37.2	76.6	80.6	13.2	6.2	69	94.2
Brenham city	11 952	6.7	24.0	14.9	26.2	15.6	19.3	6.6	32.7	82.3	72.3	15.5	12.2	1 463	56.6
Brier CDP	3 899	6.9	28.9	7.6	31.8	22.8	8.9	1.3	33.9	101.5	89.2	10.1	.7	29	86.2
Bridge City city	8 034	6.8	28.2	9.2	30.3	22.7	9.6	1.8	33.8	92.7	91.3	7.6	1.1	89	100.0
Bridgeport city	3 581	7.6	29.8	8.6	29.3	16.4	15.9	5.3	32.6	81.5	83.2	11.1	5.6	202	100.0
Brookshire city	2 922	10.4	34.7	10.2	29.2	14.1	11.7	3.8	28.3	87.1	82.7	10.9	6.4	186	57.0
Brookside Village city	1 470	6.8	27.8	9.0	31.0	23.1	9.1	.7	32.9	108.4	92.0	8.0	-	-	-
Brownfield city	9 560	8.7	32.8	8.5	25.4	18.1	15.1	3.7	31.4	84.6	89.5	9.2	1.3	127	100.0
Brownsville city	98 962	9.1	36.6	12.1	27.6	15.0	8.7	1.9	25.9	82.5	91.3	7.0	1.7	1 677	89.7
Brownwood city	18 387	7.6	27.3	12.0	25.7	16.7	18.3	5.5	33.0	83.6	78.5	14.9	6.5	1 204	49.9
Bruceville-Eddy city	1 075	8.2	26.7	9.2	31.2	17.4	15.5	3.1	33.9	87.6	90.7	9.3	-	-	-
Brushy Creek CDP	5 833	8.9	34.6	6.1	41.9	14.8	2.7	.2	30.1	100.1	94.2	5.8	-	-	-
Bryan city	55 002	8.7	27.1	16.5	32.7	13.9	9.8	2.5	27.9	96.5	78.7	19.6	1.7	943	83.4
Buchanan Dam CDP	1 099	4.5	12.2	3.5	16.0	26.5	41.9	6.8	61.3	91.1	81.8	17.6	.6	7	-
Buda city	1 795	9.2	31.6	7.6	38.4	13.8	8.6	1.6	30.6	96.6	90.9	9.1	-	-	-
Buffalo city	1 555	8.9	30.0	9.5	27.8	16.3	16.4	5.5	31.1	80.7	83.7	14.0	2.3	36	100.0
Buna CDP	2 127	7.5	29.6	9.5	26.9	19.4	14.5	4.0	33.0	87.4	87.1	10.5	2.4	51	100.0
Bunker Hill Village city	3 391	5.3	24.6	5.5	24.4	30.4	15.0	1.4	42.8	98.1	94.2	5.4	.4	12	33.3
Burkburnett city	10 145	7.1	27.2	8.6	29.5	22.1	12.5	2.8	34.0	89.4	88.7	10.2	1.1	110	98.2
Burleson city	16 113	8.1	29.7	9.7	34.0	18.6	8.1	1.9	31.1	91.0	90.5	8.4	1.1	183	100.0
Burnet city	3 423	7.9	27.9	7.8	25.1	15.9	23.3	8.1	35.1	75.5	81.1	16.2	2.7	92	100.0
Cactus city	1 529	15.2	41.3	18.8	29.3	8.8	1.8	.1	21.8	144.0	86.5	12.9	.7	10	-
Caddo Mills city	1 068	6.6	27.9	9.1	28.7	17.5	16.9	3.8	34.4	86.9	89.2	10.8	-	-	-
Caldwell city	3 181	7.1	27.7	8.7	26.4	17.7	19.5	6.7	34.5	81.7	81.0	14.9	4.0	128	100.0
Calvert city	1 536	9.3	30.3	7.7	22.4	16.4	23.1	7.3	34.6	72.6	81.8	16.7	1.6	24	100.0
Cameron city	5 580	7.6	28.1	8.1	24.3	18.3	21.3	6.8	36.0	81.2	82.6	15.2	2.2	122	100.0
Cameron Park CDP	3 802	11.0	49.5	11.8	25.3	10.4	3.0	.5	18.2	90.8	96.7	3.3	-	-	-
Camp Swift CDP	2 681	6.9	23.1	7.7	44.9	18.6	5.7	.5	33.2	217.9	63.4	7.8	28.8	771	98.7
Canadian town	2 417	7.5	29.6	6.7	29.2	18.9	15.6	5.3	33.9	88.9	86.7	11.3	2.1	50	100.0
Canton city	2 949	5.2	19.9	9.2	24.4	18.8	27.8	9.3	42.2	75.0	76.5	14.8	8.6	255	78.0
Canutillo CDP	4 442	9.7	35.3	12.3	28.6	16.2	7.5	1.4	26.5	97.0	93.1	6.9	-	-	-
Canyon city	11 365	6.7	24.9	24.1	27.7	13.3	9.9	3.1	25.5	88.1	72.2	17.1	10.6	1 207	15.2
Canyon Lake CDP	9 975	5.9	20.4	5.2	26.7	26.5	21.1	2.4	43.1	95.5	85.9	13.6	.5	54	-
Carrizo Springs city	5 745	9.0	36.5	10.5	25.5	15.5	11.9	2.9	27.3	85.2	92.0	7.1	1.0	56	100.0
Carrollton city	82 169	9.6	28.0	8.5	45.1	15.0	3.4	.6	30.6	94.7	86.2	13.6	.2	204	98.0
Carthage city	6 496	7.1	26.6	10.6	26.1	17.3	19.4	5.5	34.3	77.9	81.1	13.7	5.3	342	58.2
Castle Hills city	4 198	3.5	15.6	5.5	19.1	30.6	29.3	6.2	54.1	83.5	84.2	14.5	1.3	53	-
Castroville city	2 159	7.3	27.8	8.9	31.4	18.6	13.2	3.4	32.7	92.3	88.1	11.6	.3	6	-
Cedar Hill city	19 976	10.6	33.3	7.9	42.2	12.0	4.5	1.0	29.3	91.3	91.5	7.5	1.1	215	53.5
Cedar Park city	5 161	9.0	32.4	8.9	36.1	17.5	5.1	.7	29.9	99.0	92.0	8.0	-	-	-

REFERENCE 21

POPULATION SUMMARY

LOCATION	:	0.2 mi. radius at 32.903515, -96.603433
# BLOCK GROUPS INCLUDED	:	1
NUMBER OF PERSONS	:	1543
NUMBER OF FAMILIES	:	386
NUMBER OF HOUSEHOLDS	:	463
MEDIAN (EST.) HOUSEHOLD INCOME	:	38929
AGE 0 THRU 4	:	192
AGE 5 THRU 9	:	188
AGE 10 THRU 19	:	235
AGE 20 THRU 49	:	842
AGE 50 THRU 64	:	58
AGE 65 AND OVER	:	28
WHITE	:	999
BLACK	:	300
INDIAN	:	10
ASIAN	:	62
OTHER RACE	:	172
HISPANIC	:	265
OWNER OCCUPIED	:	353
RENTER OCCUPIED	:	110
PERCENT AGE 0 THRU 4	:	12.4
PERCENT AGE 5 THRU 9	:	12.2
PERCENT AGE 10 THRU 19	:	15.2
PERCENT AGE 20 THRU 49	:	54.6
PERCENT AGE 50 THRU 64	:	3.8
PERCENT AGE 65 AND OVER	:	1.8
PERCENT WHITE	:	64.7
PERCENT BLACK	:	19.4
PERCENT INDIAN	:	0.6
PERCENT ASIAN	:	4.0
PERCENT HISPANIC	:	17.2
PERCENT OTHER RACE	:	11.1
PERCENT OWNER OCCUPIED	:	76.2
PERCENT RENTER OCCUPIED	:	23.8

POPULATION SUMMARY

LOCATION	:	0.5 mi. radius at 32.903515, -96.603433
# BLOCK GROUPS INCLUDED	:	1
NUMBER OF PERSONS	:	1543
NUMBER OF FAMILIES	:	386
NUMBER OF HOUSEHOLDS	:	463
MEDIAN (EST.) HOUSEHOLD INCOME	:	38929
AGE 0 THRU 4	:	192
AGE 5 THRU 9	:	188
AGE 10 THRU 19	:	235
AGE 20 THRU 49	:	842
AGE 50 THRU 64	:	58
AGE 65 AND OVER	:	28
WHITE	:	999
BLACK	:	300
INDIAN	:	10
ASIAN	:	62
OTHER RACE	:	172
HISPANIC	:	265
OWNER OCCUPIED	:	353
RENTER OCCUPIED	:	110
PERCENT AGE 0 THRU 4	:	12.4
PERCENT AGE 5 THRU 9	:	12.2
PERCENT AGE 10 THRU 19	:	15.2
PERCENT AGE 20 THRU 49	:	54.6
PERCENT AGE 50 THRU 64	:	3.8
PERCENT AGE 65 AND OVER	:	1.8
PERCENT WHITE	:	64.7
PERCENT BLACK	:	19.4
PERCENT INDIAN	:	0.6
PERCENT ASIAN	:	4.0
PERCENT HISPANIC	:	17.2
PERCENT OTHER RACE	:	11.1
PERCENT OWNER OCCUPIED	:	76.2
PERCENT RENTER OCCUPIED	:	23.8

POPULATION SUMMARY

LOCATION	:	0.8 mi. radius at 32.903515, -96.603433
# BLOCK GROUPS INCLUDED	:	1
NUMBER OF PERSONS	:	1543
NUMBER OF FAMILIES	:	386
NUMBER OF HOUSEHOLDS	:	463
MEDIAN (EST.) HOUSEHOLD INCOME	:	38929
AGE 0 THRU 4	:	192
AGE 5 THRU 9	:	188
AGE 10 THRU 19	:	235
AGE 20 THRU 49	:	842
AGE 50 THRU 64	:	58
AGE 65 AND OVER	:	28
WHITE	:	999
BLACK	:	300
INDIAN	:	10
ASIAN	:	62
OTHER RACE	:	172
HISPANIC	:	265
OWNER OCCUPIED	:	353
RENTER OCCUPIED	:	110
PERCENT AGE 0 THRU 4	:	12.4
PERCENT AGE 5 THRU 9	:	12.2
PERCENT AGE 10 THRU 19	:	15.2
PERCENT AGE 20 THRU 49	:	54.6
PERCENT AGE 50 THRU 64	:	3.8
PERCENT AGE 65 AND OVER	:	1.8
PERCENT WHITE	:	64.7
PERCENT BLACK	:	19.4
PERCENT INDIAN	:	0.6
PERCENT ASIAN	:	4.0
PERCENT HISPANIC	:	17.2
PERCENT OTHER RACE	:	11.1
PERCENT OWNER OCCUPIED	:	76.2
PERCENT RENTER OCCUPIED	:	23.8

POPULATION SUMMARY

LOCATION	:	1.0 mi. radius at 32.903515, -96.603433
# BLOCK GROUPS INCLUDED	:	5
NUMBER OF PERSONS	:	5840
NUMBER OF FAMILIES	:	1398
NUMBER OF HOUSEHOLDS	:	1640
MEDIAN (EST.) HOUSEHOLD INCOME	:	38421
AGE 0 THRU 4	:	644
AGE 5 THRU 9	:	639
AGE 10 THRU 19	:	1008
AGE 20 THRU 49	:	2972
AGE 50 THRU 64	:	390
AGE 65 AND OVER	:	187
WHITE	:	3421
BLACK	:	1464
INDIAN	:	36
ASIAN	:	121
OTHER RACE	:	798
HISPANIC	:	1264
OWNER OCCUPIED	:	1205
RENTER OCCUPIED	:	435
PERCENT AGE 0 THRU 4	:	11.0
PERCENT AGE 5 THRU 9	:	10.9
PERCENT AGE 10 THRU 19	:	17.3
PERCENT AGE 20 THRU 49	:	50.9
PERCENT AGE 50 THRU 64	:	6.7
PERCENT AGE 65 AND OVER	:	3.2
PERCENT WHITE	:	58.6
PERCENT BLACK	:	25.1
PERCENT INDIAN	:	0.6
PERCENT ASIAN	:	2.1
PERCENT HISPANIC	:	21.6
PERCENT OTHER RACE	:	13.7
PERCENT OWNER OCCUPIED	:	73.5
PERCENT RENTER OCCUPIED	:	26.5

POPULATION SUMMARY

LOCATION	:	2.0 mi. radius at 32.903515, -96.603433
# BLOCK GROUPS INCLUDED	:	27
NUMBER OF PERSONS	:	34416
NUMBER OF FAMILIES	:	8838
NUMBER OF HOUSEHOLDS	:	10666
MEDIAN (EST.) HOUSEHOLD INCOME	:	34698
AGE 0 THRU 4	:	3494
AGE 5 THRU 9	:	3474
AGE 10 THRU 19	:	5634
AGE 20 THRU 49	:	16985
AGE 50 THRU 64	:	3143
AGE 65 AND OVER	:	1686
WHITE	:	24121
BLACK	:	5321
INDIAN	:	219
ASIAN	:	689
OTHER RACE	:	4066
HISPANIC	:	6663
OWNER OCCUPIED	:	7666
RENTER OCCUPIED	:	3000
PERCENT AGE 0 THRU 4	:	10.2
PERCENT AGE 5 THRU 9	:	10.1
PERCENT AGE 10 THRU 19	:	16.4
PERCENT AGE 20 THRU 49	:	49.4
PERCENT AGE 50 THRU 64	:	9.1
PERCENT AGE 65 AND OVER	:	4.9
PERCENT WHITE	:	70.1
PERCENT BLACK	:	15.5
PERCENT INDIAN	:	0.6
PERCENT ASIAN	:	2.0
PERCENT HISPANIC	:	19.4
PERCENT OTHER RACE	:	11.8
PERCENT OWNER OCCUPIED	:	71.9
PERCENT RENTER OCCUPIED	:	28.1

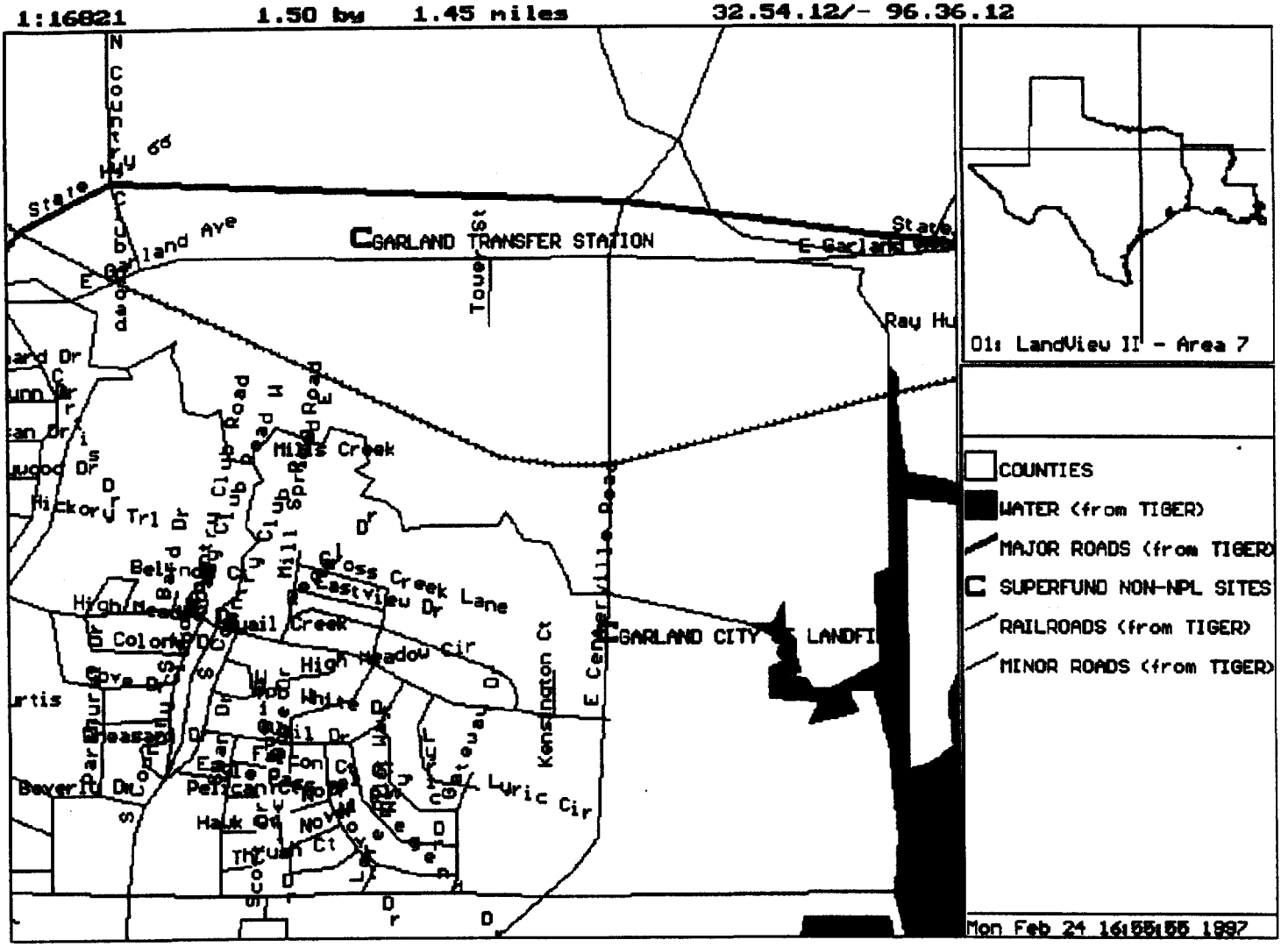
POPULATION SUMMARY

LOCATION	:	3.0 mi. radius at 32.903515, -96.603433
# BLOCK GROUPS INCLUDED	:	60
NUMBER OF PERSONS	:	72859
NUMBER OF FAMILIES	:	19468
NUMBER OF HOUSEHOLDS	:	23856
MEDIAN (EST.) HOUSEHOLD INCOME	:	36947
AGE 0 THRU 4	:	7097
AGE 5 THRU 9	:	6739
AGE 10 THRU 19	:	11301
AGE 20 THRU 49	:	35670
AGE 50 THRU 64	:	7416
AGE 65 AND OVER	:	4636
WHITE	:	56812
BLACK	:	7806
INDIAN	:	413
ASIAN	:	1553
OTHER RACE	:	6275
HISPANIC	:	10916
OWNER OCCUPIED	:	17580
RENTER OCCUPIED	:	6276
PERCENT AGE 0 THRU 4	:	9.7
PERCENT AGE 5 THRU 9	:	9.2
PERCENT AGE 10 THRU 19	:	15.5
PERCENT AGE 20 THRU 49	:	49.0
PERCENT AGE 50 THRU 64	:	10.2
PERCENT AGE 65 AND OVER	:	6.4
PERCENT WHITE	:	78.0
PERCENT BLACK	:	10.7
PERCENT INDIAN	:	0.6
PERCENT ASIAN	:	2.1
PERCENT HISPANIC	:	15.0
PERCENT OTHER RACE	:	8.6
PERCENT OWNER OCCUPIED	:	73.7
PERCENT RENTER OCCUPIED	:	26.3

POPULATION SUMMARY

LOCATION	:	4.0 mi. radius at 32.903515, -96.603433
# BLOCK GROUPS INCLUDED	:	107
NUMBER OF PERSONS	:	126771
NUMBER OF FAMILIES	:	34333
NUMBER OF HOUSEHOLDS	:	43270
MEDIAN (EST.) HOUSEHOLD INCOME	:	37841
AGE 0 THRU 4	:	11834
AGE 5 THRU 9	:	11235
AGE 10 THRU 19	:	19266
AGE 20 THRU 49	:	62828
AGE 50 THRU 64	:	13400
AGE 65 AND OVER	:	8208
WHITE	:	102353
BLACK	:	11649
INDIAN	:	682
ASIAN	:	3359
OTHER RACE	:	8728
HISPANIC	:	15806
OWNER OCCUPIED	:	30186
RENTER OCCUPIED	:	13084
PERCENT AGE 0 THRU 4	:	9.3
PERCENT AGE 5 THRU 9	:	8.9
PERCENT AGE 10 THRU 19	:	15.2
PERCENT AGE 20 THRU 49	:	49.6
PERCENT AGE 50 THRU 64	:	10.6
PERCENT AGE 65 AND OVER	:	6.5
PERCENT WHITE	:	80.7
PERCENT BLACK	:	9.2
PERCENT INDIAN	:	0.5
PERCENT ASIAN	:	2.6
PERCENT HISPANIC	:	12.5
PERCENT OTHER RACE	:	6.9
PERCENT OWNER OCCUPIED	:	69.8
PERCENT RENTER OCCUPIED	:	30.2

1:16821 1.50 by 1.45 miles 32.54.12/- 96.36.12



REFERENCE 22

A Statistical Abstract Supplement

County and City Data Book

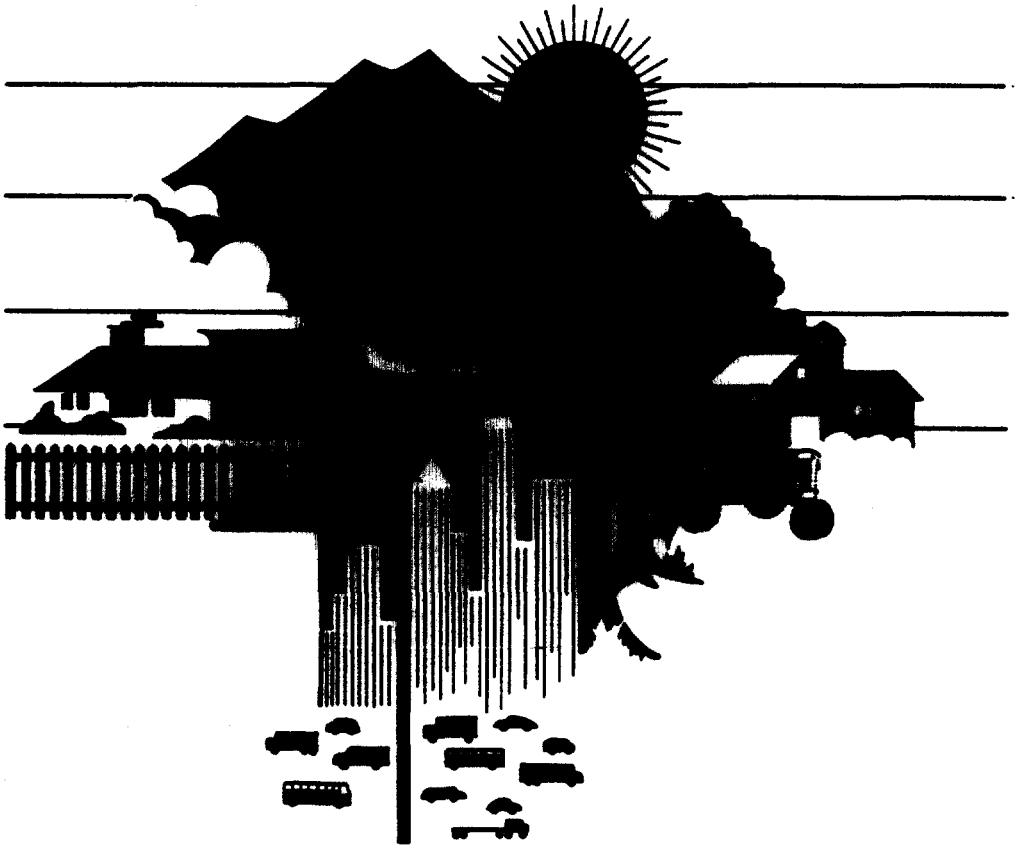
1988

States

Counties

Cities of 25,000 or More

Places of 2,500 or More



U.S. Department of Commerce

C. William Verity, Secretary
Donna C. Tuttle, Deputy Secretary
Robert Ortner, Under Secretary for Economic Affairs

BUREAU OF THE CENSUS
John G. Keane, Director

City	Households, 1980				Births, 1984			Deaths, 1984				Hospitals, 1985			Serious crimes known to police, 1985		
			Percent—		Number			Number		Rate			Beds		Number		
	Number	Persons per household	Female family householder[1]	One-person[2]	Total	To mothers under 20 yr. old (Percent)	Rate[3]	Total	Infant[4]	Total[3]	Infant[5]	Number	Number	Rate[6]	Total	Violent[7]	Rate[8]
	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
TEXAS—Con.																	
Del Rio	8 724	3.42	11.2	15.9	703	16.4	20.4	231	9	6.7	12.8	2	108	305	1 692	155	4 958
Denton	17 522	2.36	7.9	30.2	911	14.8	19.8	359	4	7.8	4.4	2	361	654	4 840	366	9 086
Duncanville	8 834	3.13	8.2	10.3	496	8.5	15.6	155	5	4.9	10.1	-	-	-	1 979	70	8 282
El Paso	128 167	3.28	13.3	16.9	10 414	14.8	22.5	2 650	100	5.7	9.6	13	2 360	480	33 697	3 682	7 096
Fort Worth	144 032	2.60	11.9	28.3	9 069	19.3	21.9	4 154	129	10.0	14.2	17	3 029	705	58 858	6 352	13 867
Galveston	24 013	2.49	14.2	31.5	1 107	18.4	17.7	663	11	10.6	9.9	3	1 298	2 139	6 654	857	9 910
Garland	45 978	3.01	9.3	13.4	3 246	12.2	20.3	653	19	4.1	5.9	3	358	203	9 209	444	5 614
Grand Prairie	23 714	2.99	9.6	15.8	1 721	17.7	20.0	448	18	5.2	10.5	2	398	403	7 296	520	6 791
Haltom City	10 463	2.74	9.2	18.3	411	16.3	13.0	209	3	6.6	7.3	-	-	-	2 962	112	9 095
Harlingen	13 091	3.23	12.1	16.1	934	15.4	16.0	399	8	7.7	8.6	3	615	1 119	3 962	207	7 856
Houston	602 896	2.62	11.5	28.7	37 685	16.2	22.1	11 714	449	6.9	11.9	45	13 601	787	156 910	16 461	8 928
Hurst	11 111	2.81	8.6	15.8	517	11.2	15.0	177	5	5.1	9.7	-	-	-	2 789	169	7 945
Irving	40 184	2.70	9.4	20.9	2 403	13.7	20.0	660	25	5.7	10.4	2	281	219	12 085	845	9 783
Killeen	16 672	2.77	8.5	17.1	2 234	18.0	40.1	236	27	4.2	12.1	1	78	131	4 137	277	7 637
Kingsville	9 151	3.00	9.7	19.7	713	19.6	23.8	172	4	5.7	5.6	1	138	476	1 679	84	5 246
Laredo	23 903	3.79	15.9	14.1	2 586	13.6	23.6	586	23	5.4	8.0	3	446	361	7 976	680	7 170
Longview	22 934	2.68	9.3	22.5	1 253	15.6	17.1	600	14	8.2	11.2	2	363	491	5 139	285	6 948
Lubbock	60 783	2.70	8.5	22.9	3 581	17.0	20.1	1 179	44	6.6	12.3	9	1 550	832	17 579	1 522	9 617
Lufkin	10 180	2.75	10.2	23.3	680	21.4	21.6	309	10	10.1	16.2	2	371	1 156	2 006	128	6 212
McAllen	19 448	3.38	11.6	16.5	1 585	10.4	20.6	463	25	8.0	15.8	4	543	652	5 480	257	7 096
Mesquite	21 368	3.11	10.2	11.2	1 686	12.8	21.6	386	15	5.0	9.0	3	408	461	6 790	449	6 905
Midland	25 558	2.74	7.7	21.7	1 922	12.3	19.8	558	16	5.7	8.3	3	305	311	4 487	469	4 975
Nacogdoches	9 268	2.47	10.8	27.1	396	18.4	13.8	230	2	8.0	5.1	2	348	1 228	1 311	129	4 369
North Richland Hills	10 500	2.90	7.1	13.8	430	11.4	11.6	141	4	3.8	9.3	1	160	364	2 499	112	7 041
Odessa	32 139	2.78	8.1	20.4	2 396	17.9	22.1	623	26	5.7	10.8	2	470	464	9 463	367	8 522
Paris	9 923	2.50	12.0	28.8	410	24.1	15.7	352	3	13.4	7.3	2	387	1 477	3 180	381	11 647
Pasadena	38 750	2.88	8.5	17.8	2 339	16.1	19.6	631	22	5.3	9.4	4	805	682	6 803	706	5 569
Plano	22 221	3.24	6.6	9.9	1 709	5.7	18.3	314	9	3.4	5.3	1	233	210	5 539	151	6 141
Port Arthur	22 130	2.74	12.3	24.0	1 103	17.8	17.2	725	11	11.3	10.0	2	501	803	3 157	305	4 524
Richardson	24 067	2.99	8.9	12.4	1 008	5.1	13.1	303	5	3.9	5.0	1	242	310	4 343	119	5 328
San Angelo	28 576	2.84	9.2	24.1	1 641	17.5	19.5	720	13	8.5	7.9	4	787	912	5 416	404	6 381
San Antonio	258 984	2.97	13.8	22.1	16 836	18.6	20.0	6 408	216	7.6	12.8	23	7 352	804	83 591	5 383	9 687
Sherman	11 718	2.49	10.1	25.6	581	20.1	18.6	356	3	11.4	5.2	2	398	1 231	2 626	131	7 940
Temple	16 039	2.55	9.9	27.0	782	18.1	17.4	476	8	10.6	10.2	3	1 792	3 847	2 710	141	6 014
Texarkana	12 144	2.53	14.7	28.6	573	21.8	17.4	450	13	13.7	22.7	3	573	1 730	2 963	250	8 674
Texas City	14 045	2.90	10.6	17.7	678	18.3	15.6	335	6	7.7	8.8	2	424	1 004	3 283	196	7 157
Tyler	26 024	2.64	11.0	24.6	1 354	16.5	18.5	753	21	10.3	15.5	6	968	1 280	7 282	449	9 296
Victoria	17 220	2.91	9.2	19.6	1 201	17.7	21.8	393	4	7.1	3.3	3	546	964	3 947	328	6 704
Waco	37 576	2.51	12.2	27.4	2 259	21.3	21.7	1 214	23	11.7	10.2	5	1 580	1 502	8 796	791	9 167
Wichita Falls	33 647	2.58	9.5	24.5	1 816	14.4	18.4	920	30	9.3	16.5	4	1 136	1 137	8 512	614	8 406
UTAH	446 603	3.20	7.6	17.2	38 299	8.7	23.2	8 987	360	5.4	9.1	47	5 423	326	87 470	4 398	5 317
Bountiful	9 138	3.57	6.7	11.3	625	6.9	18.2	192	5	5.6	8.0	1	128	371	1 242	107	3 488
Logan	9 291	2.70	6.2	22.9	861	5.9	29.9	164	7	5.7	8.1	1	154	533	897	38	3 009
Murray	9 109	2.81	8.8	21.7	618	10.5	22.9	180	1	5.9	1.6	1	243	1 024	3 138	142	11 086
Ogden	23 965	2.62	10.2	26.4	1 588	15.4	23.0	706	23	10.4	14.7	2	550	815	8 322	322	9 071
Orem	13 965	3.73	7.5	9.5	1 603	8.0	29.6	207	18	3.4	10.0	1	20	32	2 324	28	3 913
Provo	20 083	3.37	6.4	12.7	2 386	5.0	32.3	352	23	4.7	9.6	2	654	844	2 986	109	3 682
Salt Lake City	67 576	2.35	9.0	34.2	3 798	10.0	23.0	1 695	43	10.2	11.3	10	2 300	1 452	19 037	1 083	11 593
Sandy City	12 875	3.92	5.6	6.3	1 382	5.1	21.8	116	8	1.8	5.8	1	50	74	2 495	90	4 162
West Jordan	8 781	4.01	6.6	5.4	957	6.9	24.6	78	13	2.0	13.6	1	50	113	1 636	119	5 366
VERMONT	178 325	2.75	8.8	22.0	8 020	10.0	15.1	4 532	70	8.6	8.7	19	2 867	528	20 801	790	3 886
Burlington	13 107	2.44	10.1	30.7	466	12.4	12.3	330	7	8.7	15.0	1	491	1 282	3 976	100	10 217
VIRGINIA	1 963 073	2.77	10.6	20.5	82 719	12.6	14.7	44 310	1 006	7.9	12.1	138	30 096	520	215 634	16 613	3 779
Alexandria	49 004	2.07	9.9	41.3	1 945	8.5	18.2	813	35	7.6	18.0	4	786	711	7 670	602	7 079
Blacksburg town	9 098	2.43	5.1	21.8	246	9.3	8.1	63	3	2.7	12.2	1	146	461	1 286	25	4 036
Charlottesville	15 401	2.50	11.7	28.9	580	11.7	14.3	391	7	9.6	12.1	3	1 039	2 528	3 109	221	7 562
Chesapeake	36 383	3.11	11.9	13.1	2 136	13.5	16.9	866	21	7.0	9.8	1	210	156	5 112	407	4 007
Danville	17 511	2.55	14.6	25.5	986	17.5	13.2	577	9	12.9	15.3	1	383	867	1 408	63	3 111
Hampton	41 506	2.83	13.7	18.5	2 119	13.5	16.8	869	30	6.9	14.2	4	1 067	847	7 094	370	5 560
Lynchburg	23 940	2.60	13.2	24.8	888	15.7	12.9	734	13	10.9	15.0	2	686	1 022	3 220	388	4 725
Newport News	51 314	2.73	13.6	21.0	2 950	15.2	19.1	1 153	37	7.5	12.5	5	942	583	7 301	757	4 664

[1]No spouse present. [2]Householder living alone. [3]Per 1,000 resident population estimated as of July 1, 1984. [4]Deaths of infants under 1 year old. [5]Deaths of infants under 1 year old per 1,000 live births. [6]Per 100,000 resident population estimated as of July 1, 1985. [7]Includes murder and nonnegligent manslaughter, forcible rape, robbery, and aggravated assault. [8]Per 100,000 resident population estimated for 1985 by the FBI.

REFERENCE 23

FLUOR DANIEL

RECORD OF TELEPHONE CONVERSATION

FROM: Tom Casabonne

DATE: 6-7-93

LOCATION: Irvine, X6657

TIME: 08:30

TO: Ralph Ollman, USGS

P.O. NO.

LOCATION: Fort Worth, TX (817) 334-5551

OTHER REF. Flow rates

I was referred to Ralph Ollman by Bill Reeves [(512) 873-3027] at the USGS office in Austin. Ralph said that the USGS has been recording flow rates (in cubic feet per second, or cfs) on Rowlett Creek since 1969. His latest information was compiled to include 1991's flow rate. At the measuring point near Sachse, TX, the average flow rate has been 106 cfs. The high was 31,900 cfs on 5-17-89, and the low was a period of zero flow from 8-24-69 to 12-2-69.

On the East Fork Trinity River near Forney (2 mi. downstream from the dam), the USGS has been recording flow rates since 1974. The average flow rate is 600 cfs. The high was 53,000 cfs on 5-3-90, and the low was 13 cfs recorded in 1977.

Mr. Ollman got this information from a USGS publication, Water Resources Data, Texas, 1991, which he is sending us.

USGS

REFERENCE 24

Quailcreek Landfill SI

Notes

Some illegal Dumping in appearance
Roofing waste

Monitoring wells found on Northside of
site next to "Road"

site is well vegetated with many trees.
Landfill

1/4 mile House count (1) 100 homes ~~north~~ South of
site in new development
(2) 150 houses south of site in
old developments
(3) Two houses north of site

total 252 residences

No schools within 200 ft no ~~non~~ workers within 200 ft

nalysis Report Thu 12-19-96 03:21:45 PM page 1

ethod: COMEPA Sample Name: 251591A MFGX5~~1~~5A Operator: LKM
un Time: 12/19/96 15:17:34
omment: SDG: MFGX51 Case: 25210 Batch 3047
ode: CONC Corr. Factor: 1

Elem	Al3082	2068-1	2068-2	As1890	Ba4934	Be3130	B_2496
Units	ppm			ppm	ppm	ppm	ppm
Avge	44.37403	.0061780	.0023343	.0227122	.3812403	.0037698	.0317817
SDev	1.02659	.0039565	.0011754	.0004298	.0093501	.0001124	.0010288
%RSD	2.313492	64.04079	50.35325	1.892501	2.452543	2.981539	3.237252
#1	43.56297	.0067293	.0028218	.0232076	.3740948	.0038821	.0308289
#2	45.52824	.0098299	.0009936	.0224913	.3918223	.0036573	.0328726
#3	44.03088	.0019749	.0031874	.0224379	.3778036	.0037701	.0316435

Elem	Cd2265	Ca3179	Cr2677	Co2296	Cu3247	Fe2714	2203-1
Units	ppm	ppm	ppm	ppm	ppm	ppm	
Avge	.0006881	H568.7190	.0781904	.0382559	.0462769	61.92621	.0828594
SDev	.0004879	13.7407	.0017270	.0010377	.0010161	1.53896	.0023514
%RSD	70.89802	2.416076	2.208668	2.712467	2.195687	2.485145	2.837834
#1	.0011129	H557.6224	.0768503	.0373060	.0456059	60.62708	.0835178
#2	.0007962	H584.0885	.0801393	.0393633	.0474459	63.62582	.0802490
#3	.0001553	H564.4461	.0775816	.0380985	.0457789	61.52574	.0848115

Elem	2203-2	Mg2790	Mn2576	Mo2020	Ni2316	K_7664	1960-1
Units		ppm	ppm	ppm	ppm	ppm	
Avge	.0745014	10.96086	2.466467	.0009931	.0542708	6.054920	-.000210
SDev	.0030833	.26581	.060988	.0003367	.0009556	.110633	.006908
%RSD	4.138507	2.425089	2.472678	33.89774	1.760751	1.827154	3293.878
#1	.0712107	10.74762	2.416731	.0007288	.0532446	5.966468	.0075077
#2	.0773235	11.25866	2.534512	.0013721	.0551350	6.178969	-.002321
#3	.0749701	10.87629	2.448157	.0008785	.0544326	6.019321	-.005816

Elem	1960-2	Si2881	Ag3280	Na3302	Sn1899	Tl1908	Ti3349
Units		ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0172093	3.426643	-.000494	1.257894	.0159220	.0057563	.2188800
SDev	.0008342	.091415	.000127	.246062	.0023766	.0028482	.0050500
%RSD	4.847217	2.667769	25.82085	19.56144	14.92650	49.47924	2.307210
#1	.0173042	3.343332	-.000391	1.526171	.0133712	.0089843	.2150766
#2	.0179920	3.524434	-.000636	1.204797	.0180739	.0046877	.2246097
#3	.0163318	3.412163	-.000454	1.042716	.0163209	.0035970	.2169538

Elem	V_2924	Zn2138	Pb2203	Se1960	Sb2068
Units	ppm	ppm	ppm	ppm	ppm
Avge	.1600864	.2454282	.0779690	.0118878	.0041617
SDev	.0042342	.0068183	.0017158	.0025484	.0007307
%RSD	2.644957	2.778123	2.200611	21.43687	17.55742
#1	.1565276	.2398565	.0759882	.0145174	.0046664
#2	.1647692	.2530314	.0789963	.0117168	.0044949
#3	.1589622	.2433969	.0789225	.0094293	.0033238