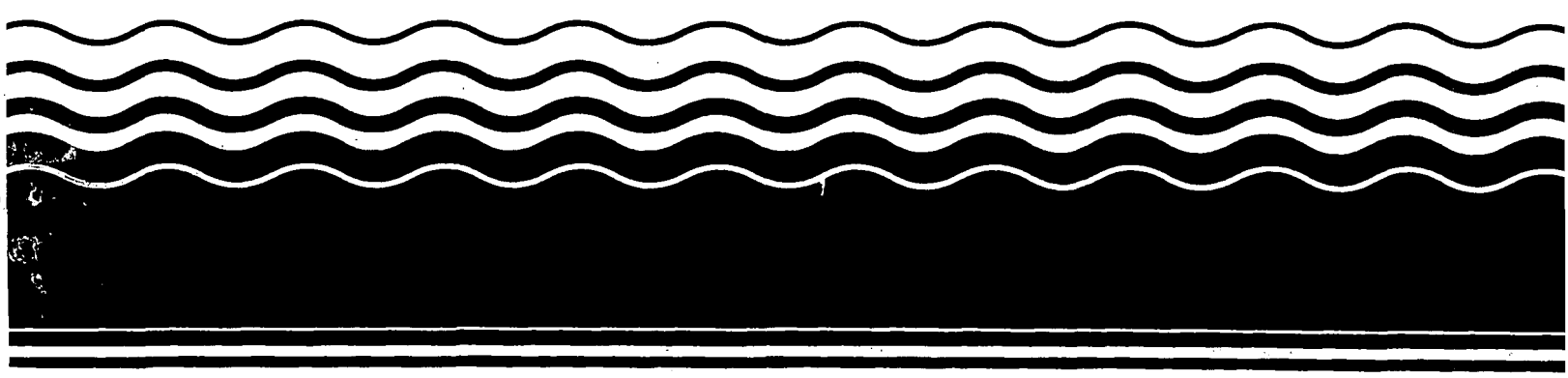
PB97-964020
EPA/541/R-97/182
January 1998

EPA Superfund Record of Decision:

Aberdeen Pesticide Dumps, OU 5
Aberdeen, NC
9/16/1997



RECORD OF DECISION

INTERIM ACTION

ABERDEEN PESTICIDE DUMPS SITE

OPERABLE UNIT 5 - GROUNDWATER
ROUTE 211 AREA

September, 1997

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 4
ATLANTA, GEORGIA

TABLE OF CONTENTS

TABLE OF CONTENTS

LIST OF FIGURES

DECLARATION FOR THE RECORD OF DECISION

Site Name and Location

Aberdeen Pesticide Dumps Site
Operable Unit Five (OU5)
Route 211 Area
Aberdeen, North Carolina

Statement of Basis and Purpose

This decision document presents the selected *interim* remedial action for OU5 (groundwater) at the Aberdeen Pesticide Dumps Site in Aberdeen, North Carolina. The selected *interim* remedial action addresses the Surficial aquifer at the Route 211 Area **only** and was chosen in accordance with the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA), as amended by the Superfund Amendments and Reauthorization Act of 1986 (SARA), and the National Oil and Hazardous Substances Pollution Contingency Plan (NCP). This decision is based on the Administrative Record for OU5.

The State of North Carolina concurs with the selected *interim* action.

Assessment of the Site

Actual or threatened releases of hazardous substances from the Route 211Area, if not addressed by implementing the response action selected in this *interim* action Record of Decision (ROD), may present an imminent and substantial endangerment to public health, welfare, or the environment.

Description of the Selected Remedy

This *interim* remedial action employs the use of one extraction well and a carbon adsorption treatment system to extract and treat the highest concentrations of pesticide-contaminated groundwater from the Surficial aquifer at the Route 211 Area. Treated groundwater will be discharged via an infiltration gallery system. The purpose of this interim remedial action is to minimize the migration of contaminants from this aquifer into lower aquifers, and to initiate groundwater restoration while the Remedial Investigation/Feasibility Study (RI/FS) and post-RI/FS activities for the entire OU 5 are completed.

The major components of the Selected Remedy are as follows:

Extraction of the highest concentrations of contaminated groundwater from the Surficial aquifer using one extraction well;

Treatment of contaminated groundwater using a carbon adsorption system; and
Discharge of treated groundwater via an infiltration gallery system.

Statutory Determinations

The selected *interim* remedy is protective of human health and the environment, complies with Federal and State requirements that are legally applicable or relevant and appropriate to this *interim* remedial action and is cost-effective. Although this *interim* action is not intended to address fully the statutory mandate for permanence and treatment to the maximum extent practicable, this *interim* action does utilize treatment and thus is in furtherance of that statutory mandate. Because this action does not constitute the *final* remedy for OU5, the statutory preference for remedies that employ treatment that reduces toxicity, mobility, and/or volume as principle element, although partially addressed in this remedy, will be addressed by the *final* response action. Subsequent actions are planned to address fully the threats posed by conditions at the Route 211 Area. Because this remedy may result in hazardous substances remaining on-site above health-based levels, a review will be conducted within five years after commencement of *final* remedial action to ensure that the remedy continues to provide adequate protection to human health and the environment.

Richard D. Green
Acting Division Director
Waste Management Division

9/16/97
Date

RECORD OF DECISION
DECISION SUMMARY

1.0 SITE NAME, LOCATION, AND DESCRIPTION

1.1 Site Location

The Route 211 Area (*Figure 1*) is located approximately 1,000 feet southwest of Route 211 East adjacent to the Aberdeen and Rockfish Railroad (ARRR), one mile east of Aberdeen (35°07'02" North Latitude and 79°23'41" West Longitude). The Route 211 Area is an old sand mining depression or pit approximately 80 feet in diameter along its short axis and approximately 8 to 20 feet below the surrounding topography. The elevation of the perimeter of the basin is between 440 and 450 feet above mean sea level (msl).

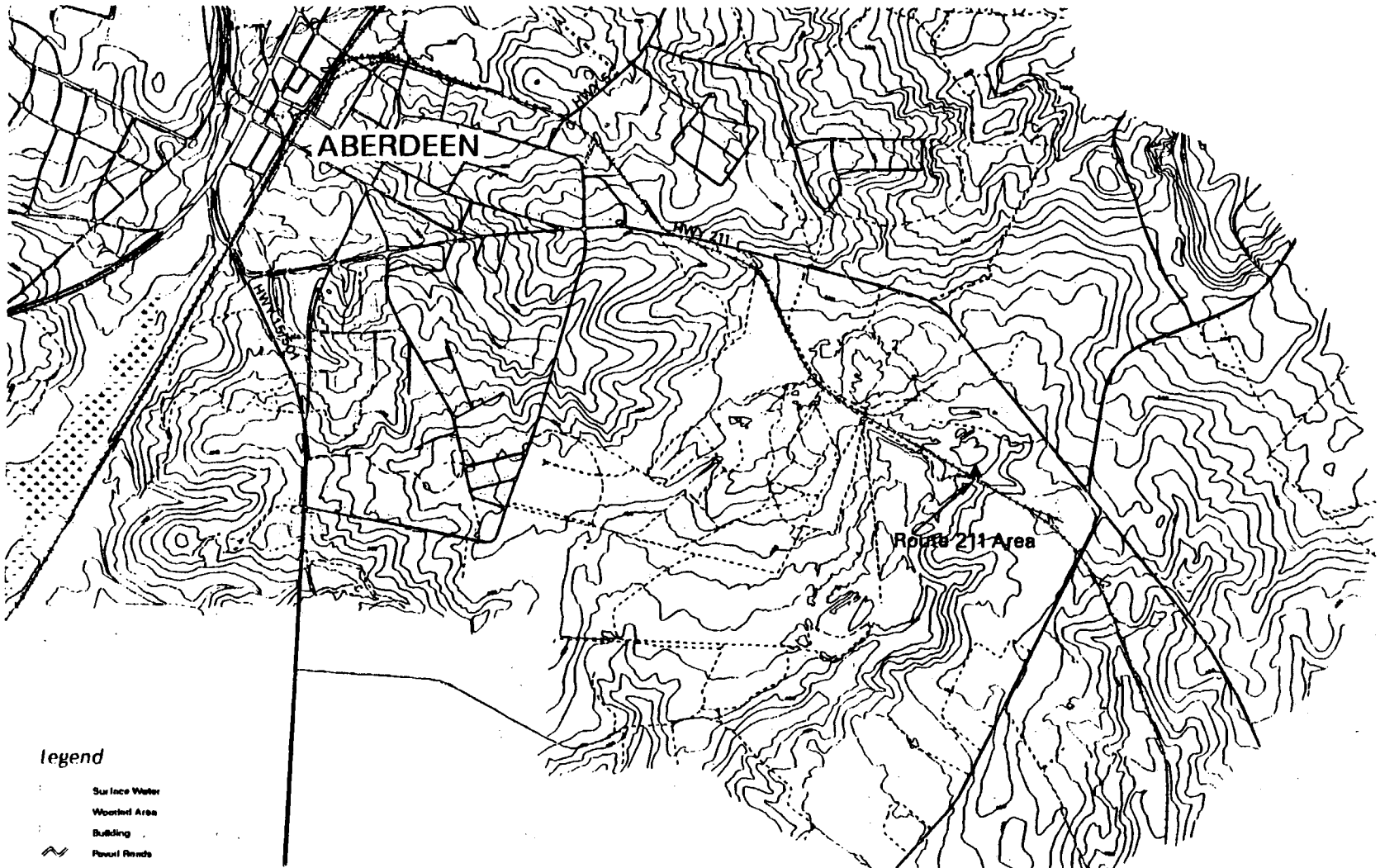
1.2 Topography and Surface Drainage

The topography of the Route 211 Area is generally flat with depressions and hills created from historic sand mining operations. Topography and surface drainage at the Route 211 Area is illustrated on *Figure 2*. The Route 211 Area comprises a small sand mining depression. Surface runoff in the immediate vicinity of the Area predominantly flows into the depression. The nearest surface water body is a localized area containing intermittent ponded water to the southeast of the Area. This surface water body is the result of drainage originating topographically upslope of the Area. The next surface water feature is an intermittent creek approximately 500 feet southeast of the Area. This creek, known as Bull Branch, flows south-southwest intermittently for approximately 0.8 miles until it becomes a perennial stream. Along this intermittent stream are two man-made ponds approximately 800 feet and one-half mile from the Route 211 Area. This stream continues to flow southward for approximately 3.3 miles, where it enters Quewhiffle Creek.

1.3 Soils

The Coastal Plain sediments overlying the bedrock units range in thickness from approximately 300 feet beneath the upland areas, to less than 100 feet beneath the principal drainage features. The geology beneath the Aberdeen area contains five lithologic units, which range in age from Precambrian to Eocene. The investigation at the Route 211 Area involves three of these units. From oldest to youngest, these units are: the Cape Fear and Middendorf Formations of late Cretaceous age; and the Pinehurst Formation of Eocene age.

The Pinehurst Formation extends from land surface down to the elevation of approximately 410 feet mean sea level (msl), and is composed of predominately fine to coarse, brown, tan, red and gray sands, with interbedded silts and clays having similar colors. This unit ranges from 8 to 50



N

legend

- Surface Water
- Wooded Area
- Building
- Paved Roads
- Unpaved Roads
- Railroads
- Topographic Contour
- Stream (Air Photo)
- ▲ Route 211 Area

1500 0 750 1500 2250 3000

SCALE IN FEET

NOTES:

This topographic map was generated using a Geographic Information System (GIS). Corresponding USGS quadrangles for this area are Southern Pines, N.C. (1984) and Pinebluff, N.C. (1982) quadrangles, NW/4 and SW/4 of the Southern Pines 15' quadrangle repectively.

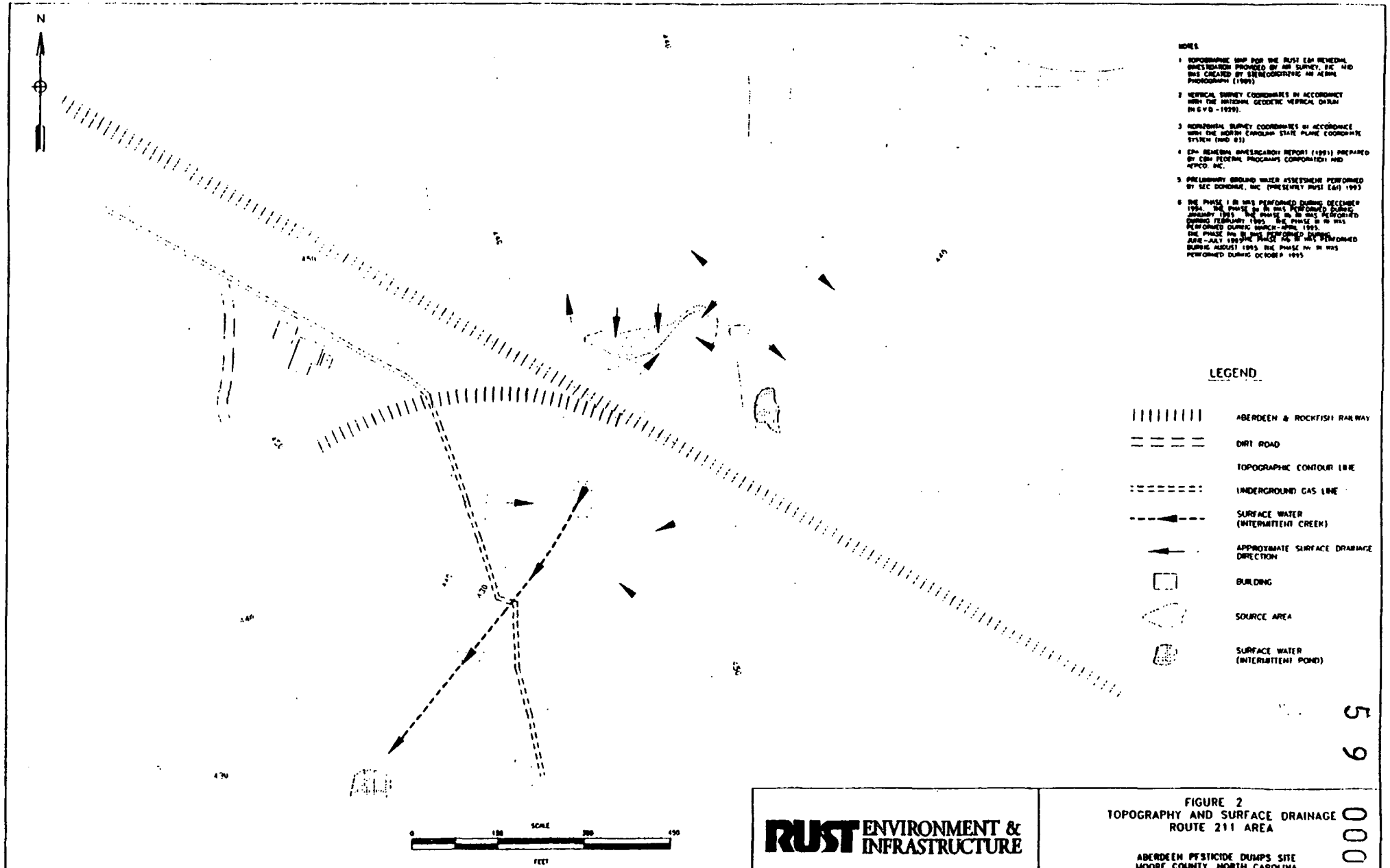
Rust Environment & Infrastructure

FIGURE 1

ROUTE 211 AREA LOCATION AND TOPOGRAPHY

ABERDEEN PESTICIDE DUMPS SITE
MOORE COUNTY, NORTH CAROLINA

5 9 0003



RUST ENVIRONMENT & INFRASTRUCTURE

FIGURE 2
TOPOGRAPHY AND SURFACE DRAINAGE
ROUTE 211 AREA

ABERDEEN PESTICIDE DUMPS SITE
MOORE COUNTY, NORTH CAROLINA

feet in thickness. A silty, clayey sand, or sandy clay unit occurs near the base of the formation, just above the Middendorf Formation contact. Where present, this low permeability unit ranges from 2.5 to 9 feet in thickness, and contains humic materials such as wood fragments, grass, peat, and other plant debris at several locations.

The top of the Middendorf Formation is usually marked by a light gray to white, hard, brittle silty clay. This clay is typically mottled pale red to dark yellowish-orange. Where present, this low permeability unit ranged in thickness from approximately 0.5 to 22 feet, is moist to dry, and is commonly overlain by a layer of purple to pink coarse sand and/or fine gravel.

Soil borings in the area of the proposed extraction and infiltration system confirm that the Surficial aquifer is confined by an uppermost clay layer which is laterally continuous across this area.

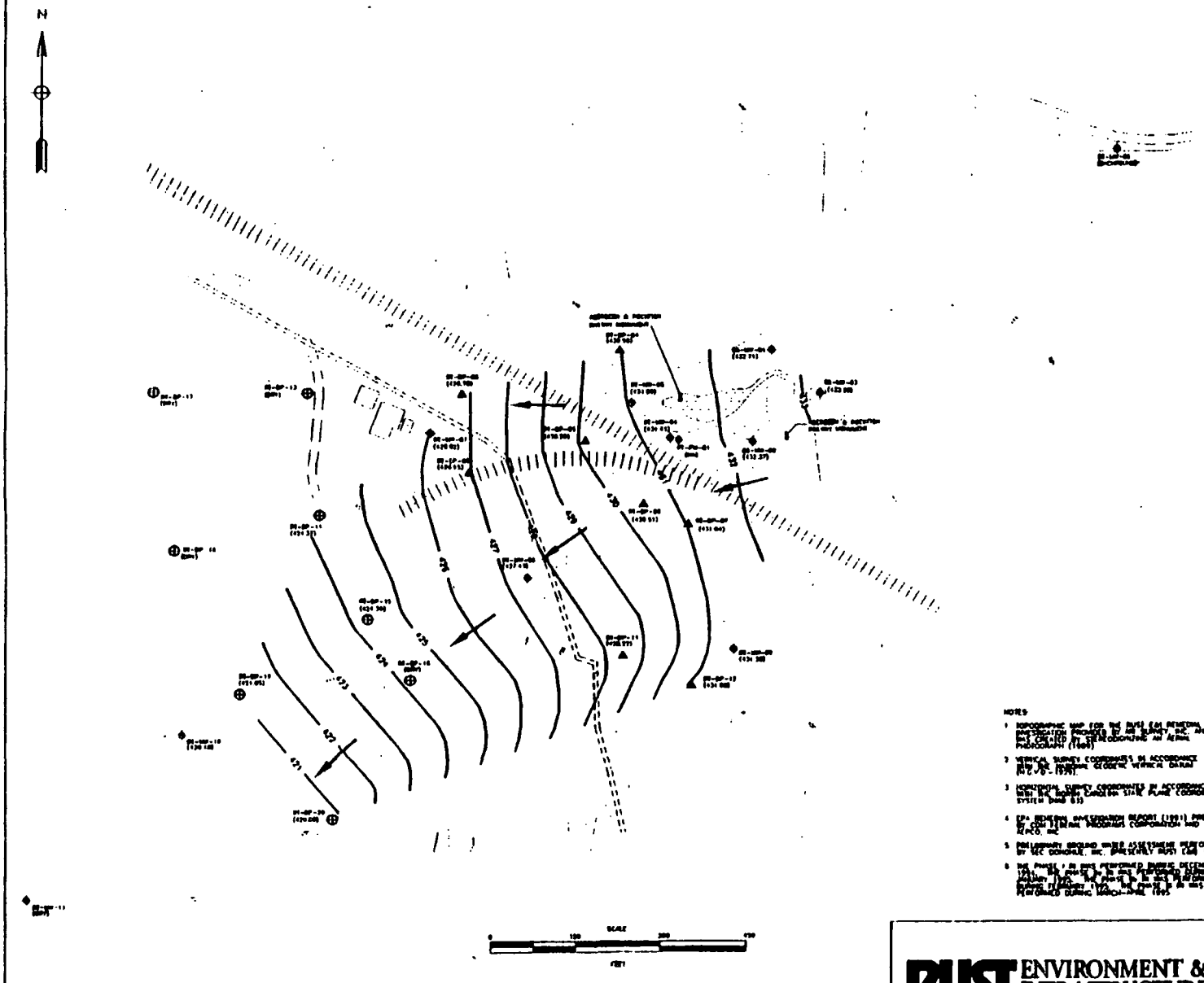
1.4 Hydrogeology

The hydrogeologic framework of the Aberdeen vicinity is composed of four aquifers which are separated by confining beds or semi-confining beds. These aquifers, in order from the top, are: the Surficial aquifer; the Upper Black Creek aquifer; the Lower Black Creek aquifer; and the Cape Fear aquifer. Since this *interim* action is for the groundwater in the Surficial aquifer only, the discussion on this section will be limited to that aquifer.

The Surficial aquifer of the Sand Hills is equivalent to the Pinehurst Formation and is the watertable aquifer that caps the highest hilltops across the Aberdeen area. However, the Black Creek aquifers (both Upper and Lower) can also be locally unconfined, but these areas are generally near points of discharge (streams and valleys) and should not be mistaken for the Surficial aquifer on the hilltops. The Pinehurst Formation, which contains the Surficial aquifer, dips to the southeast at approximately 6 feet per mile. Even though the estimated transmissivity of this unit is moderate (< 1,000 sq.ft. per day), the Surficial aquifer is not used as a primary source of drinking water. Recharge to the aquifer occurs as rainfall across outcrop areas and discharge occurs as seeps and springs along stream valleys and as leakage to the underlying Black Creek aquifers.

1.5 Groundwater Flow Direction

The water map of the Surficial aquifer at the Route 211 Area is shown on *Figure 3.* The map presents the configuration of the groundwater surfaces as they were measured on October 26, 1995. Based upon these measurements, the groundwater flow direction in the Surficial aquifer was estimated to be toward the west-southwest.



GROUND WATER MONITORING SURVEY COORDINATES

GROUND WATER MONITORING ID	NORTHING	EASTING	GROUND SURFACE ELEV (ft MSL)	TOP OF CASING ELEV (ft MSL)	DEPTH TO GW (ft MSL) 10/26/95	STATIC GROUNDWATER ELEV (ft MSL) 10/26/95
RT-DP-04	498019.62	1081961.18	438.72	435.68	4.68	430.98
RT-DP-05	497885.51	1081878.28	441.31	442.86	12.82	430.04
RT-DP-06	497791.75	1081955.78	433.86	435.72	5.21	430.51
RT-DP-07	497768.84	1082021.89	434.32	437.45	6.41	431.04
RT-DP-08	497955.44	1081668.54	446.98	449.35	22.57	426.78
RT-DP-09	497839.14	1081698.97	448.19	450.24	23.29	426.95
RT-DP-10	497757.88	1081788.88	448.94	NA	NA	NA
RT-DP-11	497563.38	1081925.96	429.85	432.37	4.15	428.22
RT-DP-12	497519.44	1082025.62	434.29	435.42	4.34	431.08
RT-DP-13	497959.78	1081463.51	458.85	453.47	dry	dry
RT-DP-14	497737.95	1081481.22	449.28	450.75	26.38	424.37
RT-DP-15	497619.23	1081551.94	449.23	451.05	26.69	424.36
RT-DP-16	497588.51	1081589.33	441.74	443.54	dry	dry
RT-DP-17	497961.16	1081239.83	438.18	439.98	dry	dry
RT-DP-18	497723.94	1081267.05	436.38	438.37	NA	NA
RT-DP-19	497510.05	1081364.57	429.48	430.83	8.98	421.85
RT-DP-20	497323.88	1081589.28	434.82	437.68	15.88	420.80
RT-MW-01	498029.54	1082142.82	451.18	454.4	21.69	432.71
RT-MW-02	497884.37	1082115.54	446.38	449.59	17.22	432.37
RT-MW-03	497955.33	1082213.58	445.47	448.91	15.71	433.20
RT-MW-04	497889.83	1081995.29	447.91	450.22	18.81	431.41
RT-MW-05	497961.74	1081938.81	446.92	449.59	18.5	431.09
RT-MW-06	498317.45	1082040.38	448.49	450.76	18.91	431.85
RT-MW-07	497898.41	1081643.87	449.64	452.95	26.03	426.92
RT-MW-08	497680.72	1081784.82	444.63	445.21	17.78	427.43
RT-MW-09	497573.71	1082007.27	436.31	438.82	7.44	431.38
RT-MW-10	497451.24	1081288.48	438.53	441.89	12.61	429.48
RT-MW-11	497287.88	1081855.38	427.48	429.61	dry	dry
RT-PW-01	497993.88	1082091.84	448.88	450.31	NA	NA

NOTES

1. TOPOGRAPHIC MAP FOR THE RUST EAR REMEDIAL INVESTIGATION PROVIDED BY SEE SURVEY, INC. AND WAS CREATED BY AEROPHOTO AN AERIAL PHOTOGRAPH (1995).
2. VERTICAL SURVEY COORDINATES IN ACCORDANCE WITH THE NATIONAL GEODETIC VERTICAL DATUM (NGVD) OF 1929.
3. HORIZONTAL SURVEY COORDINATES IN ACCORDANCE WITH THE NORTH CAROLINA STATE PLANE COORDINATE SYSTEM (NAD 83).
4. SITE INSPECTION AND EVALUATION REPORT (1991) PREPARED BY CDM FEDERAL PROGRAMS CORPORATION AND BLACK INC.
5. PRELIMINARY GROUND WATER ASSESSMENT PERFORMED BY SEE DONOHUE, INC. (PRESENTLY RUST E&I 1995)
6. RUST PHASE I RI WAS PERFORMED DURING DECEMBER 1995. PHASE II RI WAS PERFORMED DURING JANUARY - MARCH 1996. PHASE III RI WAS PERFORMED DURING MARCH - JUNE 1996

LEGEND

- ABERDEEN & ROCKFISH RAILWAY
- DIRT ROAD
- TOPOGRAPHIC CONTOUR LINE
- UNDERGROUND GAS LINE
- BUILDING
- TREE/BRUSH LINE
- SOURCE AREA
- SURFACE WATER
- GROUND WATER FLOW DIRECTION (SURFACE POWER)
- WATER TABLE SURFACE CONTOUR
- EXTRACTION WELL
- MONITORING WELL LOCATION-SURFICIAL AQUIFER
- PHASE IB DIRECT PUSH WELL POINT LOCATION (MAY 1 AND 2)
- PHASE IB DIRECT PUSH WELL POINT LOCATION (MAY 3 AND 4)
- GROUND WATER ELEVATION FT/MSL (10/26/95)

RUST ENVIRONMENT & INFRASTRUCTURE

FIGURE 3
SURFICIAL AQUIFER WATER LEVEL MAP

ROUTE 211 AREA

ABERDEEN PESTICIDE DUMPS SITE
MOORE COUNTY, NORTH CAROLINA

5 9 0 0 0 1 1

H:\895569\9550H056.DWG 01/30/97

1.6 Demography and Land Use

The 1990 Census estimated the population of Aberdeen, North Carolina to be approximately 2,700 people occupying approximately 1140 households. The Route 211Area is located in a sparsely populated area approximately one mile east of Aberdeen. The Area is zoned industrial, since it is included in a strip of land adjacent to the Aberdeen & Rockfish Railway which has an industrial zoning. The surrounding land generally consists of pine woods with surface depressions created by sandmining. Three commercial/industrial facilities are located within 2,000 feet of the Area.

2.0 SITE HISTORY AND ENFORCEMENT ACTIVITIES

2.1 Site History and Enforcement Activities

The Potentially Responsible Parties (PRPs) identified for this area are Novartis Crop Protection, Inc. (former Ciba-Geigy Corporation), and Olin Corporation. During their operation of a pesticide formulation plant on Route 211 (The Geigy Chemical Plant) east of the Town of Aberdeen, corporate predecessors to the PRPs used the Route 211 Area for disposal of wastes from that plant. These wastes contained pesticide and pesticide constituents. On March 31, 1989, pursuant to Section 105 of CERCLA, 42 U.S.C. § 9605, EPA placed the Site on the National Priorities List, set forth at 40 C.F.R. Part 300. The Route 211 Area is one of the five non-contiguous areas comprising the Site.

In response to a release or substantial threat of release of hazardous substances at or from the Site, EPA commenced on June 30, 1987, a Remedial Investigation and Feasibility Study (RI/FS) for the Site, including the Route 211 Area. EPA completed its initial Remedial Investigation at the Site on April 12, 1991. During that investigation, EPA determined that the surface water, groundwater, and sediments at the Site required further investigation. EPA designated the groundwater at all five Areas as Operable Unit Three (OU3). EPA conducted further investigation of OU3 and completed a Feasibility Study concerning OU3 on May 3, 1993. During that study, EPA determined that further investigation of the groundwater at the McIver Dump and Route 211 Areas was necessary. EPA designated the groundwater at those two Areas as Operable Unit Five (OU5). Effective March 21, 1994, the PRPs entered into an Administrative Order on Consent (AOC) with EPA concerning performance of the RI/FS for OU5. The RI report for OU5 was completed by the PRPs and approved by EPA on June 2, 1997.

3.0 COMMUNITY PARTICIPATION HIGHLIGHTS

Pursuant to CERCLA §113(k)(2)(B)(I-v) and §117, the RI Report and the Proposed Plan for this *interim* action were released to the public for comment on July 2, 1997. These documents were made available to the public in both of the Administrative Record locations. Information repositories are maintained at the EPA Region 4 Docket Room and at the Aberdeen Town Hall

in Aberdeen, North Carolina. In addition, the Proposed Plan fact sheet was mailed to individuals on the Site's mailing list on June 26, 1997.

The notice of the availability of these documents and notification of the Proposed Plan Public Meeting was announced in The Fayeteville Observer Times and The Pilot on July 2, 1997. A public comment period was held from July 2, 1997 through August 2, 1997. In addition, a public meeting was held on July 10, 1997, at the Aberdeen Fire Station. At this meeting, representatives from EPA answered questions about the Site and the remedial alternatives for the *interim* action under consideration. A response to the comments received during the comment period, including those raised during the public meeting, are addressed in the Responsiveness Summary, which is part of this Record of Decision. The Responsiveness Summary also incorporates a transcript of the Proposed Plan public meeting.

4.0 SCOPE AND ROLE OF RESPONSE INTERIM ACTION

Due to the length of time required to complete the RI/FS for the entire OU5 and the Remedial Design/Remedial Action (RD/RA) plans, and the possibility of further plume migration during this time, EPA believes that it was appropriate to initiate remedial action on the Surficial aquifer at the Route 211 Area. The selected remedy would begin groundwater cleanup while RI/FS and post RI/FS activities for the entire OU 5 are completed. This *interim* action would initiate a reduction of potential risks to human health and the environment posed by the pesticide contaminated groundwater plume, but does not constituted the *final* remedial action for OU5. A *final* remedial action will be developed to fully address the principle threats posed by Site conditions following the conclusions of the RI/FS. Upon completion of the RI/FS, the groundwater treatment system embodied by this *interim* remedial action may by incorporated into the OU5 *final* remedy. The *final* remedy for this OU5 will be documented in a *final* Record Of Decision.

5.0 SUMMARY OF SITE CHARACTERISTICS

5.1 Nature and Extent of Contamination Overview

Since this *interim* action is for the groundwater in the Surficial aquifer at the Route 211 Area only, the discussion in this section will be limited to the Surficial aquifer at this specific area. Complete information about the nature and extent of the contamination can be found in the final RI report for OU5 located in the information repository.

In September 1993, Rust E&I (an environmental contractor) was employed by the Potentially Responsible Parties (PRPs) to implement a Preliminary Groundwater Assessment at the Route 211 Area. RI field activities were performed in phases beginning in November 1994 and consisted of Phases I, IIa, IIb, III, IVa, IVb, IVc, V, and VI.

- During Phase I, soil test borings were drilled at the Route 211 Area to characterize subsurface conditions and install groundwater monitoring wells in the Surficial aquifer.

- Phase IIa and Phase IIb, Direct Push Technology (DPT) field screening techniques were utilized to obtain continuous soil samples for lithologic characterization.

- Phase III, a combination of Hollow Stem Auger (HSA) and mud rotary drilling techniques were utilized to further assess the Surficial aquifer.

- Phases IVa, IVb and IVc field activities, a combination of DPT, HSA, mud rotary, and Rotosonic drilling techniques were used to characterize subsurface conditions, collect Hydropunch groundwater samples, and install groundwater monitoring wells. During Phase IVa, one Hydropunch groundwater sample was collected from the Surficial aquifer. During Phase IVb, a potential extraction well was installed in the Surficial aquifer.

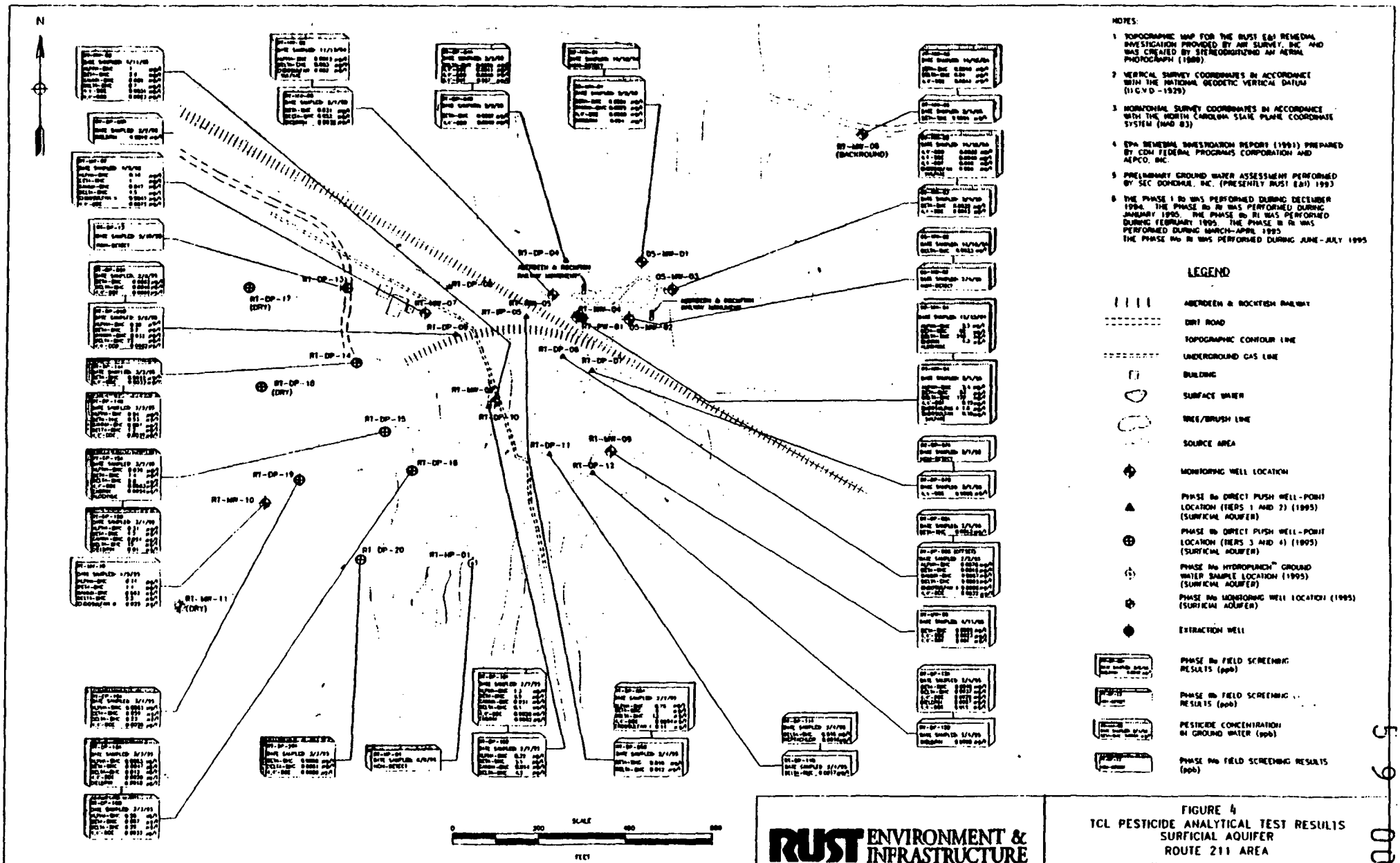
- Phase V, Hydropunch samples were collected in the Surficial aquifer.

Groundwater samples were collected from DPT locations and from permanent monitoring wells at the Route 211 Area. Selected samples were analyzed for Target Compound List (TCL) Pesticides, Target Analyte List (TAL) Metals, TCL VOCs (volatile organic compounds), and additional parameters including alkalinity, total dissolved solids, and hardness. In addition, several pesticides not included in the TCL pesticide list were analyzed including Ferbam, Sevin, Guthion, and Parathion.

Groundwater samples were collected from field screening locations using DPT and Hydropunch methods, from existing monitoring wells, DPT wellpoints, new piezometers and new monitoring wells.

A total of eight monitoring wells (designated RT-MW-04 through RT-MW-11) were installed into the Surficial aquifer at the Route 211 Area (*Figure 4*). Monitoring wells RT-MW-04 and RT-MW-05 were installed to assess groundwater quality directly downgradient of the source area and adjacent to the Aberdeen and Rockfish Railroad (ARRR) during Phase I. As a result of the groundwater flow direction, monitoring well RT-MW-06 was installed northeast of the Area to collect background groundwater quality data.

Based upon Phase IIa and IIb analytical test results, several additional monitoring wells were installed to more fully assess the extent of the contaminant plume. Monitoring well RT-MW-07 was installed to monitor groundwater quality along the northwestern perimeter, monitoring well RTMW-08 was installed to monitor the groundwater quality in the center, and monitoring well RTMW-09 was installed to monitor groundwater quality along the southeastern perimeter of the plume. Two monitoring wells were also installed to assess the groundwater quality in the



RUST ENVIRONMENT & INFRASTRUCTURE

FIGURE 4
TCL PESTICIDE ANALYTICAL TEST RESULTS
SURFICIAL AQUIFER
ROUTE 211 AREA
ABERDEEN PESTICIDE DUMPS SITE
MOORE COUNTY, NORTH CAROLINA

5 6 0 0 0 1 5

downgradient direction; monitoring well RT-MW-10 was installed in a downgradient direction of the source area and monitoring well RT-MW- 11 was installed in the farthest downgradient direction of the source area. HydropunchTM groundwater sample AT-HP-01 was collected on the east side of Bull Branch.

Based on the known location and extent of the source area, analytical test results of downgradient groundwater samples, and the absence of groundwater in the Surficial aquifer along the western perimeter of the study area, the extent of pesticides in the Surficial aquifer has been defined. A summary of the analytical test results are presented in the RI report available in the Information Repository.

No Ferbam, Sevin, Guthion, or Parathion was detected in any groundwater samples collected from the Surficial aquifer at the Route 211 Area. TCL pesticides which were not detected above reporting limits in groundwater samples from the Surficial aquifer were aldrin, chlordane, heptachlor epoxide, and methoxychlor.

The most frequently detected pesticides in the Surficial aquifer were alpha-BHC, beta-BHC, delta BHC and 4,4'-DDE (*Figure 4*). Concentrations of these compounds decrease downgradient of the source area. The highest concentration of pesticides was detected in RT-MW-04, directly downgradient of the source area. Pesticide concentrations then decreased by more than an order of magnitude in monitoring wells located south of the ARRR. Concentrations of these compounds decrease at locations hydraulically downgradient of the source area, indicating that the majority of contaminant mass resides close to the source area.

Wells 05-MW-01, -02, -03, and RT-MW-04 were sampled for TCL VOCs analysis. No VOCs were detected in any groundwater samples collected from the Surficial aquifer. Analytical results are presented in the RI report available in the Information Repository.

Some metals were detected in groundwater at the Route 211 Area. Based on the available Site data, EPA has decided that metals detected in groundwater will not be considered chemicals of concern at the Route 211 Area. Metals concentrations are considered to be consistent with background concentrations.

6.0 SUMMARY OF SITE RISKS

The formal Baseline Risk Assessment for the Route 211 Area has not been completed yet, but it will be available before the selection of the final remedy for OU5. The Agency's decision to initiate an *interim* remedial action at this Area is based on the data collected during the Site investigations. The data indicates that the highest concentrations of pesticide contamination are within the Surficial aquifer, and that this contamination is gradually moving into the lower

aquifers. This *interim* remedial action would reduce further migration of pesticide contamination to the lower aquifers.

7.0 DESCRIPTION OF REMEDIAL ALTERNATIVES

The following remedial alternatives were selected for evaluation:

Alternative 1: No-Action

Alternative 2: Extraction of contaminated groundwater from the Surficial aquifer, treatment by carbon adsorption and discharge via an infiltration gallery system

7.1 Alternative 1: No Action

CERCLA requires that the "No Action" alternative be considered. The No Action alternative provides the baseline for comparing existing Site conditions with those resulting from other proposed alternatives.

Under this alternative, EPA would take no action at the Site at this time to reduce further migration of contaminated groundwater from the Surficial aquifer into the lower aquifers while the RI/FS process is finalized.

There is no cost associated with this alternative.

7.2 Alternative 2: Extraction of contaminated groundwater from the Surficial aquifer, treatment by carbon adsorption and discharge via an infiltration gallery system.

This alternative will ensure that active treatment of contaminated groundwater in the Surficial aquifer at the Route 211 area would begin while the RI/FS and RD/RA for the entire OU5 is completed. Under this alternative, the highest concentrations of pesticide-contaminated groundwater will be pumped from the Surficial aquifer using one extraction well, thereby reducing further migration of contaminants from this aquifer into lower aquifers. Extracted groundwater will be treated using an activated carbon adsorption system. All treated groundwater will be discharged via an infiltration gallery system and will be allowed to infiltrate/percolate down through the soil back to the Surficial aquifer.

In order to develop the cost estimate for this alternative it was assumed that the system will be in operation for two years; and that an existing well will be used. Based on these assumptions the costs associated with this alternative are as follow:

Capital Cost:	$ 274,302
Annual O&M Cost:	$123,303/year
Present Worth Cost:	$ 518,908

8.0 SUMMARY OF COMPARATIVE ANALYSIS OF ALTERNATIVES

A detailed comparative analysis using the nine evaluation criteria set forth in the NCP was performed on the remedial alternatives. The advantages and disadvantages were compared to identify the alternative with the best balance among these nine criteria.

8.1 Threshold Criteria

8.1.1 Overall Protection of Human Health and the Environment

Section 8.1.1 addresses whether or not a remedy provides adequate protection and describes how risks are eliminated, reduced, or controlled through treatment, engineering controls, or institutional controls.

The "No Action" alternative is not protective of human health and the environment because it would not address the continued migration of contaminants from the Surficial aquifer into lower aquifers. Because the "No-Action" alternative would neither arrest the continued groundwater migration from the highly contaminated aquifer into the lower aquifers nor initiate the reduction of Site contaminants and the potential risk of further migration on any part of the plume, this alternative will not be considered further in this analysis.

The extraction and carbon treatment of contaminated groundwater from the Surficial aquifer presented, as Alternative 2, initiates restoration of the Surficial aquifer. Because the highest concentrations of pesticide contamination were detected in this aquifer, extraction and treatment of groundwater from this aquifer will mark the starting point toward overall protection of human health and the environment. At the same time, by extracting this mass of pesticides, further impact to the lower aquifers would be minimized.

8.1.2 Compliance with Applicable or Relevant and Appropriate Requirements (ARARs)

Section 8.1.2 addresses whether or not a remedy will meet all of the applicable or relevant and appropriate requirements of other Federal and State environmental statutes and/or provide grounds for a waiver. The identified ARARs for this Site are listed in Section 9.2. The Superfund law requires that the remedial action for a site meets all ARARs unless a waiver is invoked. One of the circumstances under which a waiver may be invoked is if the remedial action is an *interim* measure where the *final* remedy will attain the ARAR upon completion.

Under Alternative 2, the Federal and State Groundwater Standards will be waived **for the groundwater extraction component** of the Alternative. This waiver is allowed because under this *interim* remedy only, contaminated groundwater will be extracted until the *final* remedy for the entire OU5 is selected and supercedes the *interim* action. Meeting specific Federal and State Groundwater Standards will be the objective of the *final* remedy for the entire OU5. The duration of this *interim* action should not exceed two years.

The carbon adsorption system will treat the extracted groundwater to meet the State permit requirements prior to being discharged via the infiltration gallery system. All State permit requirements for construction and use of infiltrations galleries must be met. The infiltration system must be modeled to show that the extraction and treatment system would be a "close-loop" system.

8.2 Primary Balancing Criteria

8.2.1 Long-Term Effectiveness and Permanence

Subsection 8.2.1 refers to expected residual risk and the ability of a remedy to maintain reliable protection of human health and the environment over time, once cleanup levels have been met. This criterion includes the consideration of residual risk and the adequacy and reliability of controls.

The goal of this *interim* action is short term in scope and its purpose is to prevent further migration of contaminants from the Surficial aquifer into lower aquifers while the RI/FS and post RI/FS activities for the entire OU5 are completed. Still, Alternative 2 is consistent with the Agency's long term goal of returning groundwater to its beneficial uses because contaminants are permanently removed as the Surficial aquifer is pumped in attempt to hydraulically control the groundwater plume's migration from this aquifer into lower aquifers.

8.2.2 Reduction of Toxicity, Mobility, or Volume Through Treatment

This subsection refers to the anticipated performance of the treatment technologies a remedy may employ.

The groundwater extraction well/carbon adsorption filter system presented as Alternative 2 will reduce the toxicity, mobility, and volume of contaminants in the Surficial aquifer, by extracting pesticide contamination water for treatment by the carbon adsorption system. The activated carbon is considered to be the Best Available Treatment technology for removing pesticides from water.

8.2.3 Short-Term Effectiveness

Short-term effectiveness refers to the period of time needed to complete the remedy and any adverse impacts on human health and the environment that may be posed during the construction and implementation of the remedy until cleanup levels are achieved.

Alternative 2 is effective in the short-term because it will reduce further ground-water migration from the Surficial aquifer into lower aquifers while initiating reduction in toxicity, mobility, and volume of contamination until the *final* action is selected.

There should be NO adverse effects to human health or the environment from the installation or operation of Alternative 2.

The duration of this *interim* action should not exceed two years. At the conclusion of the RI/FS activities, the Agency will propose the *final* remedial action for the groundwater at the Route 211 Area. If Alternative 2, as presented on this *interim* action Record of Decision becomes a component of the *final* remedy for OU5, continuing operation is expected until the cleanup levels are achieved. As previously mentioned, the groundwater cleanup levels are not addressed in this *interim* remedy because such goals are beyond the scope of this action. The cleanup levels will be addressed by the *final* remedial action Record Of Decision for OU5.

8.2.4 Implementability

Implementability is the technical and administrative feasibility of a remedy, including the availability of materials and services needed to implement the chosen solution.

The required construction technology for implementation of Alternative 2 is proven, and the necessary materials/services are readily available. The administrative requirements for implementation are manageable.

8.2.5 Cost

The total Present Worth Costs for the alternatives evaluated are as follows:

Alternative 1: $ 0

Alternative 2: $ 518,908

The Capital costs for Alternative 2 are estimated to be $274,302. The Operation and Maintenance (O&M) costs for Alternative 2 are estimated to be $123,303 per year. The duration of this interim action is expected not to exceed two years. The total present worth cost for Alternative 2 is estimated to be $518,908.

8.3 Modifying Criteria
8.3.1 State Acceptance

EPA and the North Carolina Department of Environment, Health, and Natural Resources (NCDEHNR) have cooperated throughout the RI/FS process. The State has participated in the development of the RI/FS through comment on each of the various reports developed by EPA, and the Draft ROD and through frequent contact between the EPA and NCDEHNR site project managers. EPA and NCDEHNR are in agreement on the selected alternative. Please refer to the Responsiveness Summary which contains a letter of concurrence from NCDEHNR.

The NCDEHNR has participated during the development of all the remedial processes for this OU5 and concurs with this *interim* remedy.

8.3.2 Community Acceptance

EPA solicited input from the community on the Proposed Plan for this *interim* action. Although public comments indicated no opposition to the preferred alternative, some local residents expressed some minor concerns during the Proposed Plan public meeting. Please see the Responsiveness Summary which contains a transcript of the public meeting.

9.0 THE SELECTED REMEDY

Based upon consideration of the CERCLA requirements, the NCP, the analysis of the alternatives using the nine criteria, and public and State comments, EPA has selected an *interim* action remedy for the Route 211. The selected *interim* action for the Route 211 area is Alternative 2.

This alternative will ensure that active extraction and treatment of contaminated groundwater from the Surficial aquifer would begin while the RI/FS and RD/RA standard process continues. Under this alternative contaminated groundwater will be pumped from the Surficial aquifer thereby reducing further migration of contaminants from this aquifer into lower aquifers. Extracted groundwater will be treated using an activated carbon adsorption system. All treated groundwater will be discharged via an infiltration gallery system and will be allowed to infiltrate/percolate down through the soil back to the Surficial aquifer.

For the purpose of the cost estimate, it was assumed that the system will be in operation for two years, and that an existing extraction well will be used. Based on these assumptions the costs associated with this alternative are as follow:

Capital Cost:	$ 274,302
Annual O&M Cost:	$123,303/year
Present Worth Cost:	$ 518,908

9.1 Performance and Treatment Standards

The performance standards for the selected remedy include, but are not limited, to the following standards:

Extraction System

The Surficial aquifer is the only aquifer involved in this *interim* action. The highest groundwater pesticide concentrations will be extracted from the Surficial aquifer using one extraction well. An electric submersible pump will be used to extract groundwater from the well. The need for additional extraction wells in the Surficial aquifer will be addressed in the *final* remedy for the entire OU5.

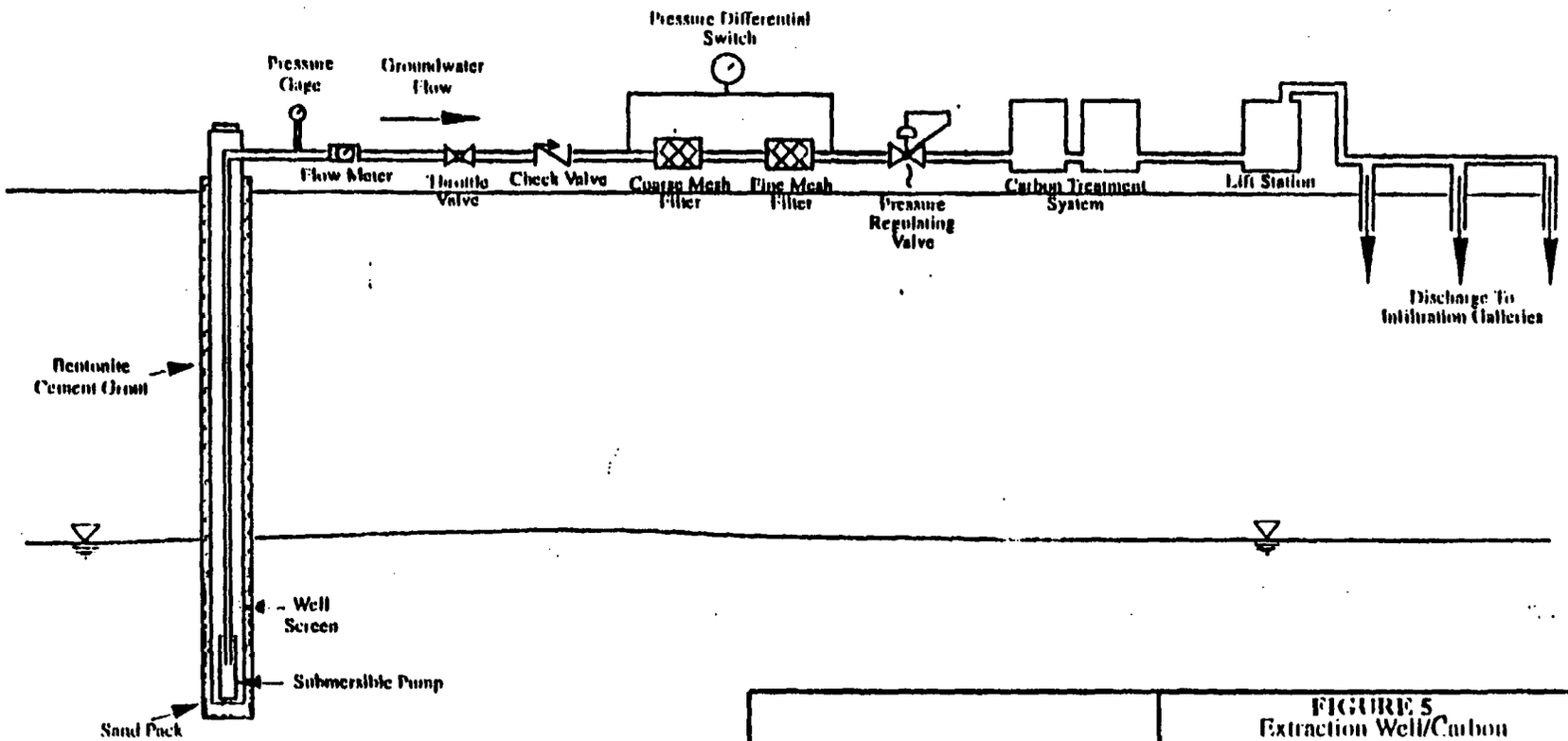
Treatment System

Activated carbon adsorption is considered to be the Best Available Treatment technologies for removing pesticides from water. A flow diagram of a typical extraction well/carbon adsorption treatment system is provided in *Figure 5*. All of the pesticides present in the groundwater to be extracted can be treated using activated carbon absorption. Routine analytical sampling of the influent and effluent from the canister(s) shall be conducted to determine when the carbon canisters should be replaced. The exact configuration of the carbon treatment system will be determined during design.

Discharge

Treated water will be discharged via an infiltration gallery system. Discharge requirements will be documented in an infiltration gallery permit. Based on the groundwater modeling, all treated water can be distributed through the galleries and allowed to infiltrate down through the soils to the Surficial aquifer. The infiltration system shall be located upgradient of the extraction system to form a "closed-loop" system, as required by the State of North Carolina.

The duration of this *interim* action should not exceed two years. At the conclusion of the RI/FS activities for the entire OU5, the Agency will propose the *final* remedial action for groundwater at the Route 211 Area. If this *interim* remedy becomes a component of the *final* remedy for OU5, continuing operation is expected until the cleanup levels are achieved. As previously mentioned, the groundwater cleanup levels are not addressed in this *interim* remedy because such goals are beyond the scope of this action. The cleanup levels will be addressed on the *final* Record of Decision for the entire OU5.



RUST ENVIRONMENT & INFRASTRUCTURE

FIGURE 5
Extraction Well/Carbon Adsorption Treatment System Flow Diagram
Surficial Aquifer Interim Action
Route 211 Area
Aberdeen Pesticide Dumps Site
Moore County, North Carolina

9.2 Site Specific Applicable and Relevant and Appropriate Requirements (ARARs)

The Superfund law requires that the remedial action for a site meets ARARs unless a waiver is invoked. One of the circumstances under which a waiver may be invoked is if the remedial action is an *interim* measure where the *final* remedy will attain the ARAR upon completion. The remedy will comply with all the applicable and relevant and appropriate portions of the following Federal and State regulations:

40 CFR Parts 261, 262, 263, 264, and 268 promulgated under the authority of the Resource Conservation and Recovery Act (RCRA). These regulations are applicable to the management of hazardous waste, including treatment, storage and disposal.

North Carolina Administrative Code (NCAC) Title 15A, Chapter 13A, Regulations for the Management of Hazardous Waste promulgated under the authority of NC Waste Management Act. These regulations are applicable to the management of hazardous waste in the State of North Carolina.

NCAC Title 15A, Chapter 13B, Regulations for disposal of Solid Waste promulgated under the authority of the NC Hazardous Waste Commission Act. These regulations are applicable to the management of solid waste in the State of North Carolina.

NCAC Title 15A, Chapter 2, Subchapter 2L, Regulations governing classifications and water quality standards applicable to groundwater, Promulgated under the authority of the NC Water and Air Resources Act. These regulations are applicable to the protection of groundwater in the State of North Carolina. These specific regulations will be waived for the groundwater extraction component of the remedy only. This waiver is allowed because under this *interim* remedy only, contaminated groundwater will be extracted until the *final* remedy for the entire OU5 is selected and supercedes the *interim* action. Meeting this ARAR will be the objective of the *final* remedy for the entire OU5.

State permit requirements for construction and use of infiltrations galleries must be met.

10.0 STATUTORY DETERMINATIONS

Under CERCLA Section 121, EPA must select remedies that are protective to human health and the environment, comply with applicable or relevant and appropriate requirements (unless a statutory waiver is justified), are cost-effective, and utilize permanent solutions and alternative treatment technologies or resource recovery technologies to the maximum extent practicable. In addition, CERCLA includes a preference for remedies that employ treatment that permanently and significantly reduce the volume, toxicity, or mobility of hazardous waste as their principal element. The following sections discuss how this remedy meets these statutory requirements.

10.1 Protection of Human Health and the Environment

The *interim* remedial action protects human health and the environment from exposure to Surficial aquifer contaminants. The groundwater extraction well/carbon treatment system presented as Alternative 2, initiates a reduction of risks from future exposure to contaminants in groundwater. Because the highest concentrations of pesticide contamination were detected in the Surficial aquifer, extraction and treatment of groundwater from this aquifer will mark the starting point toward overall protection of human health and the environment. At the same time, by extracting this mass of pesticides, further impact to the lower aquifers would be minimized.

10.2 Compliance with Applicable or Relevant and Appropriate Requirements

The Superfund law requires that the remedial action for a site meets all ARARs unless a waiver is invoked. One of the circumstances under which a waiver may be invoked is if the remedial action is an *interim* measure where the *final* remedy will attain the ARAR upon completion. The Federal and State Groundwater Standards will be waived **for the groundwater extraction component** of this *interim* remedy. This waiver is allowed because contaminated groundwater will be extracted until the *final* remedy for the entire Operable Unit 5 is selected and takes over the *interim* action, and not until the cleanup levels are met. (The duration of this interim action should not exceed two years). Meeting the Federal and State Groundwater Standards will be the objective of the *final* remedy.

The scope of this proposed *interim* remedial action is to start cleaning up contaminated groundwater in the Surficial aquifer while RI/FS and post RI/FS activities for the entire operable unit are completed. The groundwater cleanup levels are not addressed in this *interim* remedy because such goals are beyond the scope of this *interim* action. The cleanup levels will be addressed on the *final* ROD for the entire Operable Unit # 5.

The carbon adsorption system will treat the extracted groundwater to meet the State permit requirements prior to be discharged into an infiltration gallery. A permit must be obtained for the use of an infiltration gallery. The infiltration system must be modeled to show that the extraction and treatment system would be a "close-loop" system.

10.3 Cost Effectiveness

The Capital costs for the selected *interim* remedy are estimated to be $274,302. The Operation and Maintenance (O&M) costs for the remedy are estimated to be $123,303 per year. The duration of this *interim* action is expected not to exceed two years. The total present worth cost for Alternative 2 is estimated to be $518,908.

10.4 Utilization of Permanent Solutions and Alternative Treatment Technologies or Resource Recovery Technologies to the Maximum Extent Practicable

This *interim* action does not constitute a *final* action for remediation of the groundwater at the Route 211 area. It will, however, be effective in reducing the toxicity, mobility, and volume of pesticide-contaminated groundwater extracted from the Surficial aquifer by treating the pesticides-contaminated groundwater with a carbon adsorption system. Selection of this *interim* remedy represents the best balance of tradeoffs with respect to pertinent criteria, given the limited scope of the action.

10.5 Preference for Treatment as a Principal Element

The selected *interim* remedy utilizes a carbon adsorption system as a means of treatment of the pesticides in the groundwater. By utilizing treatment as a significant portion of the remedy, the statutory preference for remedies that employ treatment as a principal element is satisfied.

APPENDIX A
RESPONSIVENESS SUMMARY

1.0 RESPONSIVENESS SUMMARY OVERVIEW

The U.S. Environmental Protection Agency (EPA) held a public comment period from July 2, 1997, through August 2, 1997, for interested parties to comment on the Proposed Plan for the interim action at the Route 211 Area. This area is part of Operable Unit 5 (OU5) for the Aberdeen Pesticide Dumps Site in Aberdeen, North Carolina. The Proposed Plan, included in Attachment A of this document, provides a summary of the Site's background information leading up to the public comment period.

EPA held a public meeting at 7:00 p.m. on July 10, 1997, at the Aberdeen Fire Station in Aberdeen, North Carolina to describe EPA's proposed interim alternatives for the Site. All of the comments received by EPA during the public comment period were considered in the selection of the interim action for the Site.

The Responsiveness Summary provides a summary of citizens' comments and concerns identified and received during the public comment period, and EPA's responses to those comments and concerns.

This Responsiveness Summary is organized into the following sections and attachments:

1.0 RESPONSIVENESS SUMMARY OVERVIEW: This section outlines the purpose of the public comment period and the Responsiveness Summary. It also references the background information leading up to the public comment period.

2.0 BACKGROUND ON COMMUNITY INVOLVEMENT AND CONCERNS: This section provides a brief history of the interests and concerns of the community regarding the Route 211 Area.

3.0 SUMMARY OF MAJOR QUESTIONS AND CONCERNS RECEIVED DURING THE PUBLIC COMMENT PERIOD AND EPA'S RESPONSES TO THESE COMMENTS: This section summarizes the comments received by EPA during the comment period including any verbal comments made during the public meeting on July 10, 1997. EPA's written responses to these comments are also provided.

ATTACHMENT A: Attachment A contains the Proposed Plan for the interim action at the Route 211 Area which was mailed to the information repository and to individuals on the Site mailing list on June 26, 1997, and distributed to the public during the public meeting held on July 10, 1997.

ATTACHMENT B: Attachment B includes the sign-in sheet from the public meeting held on July 10, 1997, at the Aberdeen Fire Station, Aberdeen, North Carolina.

ATTACHMENT C: Attachment C includes the address and phone number of the information repository designated for the Aberdeen Pesticide Dumps Site.

ATTACHMENT D: Attachment D includes a copy of the official transcript of the Public Meeting on the Proposed Plan for the groundwater interim action for the Route 211 Area.

2.0 BACKGROUND ON COMMUNITY INVOLVEMENT CONCERNS

2.1 Background on Community Involvement

The Interim Action Proposed Plan fact sheet was prepared and mailed to citizens on the Site's mailing list on June 27, 1997, announcing a public comment period of July 2 - August 2, 1997, and a public meeting on July 10th. A transcript of this meeting was prepared by a court report and a copy was placed in the information repository located in the Aberdeen Town Hall. A display ad was prepared and placed in both the *Fayetteville Observer Times* and *The Pilot* newspapers on July 2, 1997 and July 3, 1997, respectively. Also, EPA representatives met with the Interim City Manager to inform him of what we would be explaining at the evening meeting enabling him to be responsive to his constituents in the event he was unable to attend the meeting.

EPA representatives also met with representatives of the MooreFORCE TAG group and their consultant to go over the proposed interim action and to respond to their concerns.

EPA fact sheets covering Pump-and-Treat and Activated Carbon Treatment, as well as a brochure on Groundwater Cleanup at Superfund Sites was provided to attendees at the proposed plan public meeting. A copy of this same literature was also placed in the information repository.

There has always been an interest by the public in the Aberdeen Pesticide Dumps Site areas and meetings have been fairly well attended.

2.2 Community Concerns

The following major issues and concerns regarding the Site were expressed during the July 10, 1997, public meeting.

1. Is the chemical DDE a contaminant of concern on this Site ?

2. How long would it take to clean up the aquifers ?

3. Why the scope of the interim action is limited to the Surficial aquifer ?

3.0 SUMMARY OF MAJOR QUESTIONS AND CONCERNS

3.1 Verbal Comments

The following is a summary of the verbal comments, concerns and questions raised by the attendees during the public meeting on July 10, 1997, together with EPA's responses.

COMMENT: A concerned citizen asked if the concentrations of the BHC isomers, and the chemical DDE detected in the Surficial aquifer exceed any of the established MCLs; and if not, why is EPA proposing cleaning up the aquifer?

RESPONSE: The BHC isomers detected in the Surficial aquifer are alpha, beta, delta and gamma. Of those BHC isomers, the only one that has an established MCL is gamma (0.2 parts per billion (ppb)). The MCL for gamma was not exceeded in any of the groundwater samples collected from the Surficial aquifer. DDE was detected in very low concentrations and it is not a contaminant of concern for this Site. The clean up of the Surficial aquifer is proposed by the Agency because some of the BHCs concentrations detected in the Surficial aquifer exceed preliminary risk calculations.

COMMENT: How long would it take to clean up the aquifer?

RESPONSE: Achieving a specific clean up levels is not within the scope of this interim action. The goal of this interim action is to start pumping out and treating contaminated groundwater from the Surficial aquifer which contains the higher concentrations of contaminants in the whole Route 211 Area while the Remedial Investigation/Feasibility Study (RI/FS) and post-RI/FS activities for the entire OU5 are completed. After the RI/FS activities for the entire OU5 are completed, a final Record of Decision (ROD) will be issued. Achieving specific clean up levels will be the goal of the final ROD. The final ROD will document the final remedy for the entire OU5 including the estimated time frames for achieving cleanup levels.

3.2 Written Comments

The following are written comments submitted by MooreFORCE, together with EPA's responses.

COMMENT 1: MooreFORCE, Inc., strongly endorses EPA intentions to begin interim action at Route 211 Area, and encourages the agency to expedite negotiations and begin as soon as possible. However, the scope of the proposed interim action is too limited.

RESPONSE: Please see response to MooreFORCE's comment 3.

COMMENT 2: The Remedial investigation has revealed that contaminated groundwater has been detected not only in the surficial aquifer, but also in the upper and lower sections of the

Upper Black Creek aquifer, and the Lower Black Creek aquifer. Why aren't these other contaminated aquifers also being addressed at this time with this proposed interim action?

RESPONSE: EPA is not addressing other aquifers at this time because the FS for the entire OU5 is not completed. The FS for the entire OU5 will address contamination above the cleanup levels in all the aquifers. As documented in the RI report, the highest concentrations of pesticides in the groundwater are in the surficial aquifer, therefore, EPA believes that it was appropriate to initiate restoration of the Surficial aquifer at this time, and not to wait until the FS report for the entire OU5 (all the aquifers) is completed. A copy of the final RI report is located in the information repository.

COMMENT 3: At a minimum, the scope of the interim action should be expanded by adding (an) additional well(s) to more fully capture the "hot spots" in the surficial aquifer, before the contaminants have an opportunity to further migrate into the lower aquifer. The front end cost of the carbon filtration system design would not be greatly increased to expand the system's capacity. Nor should there be any delays in permitting an expanded action. Because the Remedial investigation has found that groundwater moving rapidly through the Surficial aquifer, at 635 feet per year, it is imperative that an expanded interim action be undertaken as soon as possible. It is much easier to capture and treat the more concentrated contaminants in the Surficial aquifer now rather than wait until the contaminants move down and spread out through the lower aquifers.

RESPONSE: Groundwater modeling performed as a part of the Route 211 Feasibility Study indicates that the additional Surficial aquifer recovery wells would not provide a measurable benefit toward the shortening of the anticipated remedial time frames under potential remedial actions for the lower aquifers. A measurable reduction in risk is likewise improbable. While some limited benefit of adding Surficial aquifer recovery wells is anticipated, EPA believes the additional recovery wells are not justified because of additional costs and probable delays to the implementation of this interim action. In part, this conclusion was reached because of the already significant degree of groundwater contamination in the lower aquifers, which would only be marginally affected by the addition of more recovery wells to the Surficial aquifer interim action. EPA agrees with the observation that at the Route 211 area, removal of the concentrated groundwater contamination close to the source area will be much easier than would be contaminant removal from more distant areas.

COMMENT 4: The Remedial investigation has revealed vertical hydraulic connections between each of the aquifers characterized at the Route 211 Area site. What is the possibility that the installation of monitoring wells has contributed to the cross-contaminated of the various aquifers? Any proposed interim actions must be sensitive to this issue to prevent exacerbating the movement of contaminants down through the aquifers. Also, the restarting of Municipal Well #13, which may effect the dynamics of groundwater flow and contaminant migration must be taken into account.

RESPONSE: The planned groundwater interim action will act to reduce vertical contaminant migration from the Surficial aquifer to the underlying Upper Black Creek aquifer. There is no concern about the planned interim action exacerbating vertical contaminant migration.

With regard to the concern expressed about monitoring well installation contributing to vertical contaminant migration, it is possible that a very short-term increase in vertical contaminant migration occurred during well installation. However, the volume of water (and mass of contaminants) that could have migrated vertically during the period of well installation is insignificant, relative to the movement of groundwater and contaminants through naturally occurring vertical migration pathways downgradient of the Route 211 source area. The EPA has performed modeling analyses which have compared the potential vertical contaminant migration around Municipal Well 13 to contaminant migration through the geologic formations near the Route 211 area. Municipal Well 13 is constructed such that vertical groundwater flow around that well is much greater than is any potential vertical groundwater flow around the Route 211 monitoring wells. EPA's modeling analyses indicate that naturally occurring vertical groundwater flow and contaminant migration are orders of magnitude greater than are vertical groundwater flow and contaminant migration around Municipal Well 13. All monitoring wells installed during the Route 211 investigations were constructed to minimize vertical contaminant migration, in accordance with U.S. EPA guidance. There is no reason to believe that measurable amounts of contamination could migrate vertically as a result of the construction of the monitoring wells.

The operation of Municipal Well 13 should not have any measurable effect on the planned Surficial aquifer interim action at the Route 211 area. The operation of this well does have an effect on groundwater flow and contaminant migration patterns in lower aquifers, and will be considered by the EPA with regards to selection of a final remedial action for the Route 211 groundwater contamination.

ATTACHMENT A
PROPOSED PLAN FACT SHEET

REGION 4

SUPERFUND FACT SHEET
INTERIM ACTION PROPOSED PLAN

ABERDEEN PESTICIDE DUMPS SITE
OPERABLE UNIT #5
Groundwater Interim Action
at the Route 211 Area
ABERDEEN, NORTH CAROLINA

July 2, 1997

INTRODUCTION

This **Interim Action** Proposed Plan fact sheet has been prepared by the U.S. Environmental Protection Agency - Region 4 (EPA) to propose an interim cleanup plan to address groundwater contamination in the Surficial Aquifer at the Route 211 Area for Operable Unit # 5 of the Aberdeen Pesticide Dumps Site in Moore County, Aberdeen, North Carolina. As the lead Agency, EPA has worked in conjunction with the North Carolina Department of Environment, Health and Natural Resources (NCDEHNR) for oversight of the remedial activities at the Site. In accordance with Section 117(a) of the **Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), as amended by the Superfund Amendments and Reauthorization Act, SARA 1986,** EPA is publishing this Interim Action Proposed Plan to provide an opportunity for public review and comment on cleanup options under consideration for the Site.

This Interim Action Proposed Plan includes:

- a summation of Site data collected during the field investigations (relevant to the Surficial Aquifer at the Route 211 area); and
- a short analysis of the remedial alternatives considered.

Since this interim action addresses only the Surficial Aquifer or shallow aquifer at the Route 211 Area, most of the information included in this report is confined to this specific aquifer at this specific Area. Information covering this interim action is available in the Information Repository. Complete Remedial Investigation /Feasibility Study (RI/FS) reports for Operable Unit #5 which covers groundwater for both the Route 211 and McIver Dump Areas will be available before the final Record of Decision covering the entire operable unit is prepared.

PUBLIC MEETING

DATE: July 10, 1997
TIME: 7:00 pm
LOCATION: Aberdeen Fire Station
Hwy. 1 and Peach Street
Aberdeen, NC

COMMENT PERIOD:
July 2, 1997 - August 2, 1997

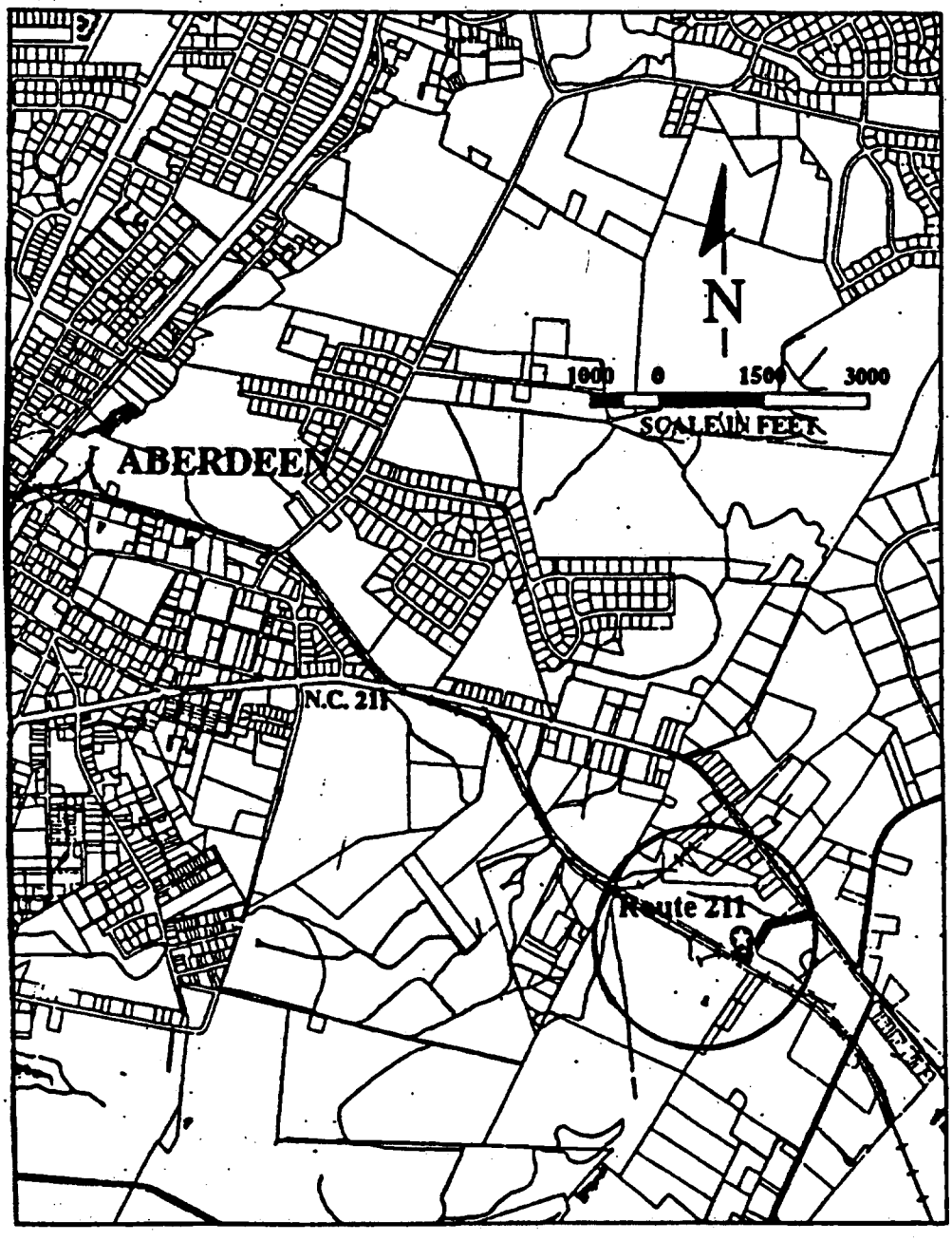


FIGURE 1

SITE LOCATION MAP

SITE BACKGROUND

The Route 211 Area (*Figure 1*) is located approximately 1,000 feet southwest of Route 211 East adjacent to the Aberdeen and Rockfish Railroad (ARRR), one mile east of Aberdeen (35 °07'02"N Latitude and 79°23'41"W Longitude). The Area is an old sand mining depression or pit approximately 80 feet in diameter along its short axis and approximately 8 to 20 feet below the surrounding topography. The elevation of the perimeter of the basin is between 440 and 450 feet above mean sea level (msl).

Materials, some of which contained pesticides, were discovered in a waste pile on the southwest slope of the depression. In 1986, approximately 100 cubic yards of pesticides and associated soil were removed from this Area, and disposed at the GSX facility in Pinewood, South Carolina. In 1989, approximately 200 cubic yards of similar material were discovered and subsequently removed and placed in the stockpile at the McIver Dump Area. The following pesticide compounds were detected in various samples taken from the waste pile and surface soils:

alpha- Benzenehexachloride (alpha BHC),
beta-BHC
gamma-BHC
delta-BHC
4,4'-dichlorodiphenyldichloroethylene (4,4'-DDE)
4,4'-Dichlorodiphenyldichloroethane (4,4'-DDD)
4,4'-Dichlorodiphenyltrichloroethane (4,4'-DDT)
heptachlor
chlordane.

Contaminated soil from the Route 211 area is being addressed as part of Operable Unit #1.

GROUNDWATER CHARACTERIZATION:

Summary of RI (Remedial Investigation) findings

Since this interim action is for the Surficial Aquifer at the Route 211 Area only, discussion of the RI findings in this fact sheet will be limited to the Surficial Aquifer at this specific area.

In September 1993, Rust E&I (an environmental contractor) was employed by the Potentially Responsible Parties (PRPs) to implement a Preliminary Groundwater Assessment at the Route 211 Area. RI field activities were performed in phases beginning in November 1994 and consisted of Phases I, IIa, IIb, III, IVa, IVb, IVc, V, and VI to obtain successful data that better represents the contaminants in the groundwater.

- During Phase I, soil test borings were drilled at the Route 211 Area to characterize subsurface conditions and install ground water monitoring wells in the Surficial Aquifer.

- Phase IIa and Phase IIb, Direct Push Technology (DPT) field screening techniques were utilized to obtain continuous soil samples for lithologic characterization.

- Phase III, a combination of Hollow Stem Auger (HSA) and mud rotary drilling techniques were utilized to further assess the Surficial Aquifer.

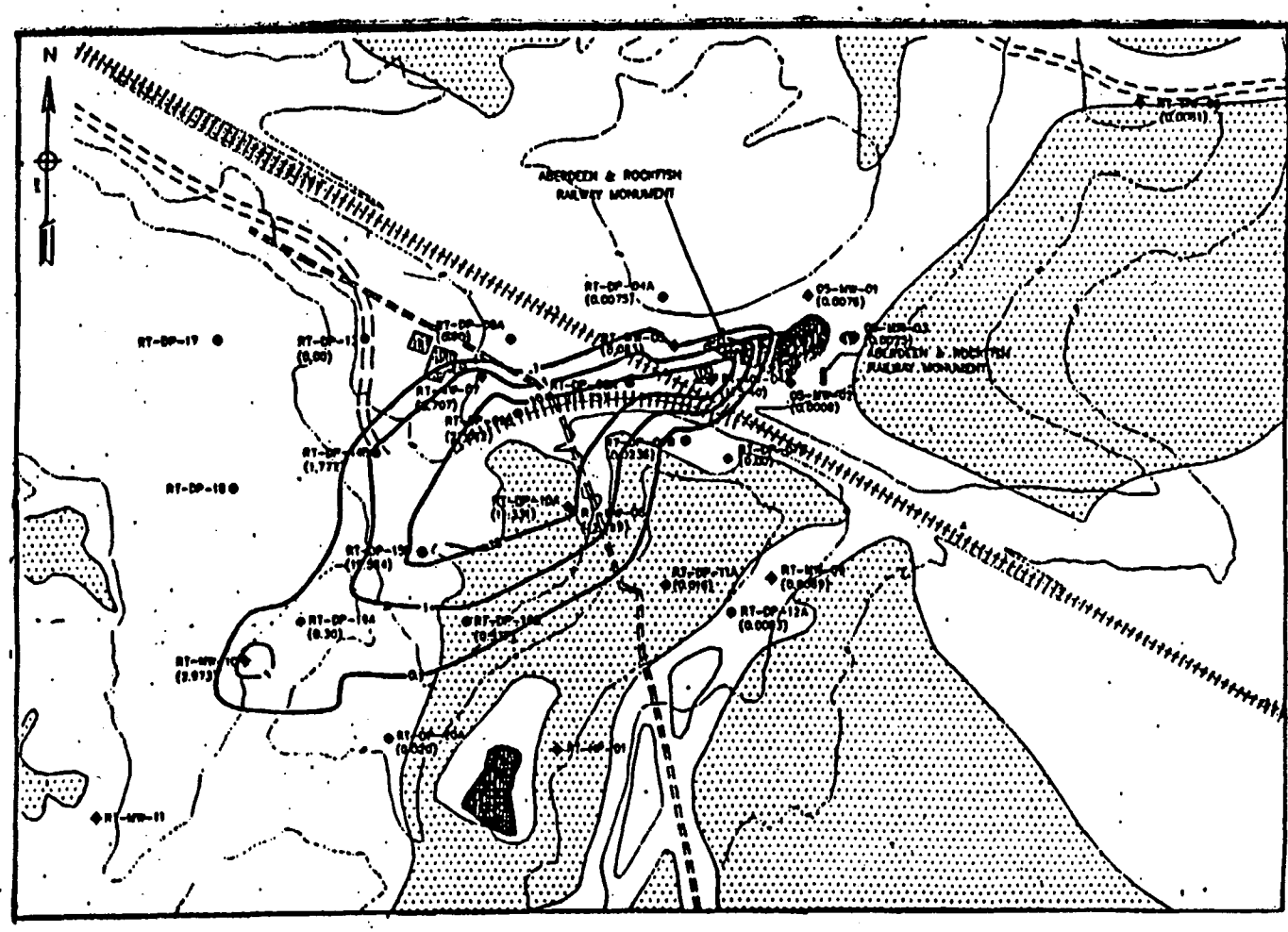
- Phases IVa, IVb and IVc field activities, a combination of DPT, HSA, mud rotary, and Rotosonic drilling techniques were used to characterize subsurface conditions, collect Hydropunch groundwater samples, and install groundwater monitoring wells. During Phase IVa, one Hydropunch groundwater sample was collected from the Surficial Aquifer. During Phase IVb, HSA were used to install a potential extraction well in the Surficial Aquifer.

- Phase V, Hydropunch samples were collected in the Surficial Aquifer.

- No work was performed in the Surficial Aquifer during Phase VI.

Groundwater samples were collected from DPT locations and from permanent monitoring wells at the Route 211 Area. Selected samples were analyzed for Target Compound List (TCL) Pesticides, Target Analyte List (TAL) Metals, TCL VOCs (volatile organic compounds), and additional parameters including alkalinity, total dissolved solids, and hardness. In addition, several pesticides not included in the TCL pesticide list were analyzed including Ferbam, Sevin, Guthion, and Parathion.

Groundwater samples were collected from field screening locations using DPT and Hydropunch methods, from existing monitoring wells, DPT



LEGEND

- ABERDEEN & ROCKFISH RAILWAY
- PAVED ROAD
- DIRT ROAD
- TOPOGRAPHIC CONTOUR LINE
- UNDERGROUND GAS LINE
- SURFACE WATER
- 0.1 — ISOCONCENTRATION CONTOUR (ug/l)
- (0.0037) TOTAL BHC-ISOMER CONCENTRATION (ug/l)
- RAILROAD
- MARSH AREA
- TREE/BRUSH LINE
- EPA, PHASE I, and II MONITORING WELL LOCATION-(1988,1991, & 1993) (SURFICIAL AQUIFER)
- PHASE III DIRECT PUSH WELL-POINT MONITOR (PHASE II AND III (1993)) (SURFICIAL AQUIFER)
- PHASE III GROUNDWATER GRAB SAMPLE LOCATION PHASE

FIGURE 2

TOTAL BHC-ISOMER
ISOCONCENTRATION CONTOUR MAP
SURFICIAL AQUIFER
ROUTE 211 AREA

wellpoints, new piezometers and new monitoring wells.

A total of eight monitoring wells (designated RT-MW-04 through RT-MW-11) were installed into the Surficial Aquifer at the Route 211 Area (*Figure 2*). Monitoring wells RT-MW-04 and RT-MW-05 were installed to assess groundwater quality directly downgradient of the source area and adjacent to the Aberdeen and Rockfish Railroad (ARRR) during Phase I. As a result of the groundwater flow direction, monitoring well RT-MW-06 was installed northeast of the Area to collect background ground water quality data.

Based upon Phase IIa and IIb analytical test results, several additional monitoring wells were installed to more fully assess the extent of the contaminant plume. Monitoring well RT-MW-07 was installed to monitor groundwater quality along the northwestern perimeter, monitoring well RTMW-08 was installed to monitor the groundwater quality in the center, and monitoring well RTMW-09 was installed to monitor groundwater quality along the southeastern perimeter of the plume. Two monitoring wells were also installed to assess the groundwater quality in the downgradient direction; monitoring well RT-MW-10 was installed in a downgradient direction of the source area and monitoring well RT-MW- 11 was installed in the farthest downgradient direction of the source area. HydropunchTM groundwater sample AT-HP-01 was collected on the east side of Bull Branch.

Based on the known location and extent of the source area, analytical test results of downgradient groundwater samples, and the absence of groundwater in the Surficial Aquifer along the western perimeter of the study area, the extent of pesticides in the Surficial Aquifer has been defined. A summary of the analytical test results are presented in the RI report available in the Information Repository.

No Ferbam, Sevin, Guthion, or Parathion was detected in any groundwater samples collected from the Surficial Aquifer at the Route 211 Area. TCL pesticides which were not detected above reporting limits in groundwater samples from the Surficial Aquifer were aldrin, chlordane, heptachlor epoxide, and methoxychlor.

The most frequently detected pesticides in the Surficial Aquifer were alpha-BHC, beta-BHC, delta BHC and 4,4'-DDE. Concentrations of these compounds decrease downgradient of the source area. The highest concentration of pesticides was detected in RT-MW-04, directly downgradient of the source area. Pesticide concentrations then decreased by more than an order of magnitude in monitoring wells located south of the ARRR. Concentrations of these compounds decrease at locations hydraulically downgradient of the source area, indicating that the majority of contaminant mass resides close to the source area.

Wells 05-MW-01, -02, -03, and RT-MW-04 were sampled for TCL VOCs analysis. No VOCs were detected in any groundwater samples collected from the Surficial Aquifer. Analytical results are presented in the RI report available in the Information Repository.

Some metals were detected in groundwater at the Route 211 Area. Based on the available Site data, EPA and NCDEHNR have decided that metals detected in groundwater will not be considered chemicals of concern at the Route 211 Area. Metals concentrations are considered to be consistent with background concentrations.

SCOPE AND ROLE OF PROPOSED INTERIM REMEDIAL ACTION

Due to the length of time required to complete the Remedial Investigation/Feasibility Study (RI/FS) for the entire Operable Unit and the Remedial Design/Remedial Action (RD/RA) plans, and the possibility of further plume migration during this time, EPA believes that it is appropriate to initiate remedial action on the Surficial Aquifer as soon as possible. The proposed interim remedial action would begin groundwater cleanup while RI/FS and post RI/FS activities for the entire operable unit are completed. This proposed interim action would initiate a reduction of risks to human health and the environment posed by the pesticide contaminated groundwater plume, but does NOT constituted the final remedial action for Operable Unit # 5. A final remedial action will be developed to fully address the principle threats posed by Site conditions following the conclusions of the RI/FS. Upon completion of the RI/FS, the groundwater treatment system embodied by this interim remedial action may by incorporated into the Operable Unit # 5 final remedy. The final remedy for this Operable Unit # 5 will be documented in a final Record Of Decision.

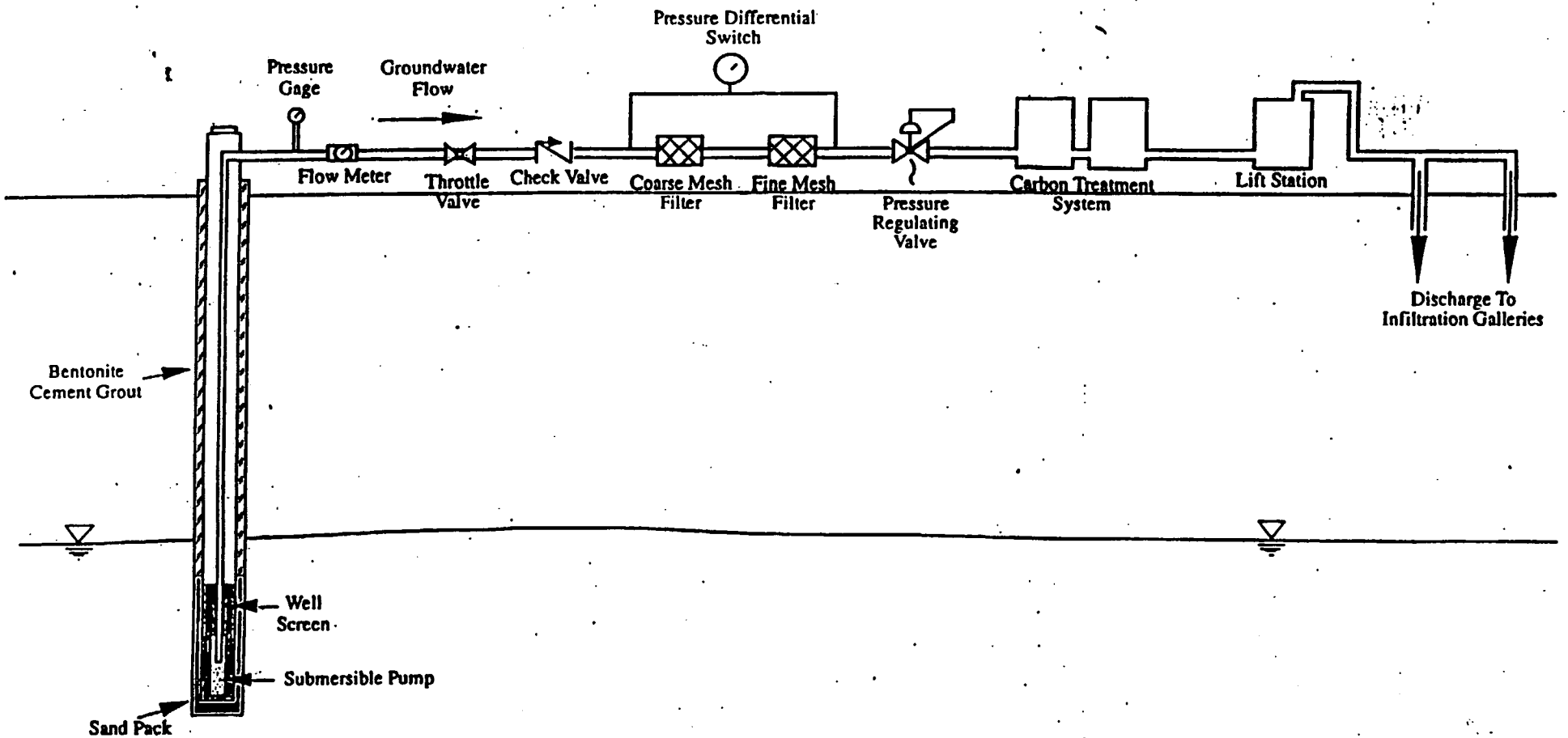


FIGURE 3

EXTRACTION WELL/CARBON
ADSORPTION TREATMENT SYSTEM
FLOW DIAGRAM
SURFICIAL AQUIFER INTERIM ACTION
ROUTE 211 AREA

SUMMARY OF SITE RISKS

The formal Baseline Risk Assessment for the Route 211 Area has not been completed yet, but it will be available before the selection of the final remedy for Operable Unit # 5. The Agency's decision to initiate an interim remedial action at this Area is based on the data collected during the Site investigations. The data indicates that the highest concentrations of pesticide contamination are within the Surficial Aquifer, and that this contamination is gradually moving into the lower aquifers. This interim remedial action would reduce further migration of pesticide contamination to the lower aquifers.

SUMMARY OF ALTERNATIVES

The alternatives that EPA has evaluated for this Interim Remedial Action are described briefly below.

Alternative 1: No Action
Cost: $0

The Agency requires that this alternative be evaluated at every site to serve as a basis for comparison for any other alternative(s) considered. Under this alternative, EPA would take no action at the Site at this time to reduce further migration of contaminated groundwater from the Surficial Aquifer into the lower aquifers while the RI/FS process is finalized.

Alternative 2: Extraction of contaminated groundwater from the Surficial Aquifer, treatment by carbon adsorption and discharge to an infiltration gallery;

Capital Cost:	$ 274,302
Annual O&M Cost:	$123,303/year
Present Worth Cost:	$ 518,908

This alternative will ensure that active treatment of contaminated groundwater in the Surficial Aquifer would begin while the RI/FS and RD/RA standard process continues. Under this alternative groundwater will be pumped from the Surficial Aquifer thereby reducing further migration of contaminants from this aquifer into lower aquifers. Extracted groundwater will be treated using an activated carbon adsorption filter system. All treated groundwater will be discharged to an infiltration gallery and will be allowed to infiltrate/percolate down through the soil back to the Surficial Aquifer. The duration of this interim action should not exceed two years.

Extraction System

The Surficial Aquifer is the only aquifer involved in this interim action. Pesticide-contaminated groundwater will be extracted from the Surficial Aquifer using an existing well. An electric submersible pump will be used to extract groundwater from the well. The need for any additional extraction well(s) in the Surficial Aquifer will be addressed in the final Record Of Decision.

Treatment System

Activated carbon adsorption is considered to be one of the Best Available Treatment technologies for removing pesticides from water. A flow diagram of the proposed extraction well/carbon adsorption treatment system is provided in *Figure 3*.

In order to ensure the proper performance of the carbon adsorption system, a number of preliminary treatment elements are proposed. The groundwater will be pumped through two backwashable screen filters for removal of suspended solids/particles. The first filter will be used to remove the larger particles, while the second filter will provide fine particulate removal. Suspended solids removal will increase the effective operating life of the carbon adsorbers, thus reducing overall operational costs. Removal of solids also minimizes the need for backwashing or backflushing of the adsorbers.

All of the pesticides present in the groundwater to be extracted can be treated using activated carbon absorption. Routine analytical sampling of the influent and effluent (from each canister) will be conducted to determine when the carbon canisters should be replaced.

Discharge

Treated water will be discharged to an infiltration gallery. Discharge requirements will be documented in an infiltration gallery permit.

Based on the groundwater modeling, all treated water can be distributed through the galleries and allowed to infiltrate down through the soils to the Surficial Aquifer. The infiltration system would be located upgradient of the extraction system to form a "closed-loop" system, as required by the State of North Carolina.

EVALUATION OF ALTERNATIVES

The proposed interim remedial action for the Route 211 Area is presented as Alternative 2 and involves the extraction of pesticides-contaminated groundwater from the Surficial Aquifer for treatment by an activated carbon adsorption system and discharge to an infiltration gallery. This section profiles the Preferred Alternative against the nine criteria which EPA uses to compare all proposed alternatives, noting how it compares to the "No- Action" alternative for each evaluation criteria.

1. Overall protection of human health and the environment: EPA assesses the degree to which each alternative eliminates, reduces, or controls threats to public health and the environment through treatment, engineering methods, or institutional controls.

2. Compliance with Applicable or Relevant and Appropriate Requirements (ARARs: The alternatives are evaluated for compliance with all applicable state and federal environmental and public health laws and requirements that apply or are relevant and appropriate to the Site conditions.

3. Short-term effectiveness: The length of time needed to implement each alternative is considered, and EPA assesses the risks that may be posed to workers and nearby residents during construction and implementation.

4. Long-term effectiveness: The alternatives are evaluated based on their ability to maintain reliable protection of public health and the environment over time once the cleanup levels have been met.

5. Reduction of contaminant toxicity, mobility, and volume: EPA evaluates each alternative based on how it reduces (1) the harmful nature of the contaminants, (2) their ability to move through the environment, and (3) the volume or amount of contamination at the Site.

6. Implementability: EPA considers the technical feasibility (e.g., how difficult the alternative is to construct and operate) and administrative ease (e.g., the amount of coordination with other government agencies that is needed) of a remedy, including the availability of necessary materials and services.

7. Cost: The benefits of implementing a particular remedial alternative are weighed against the cost of implementation. Costs include the capital (up-front) cost of implementing an alternative over the long term, and the net present worth of both capital and operation and maintenance costs.

8. State Acceptance: EPA requests state comments on the Remedial Investigation Report, Risk Assessment, Feasibility Study Report, and Proposed Plan, and must take into consideration whether the State concurs with, opposes, or has no comment on the preferred alternative.

9. Community Acceptance: To ensure that the public has an adequate opportunity to provide input, EPA holds a public comment period and public meeting and considers and responds to all oral and written comments received from the community prior to the final selection of a remedial action.

ANALYSIS

Overall Protection

The "No Action" alternative is not protective of human health and the environment because it would not address the continued migration of contaminants from the Surficial Aquifer into lower aquifers. Thus, the "No-Action" alternative would neither arrest the continued groundwater migration from the highly contaminated aquifer into the lower aquifers nor initiate the reduction of Site contaminants and the potential risk of further migration on any part of the plume .

The groundwater extraction and carbon treatment of contaminated groundwater from the Surficial Aquifer presented as Alternative 2, initiates restoration of the Surficial Aquifer. Because the highest concentrations of pesticide contamination were detected in this aquifer, extraction and treatment of groundwater from this aquifer will mark the starting point toward overall protection of human health and the environment. At the same time, by extracting this mass of pesticides, further impact to the lower aquifers would be minimized.

Compliance with ARARs

The Superfund law requires that the remedial action for a site meets all ARARs unless a waiver is invoked. One of the circumstances under which a waiver may be invoked is if the remedial action is an interim measure where the final remedy will attain the ARAR upon completion. The Federal and State Groundwater Standards will be waived for the

groundwater extraction component of this interim action. This waiver is allowed because contaminated groundwater will be extracted until the final remedy for the entire Operable Unit # 5 is selected and takes over the interim action, and not until the cleanup levels are met. (The duration of this interim action should not exceed two years). Meeting the Federal and State Groundwater Standards will be the objective of the final remedy.

The scope of this proposed interim remedial action is to start cleaning up contaminated groundwater in the Surficial Aquifer while RI/FS and post RI/FS activities for the entire operable unit are completed. The final groundwater cleanup levels are not addressed in this interim remedial action because such goals are beyond the scope of this interim action. The final cleanup levels will be addressed by the final remedial action for Operable Unit # 5.

The carbon adsorption system will treat the extracted groundwater to meet the State permit requirements prior to be discharged into an infiltration gallery. A permit must be obtained for the use of an infiltration gallery. The infiltration system must be modeled to show that the proposed extraction and treatment system would be a "close-loop" system.

Reduction of Toxicity, Mobility, or Volume of the Contaminants through Treatment
The groundwater extraction well/carbon adsorption filter system will reduce the toxicity, mobility, and volume of contaminants in the Surficial Aquifer, by extracting pesticide contamination water for treatment by the carbon adsorption system. The activated carbon is considered to be the Best Available Treatment technology for removing pesticides from water.

Short-Term Effectiveness
The interim remedial action proposed is effective in the short-term because it reduces further groundwater migration from the Surficial Aquifer into lower aquifers while initiating reduction in toxicity, mobility, and volume of contamination until the final action is selected.

There should be NO adverse effects to human health or the environment from the installation or operation of this interim action.

The duration of this interim action should not exceed two years. At the conclusion of the RI/FS activities, the Agency will propose the final remedial action for the groundwater at the Route 211 Area. If this interim action becomes a component of the final remedy for Operable Unit # 5, continuing operation is expected until the final cleanup levels are achieved. As previously mentioned, the final groundwater cleanup levels are not addressed in this interim remedy because such goals are beyond the scope of this action. The final cleanup levels will be addressed by the final remedial action Record Of Decision for Operable Unit # 5.

Implementability
The required construction technology for implementation of Alternative 2 is proven, and the necessary materials/services are readily available. The administrative requirements for implementation are manageable.

Cost
The Capital costs for Alternative 2 are estimated to be $274,302. The Operation and Maintenance (O&M) costs for Alternative 2 are estimated to be $123,303 per year. The duration of this interim action is expected not to exceed two years. The total present worth cost for Alternative 2 is estimated to be $518,908.

State Acceptance
The NCDEHNR has participated during the development of all the remedial processes for this Site and concurs with EPA's Proposed Interim Remedial Action.

Community Acceptance
Community acceptance of the Interim Remedial Action will be evaluated after the public comment period and will be described in the Interim Action Record of Decision (ROD).

The public is asked to comment on this proposed Interim action during the public comment period which extends from July 2, 1997 through August 2, 1997. Questions and answers will be recorded to assist in the preparation of a report called "Responsiveness Summary", that will summarize citizen comments and EPA responses.

After the public comment period and the public meeting, EPA will review and consider all comments received from the community as part of the process of reaching the decision of the most appropriate remedial alternative for this interim action. EPA's final choice of a remedy for the interim action will be

documented in the Interim Action ROD, which will include the Responsiveness Summary.

After the Interim Action ROD is signed by the EPA Waste Management Division Director, EPA will negotiate with the PRPs to design and implement the selected cleanup. At the end of the negotiation period, EPA will oversee the development of engineering design plans for the implementation of the selected remedial alternative.

Public Participation/Community Relations

As already stated in this fact sheet, EPA is conducting a 30-day public comment period beginning on July 2 and extending until midnight August 2, 1997 to receive written comments from citizens concerning this proposed interim remedial action. There will also be a public meeting on July 10th at the Aberdeen Fire Station to receive oral comments. If requested by an individual, a 30-day extension can be added to the comment period. If you prefer to submit written comments, please mail them postmarked no later than midnight August 2 to:

Ms. Diane Barrett
Community Relations Coordinator
North Site Management Branch
U.S.E.P.A., Region 4
61 Forsyth Street, SW
Atlanta, GA 30303-3014

The Aberdeen Pesticide Dumps Site awarded an EPA Technical Assistance Grant (TAG) to the MooreFORCE, Inc. organization several years ago. They are very active in reviewing documents and providing comments to the Agency for this Site. If you are interested in joining this group of concerned citizens, please contact them at (704)692-7141.

The Aberdeen Community Liaison Panel meets the third Thursday of each month to discuss on-going activities occurring at the entire Site. The members of the panel consist of area citizens, businessmen, City/County/State and Federal government officials and representatives of the Potentially Responsible Parties. Citizens are invited to attend .. The meetings begin at 5:30 PM at the Aberdeen Fire Station.

THE NEXT STEP: ONCE THE REMEDIAL INVESTIGATION/FEASIBILITY STUDY (RI/FS) FOR THE ENTIRE OPERABLE UNIT #5 IS COMPLETED

At completion of the RI/FS, EPA will develop another proposed plan which will describe the final remedial alternative for both the Route 211 and McIver Dump Areas. A copy of the proposed plan, which will include a brief description of the RI/FS results, will be mailed to interested parties and all persons who have requested to be included on EPA's mailing list for the Site. EPA will conduct another 30-day public comment period on the FS report and the proposed plan to provide an opportunity for public involvement in the final cleanup decision.

EPA will also conduct another public meeting to discuss the RI/FS and the proposed plan, and to address community questions and concerns. Questions and answers will be recorded to assist in the preparation of a " Responsiveness Summary".

After the public comment period and the public meeting, EPA will review and consider all comments received from the community as part of the process of reaching the final decision of the most appropriate remedial alternative, or combination of alternatives to address the groundwater contamination at the Route 211 and McIver Dump Areas. EPA's final choice of a remedy will be documented in the final ROD, which will include the Responsiveness Summary.

After the final ROD is signed by the EPA Waste Management Division Director, EPA will negotiate with the PRPs to design and implement the selected cleanup. At the end of the negotiation period, EPA will oversee the development of engineering design plans for the implementation of the selected remedial alternative.

Information Repository Location

The Administrative Record and Information Repository files are available for public reading and are housed in the:

Aberdeen Town Hall
115 North Poplar Street
Aberdeen, N.C.

The repository contains copies of the reports developed during the Superfund process as well as general information about the Site and the Superfund Program.

Need More Information? Contact:

If you need more information about this Interim Proposed Plan for Operable Unit #5 at the Route 211 Area, please contact:

Luis E. Flores, EPA Remedial Project Manager
Diane Barrett, Community Relations Coord.
North Site Management Branch
U.S.E.P.A. Region 4
61 Forsyth Street, SW
Atlanta, GA 30303-3014
Phone: 1-800-435-9233

MAILING LIST

Since you have received this fact sheet in the mail your name is on the **Aberdeen Pesticide Dumps Site** mailing list. If you know of other people in the community that would like to be added to this list, please have them complete this form and return to Diane Barrett at the EPA address given earlier. If you want to correct your address or wish to have you name removed from this Site's mailing list, please indicate this choice below and return to Diane Barrett. Thank you for your cooperation.

NAME _____

ADDRESS _____

CITY, STATE, ZIP CODE _____

ADDITION____ **CORRECTION**____ **DELETION**____

Region 4

U.S. Environmental Protection Agency
61 Forsyth Street, SW
Atlanta, Georgia 30303-3014

North Site Management Branch
Diane Barrett, Community Relations Coord.
Luis Flores, Remedial Project Manager

Official Business
Penalty for Private Use $300

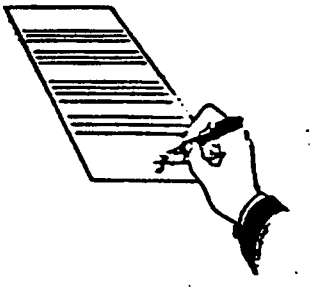
ATTACHMENT B
PUBLIC MEETING SIGN-IN SHEET

SIGN-IN FOR PUBLIC MEETING

5 9 0047

INTERIM ACTION PROPOSED PLAN
OPERABLE UNIT #5- Groundwater at Route 211
ABERDEEN PESTICIDE DUMPS SUPERFUND SITE

Aberdeen, N.C.



July 10, 1997

(NOTICE: Due to the Freedom of Information Act regulations once your name and address are provided they become public information.)

NAME	ADDRESS	PHONE#
Harold Moats		
GARLAND HUGHES		
Paige Bentley		
Stacy Sargent		
Jim MANN		
Stephen BLECHARCZYK		
DAVID WARNER		
Harry Hubard		
Claudia Mabile		
Faye B—		
Dr. Moabs		

ATTACHMENT C
INFORMATION REPOSITORY

ADMINISTRATIVE RECORD AND INFORMATION REPOSITORY

FILES ARE AVAILABLE FOR PUBLIC READING AT:

ABERDEEN TOWN HALL
115 NORTH POPLAR STREET
ABERDEEN, NC

AND

EPA REGION 4
ATLANTA FEDERAL CENTER
61 FORSYTH STREET
ATLANTA, GA

ATTACHMENT D
PUBLIC MEETING OFFICIAL TRANSCRIPT

COPY

5 9 0051

PUBLIC MEETING

ON

INTERIM ACTION PROPOSED PLAN

FOR GROUNDWATER

OPERABLE UNIT #5 AT

ROUTE 211 AREA

JULY 10, 1997

ABERDEEN FIRE STATION
HIGHWAY 1 AND PEACH STREET
ABERDEEN, NORTH CAROLINA

TAKEN BY:
WANDA B. LINDLEY, CVR/NCCR
NOTARY PUBLIC

WORDSERVICES, INC.
Post Office Box 751
Siler City, North Carolina 27344
(800) 266-3248

DIANE BARRETT: WELCOME TO TONIGHT'S MEETING. WE THANK YOU FOR COMING AND FOR TAKING THE TIME OUT OF YOUR DAILY BUSY SCHEDULES. I'M DIANE BARRETT, PUBLIC RELATIONS COORDINATOR FOR E.P.A. FOR SITES IN NORTH CAROLINA.

NOW, WITH ME TONIGHT IS MR. LUIS FLORES. WOULD YOU STAND, PLEASE, LUIS? HE IS THE PROJECT MANAGER FOR OPERABLE UNIT 5, THE SUBJECT OF TONIGHT'S MEETING.

MR. BILL OSTEEN, HE IS A GROUNDWATER SPECIALIST; HYDROGEOLOGIST, RIGHT?

BILL OSTEEN: RIGHT.

DIANE BARRETT: OKAY. AND MR. CHUCK MIKALIAN. HE IS OUR ATTORNEY FOR THE SITE. AND, ALSO, LET'S SEE HERE. WE'VE GOT MR. JIM CALDWELL, THE TOWN MANAGER HERE; AND MR. JACK BUTLER AND MR. GROVER NICHOLSON FROM THE STATE OF NORTH CAROLINA; AND WE'VE GOT HAROLD MOATS AND GARLAN WIGGINS FROM THE COMPANIES -- THE POTENTIALLY RESPONSIBLE COMPANIES. LET'S SEE HERE. AND OTHER DISTINGUISHED PEOPLE. WELL, EVERYBODY'S DISTINGUISHED. WE WELCOME YOU ALL.

AS I SAID, THE PURPOSE IS TO DISCUSS AND TO PROPOSE TO THE PUBLIC AN INTERIM ACTION FOR GROUNDWATER TREATMENT AT OPERABLE UNIT 5 AT THE ROUTE 211 SITE, AND ONLY THE GROUNDWATER AT OPERABLE -- AT 211.

TONIGHT IS A PROPOSED PLAN. ALTHOUGH IT'S AN INTERIM PROPOSED PLAN MEETING, WE HAVE A COURT REPORTER. SHE WILL BE TAKING A TRANSCRIPT OF THIS MEETING. AND AFTER

WE FINISH OUR PRESENTATIONS, IF YOU WANT TO MAKE COMMENT OR STATEMENTS, IF YOU'D PLEASE STAND AND GIVE YOUR NAMES SO THAT SHE CAN HEAR YOU AND GET IT RIGHT; AND IF NOT, SHE'LL JUST RAISE HER HAND AND ASK YOU TO REPEAT YOUR NAME. THANK YOU FOR THAT.

MAKE SURE EVERYBODY SIGNS IN, AND GET LITERATURE. AS YOU CAN TELL, I WAS EXPECTING A CROWD. I'VE GOT A STACK OF LITERATURE BACK THERE AND IT'S NOT EVEN GONE. THAT'S WHAT HAPPENS. THESE SITES THAT ARE AROUND FOR A WHILE, IT'S KIND OF -- INTEREST KIND OF DWINDLES, I GATHER.

SINCE ALL OF YOU ARE EXPERTS IN THE PROCESS, I WILL NOT GO THROUGH THAT FOR YOU TODAY. AND YOU KNOW WHERE THE REPOSITORY IS IN THE TOWN HALL.

TONIGHT I DID BRING SOMETHING THAT IS A LITTLE BIT DIFFERENT THAT APPLIED TO OUR MEETING. IT IS THE GROUNDWATER BROCHURE, AND IT GIVES MORE SIMPLISTIC INFORMATION ABOUT GROUNDWATER AND TREATMENT AND SO FORTH.

IF YOU NEED SOMETHING LIKE THIS FOR SCHOOL KIDS, ALSO -- I DON'T KNOW IF YOU'VE NOTICED; I'VE GOT LITTLE DIAGRAMS ON THE WALLS HERE AND THESE ARE VERY GOOD FOR SCHOOL KIDS. ON THE BACK OF THEM THERE'S ALL KINDS OF ACTIVITIES FOR THE TEACHERS -- THE SCHOOL TEACHERS TO IMPLEMENT AND USE AT SCHOOL. SO IF ANY OF YOU ARE INTERESTED IN THAT, LET ME KNOW AND I'LL GET YOU SOME COPIES.

LET'S SEE HERE. THIS IS QUICK. THANK YOU FOR YOUR ATTENTION. I WILL NOW TURN IT OVER TO LUIS.

LUIS FLORES: WELL, THANK YOU, EVERYBODY, FOR COMING HERE TO THIS MEETING. AS DIANE MENTIONED, WE ARE GOING TO BE TALKING ABOUT INTERIM ACTION FOR THE OPERABLE UNIT 5 AT THE ROUTE 211 AREA FOR THE SURFICIAL AQUIFER.

THE MAP THAT WE HAVE HERE BASICALLY JUST SHOWS WHERE ALL THE AREA -- THESE SITE AREAS ARE. AS YOU CAN SEE HERE, IT'S THE 211 AREA WHICH IS GOING TO BE THE FOCUS OF THIS INTERIM ACTION.

WELL, I THOUGHT THIS TRANSPARENCY WAS GOING TO SHOW BETTER. BUT IT'S IN HERE.

IT'S BASICALLY A FLOW CHART THAT SHOWS WHERE THE O.U.'S OF THE ABERDEEN PESTICIDE DUMP SITE IS. O.U. 1 AND 4 IS SOILS. WE ADDRESSED SOILS AT THE TWIN SITES, THE FAIRWAY SIX, THE FARM CHEMICAL, THE MCIVER DUMP, AND THE ROUTE 211.

THE O.P. -- THE O.U. 2 WAS RENAMED AND IT'S NOW O.U. 4 AND IT'S PART -- IT ADDRESSES SOIL.

O.U. 3 IS GROUNDWATER. THE R.P.R. [SIC] FOR THAT IS JON BORNHOLM. AND O.U. 3 ADDRESSES THE TWIN -- THE GROUNDWATER AT TWIN SITES, THE FAIRWAY SIX, AND THE FARM CHEMICAL.

O.U. 5 WHICH IS GROUNDWATER -- AND IT'S THE OPERABLE UNIT THAT I MANAGE -- ADDRESSES THE MCIVER DUMP AND

THE ROUTE 211 AREA.

THE ROUTE 211 AREA, WE BASICALLY HAVE THREE DIFFERENT AQUIFERS: THE SURFICIAL AQUIFER WHICH IS THE FOCUS OF THIS INTERIM ACTION; THE UPPER BLACK CREEK AQUIFER WHICH IS DIVIDED BY TWO OTHER -- WE CAN CALL IT SUB-AQUIFERS; AND THEN THE LOWER BLACK CREEK AQUIFER.

THIS IS JUST A SCHEMATIC REPRESENTATION OF THE AQUIFERS AT THE ROUTE 211 AREA. YOU CAN SEE THE SURFICIAL IS THE ONE CLOSEST TO THE GROUND, THEN WE HAVE THE UPPER PORTION OF THE UPPER BLACK CREEK AQUIFER AND THE LOWER PORTION OF THE UPPER BLACK CREEK AQUIFER. AND THEN WE HAVE THE LOWER BLACK CREEK AQUIFER.

HERE IN THIS FIGURE, THEY'RE SHOWN WITH -- WITH SOME DIVIDING CLAY UNITS BETWEEN THEM. OF COURSE, WE KNOW THAT ALL THOSE AQUIFERS ARE SOME WAY OR ANOTHER INTERCONNECTED -- INTERCONNECTED.

AS I SAID, TODAY WE'RE GOING TO BE TALKING ABOUT INTERIM REMEDIAL ACTION FOR THE ROUTE 211 AREA FOR THE SURFICIAL AQUIFER. WE'RE GOING TO BE DISCUSSING A LITTLE BIT ABOUT THE GROUNDWATER CHARACTERIZATION. WE'RE GOING TO MENTION A SUMMARY OF THE REMEDIAL ALTERNATIVES AND E.P.A.'S PROPOSED ALTERNATIVE.

THE PURPOSE OF THIS INTERIM ACTION IS TO INSTIGATE -- INITIATE REMEDIAL ACTION ON THE SURFICIAL AQUIFER AT THE ROUTE 211 AREA WHILE THE REMEDIAL

INVESTIGATION/FEASIBILITY STUDY, R.I./F.S., FOR THE ENTIRE OPERABLE UNIT 5 IS COMPLETED.

WHILE WE KNOW THAT SURFICIAL AQUIFER IS THE AQUIFER WITH THE HIGHEST CONCENTRATION, SO THAT'S BASICALLY WHAT WE ARE INITIATING THIS INTERIM ACTION. WE ARE NOT AFTER -- WE FOUND -- FOUND THAT OUT AFTER WE DID THE INVESTIGATION.

AS PART OF THAT INVESTIGATION, GROUNDWATER SAMPLES WERE COLLECTED USING THREE DIFFERENT METHODS: WE INSTALLED SOME MONITORING WELLS; WE ALSO DID SOME SCREENING USING DIRECT PUSH TECHNOLOGY, OR D.P.T., AND WE COLLECTED SOME SAMPLES WITH THAT; AND USING HYDROPUNCH.

THE RESULT OF THE INVESTIGATION SHOWED THAT THE MOST FREQUENTLY DETECTED -- DETECTED PESTICIDES WERE THE -- ALL THE B.H.C.'S: ALPHA, BETA, DELTA, AND GAMMA -- AND GAMMA BEING ALSO KNOWN AS LINDANE -- AND 4,4' D.D.E.

THERE WERE OTHER PESTICIDES THAT WERE DETECTED IN THAT SURFICIAL AQUIFER, BUT IN A LOT LESS CONCENTRATIONS AND FREQUENCY. WE ALSO DETECTED METALS, BUT WE -- ALL THOSE METALS ARE IN BACKGROUND CONCENTRATIONS. WE ALSO SAMPLED -- WE ALSO SAMPLED FOR VOLATILES AND THEY WERE NOT DETECTED.

AS I ALREADY MENTIONED, THE HIGHEST CONCENTRATIONS OF PESTICIDES WERE THE MONITORING WELL NUMBER 4, RT-MW-04, WHICH IS A DIRECT DOWNGRADIENT OF THE SOURCE AREA. AND -- AND PESTICIDE CONCENTRATIONS DROPPED

CONSIDERABLY AT LOCATIONS FURTHER DOWNGRADIENT OF THAT MONITORING WELL 04.

ON THIS MAP WE CAN SEE MONITORING WELL NUMBER 4 PROBABLY HERE WHERE THE HIGHEST CONCENTRATION OF A TOTAL B.H.C. ISOMERS IS. AND AS YOU CAN SEE, THERE IS HUNDRED P.P.B. IN THAT AREA. AND AS WE MOVE DOWNGRADIENT, THE CONCENTRATION DROPS -- DROPPED TO TEN AND ONE POINT ONE. SO THE SOURCE AREA IS RIGHT HERE.

SO, AS I SAID, THE HIGHEST CONCENTRATIONS IN MOST OF THE CONTAMINATION IS CLOSE TO THE SOURCE AREA, AND THAT'S THE MUNICIPAL WELL -- MONITORING WELL 4.

SO WHAT WE ARE PROPOSING TONIGHT, OR THE ALTERNATIVE THAT WE HAVE TO -- THAT WE HAVE RELATED, ARE BASICALLY THE NO ACTION ALTERNATIVE OR WE HAVE -- THAT WE ALWAYS HAVE TO EVALUATION AND BASICALLY DON'T DO ANYTHING AT THIS POINT; OR THE ALTERNATIVE THAT WE ARE PROPOSING IS THE EXTRACTION OF THE CONTAMINATED -- OF CONTAMINATED GROUNDWATER FROM THE SURFICIAL AQUIFER, TREATMENT BY CARBON ADSORPTION, AND DISCHARGE TO AN INFILTRATION GALLERY.

IN -- THIS FIGURE I'M SHOWING IS A DRAWING OF HOW THE -- THIS ALTERNATIVE WILL WORK. BASICALLY, THE GROUNDWATER WILL BE EXTRACTED BY A PUMP WELL. IT WILL GO UP TO THE UNIT HERE. WE WILL HAVE A PREFILTER THAT WILL TAKE OUT THE PARTICLES AND THEN WILL GO THROUGH THE CARBON TREATMENT.

THERE IS A SAMPLE PORT AT THE END OF THAT CARBON UNIT AND THAT -- THAT WILL BE TO VERIFY IF THE PESTICIDES OR THE CONTAMINATION HAVE BEEN REMOVED PRIOR TO DISCHARGE BACK INTO GROUND TO THE INFILTRATION GALLERIES.

THIS SLIDE BASICALLY SHOWS SOME OF THE BENEFIT OF DOING THIS PROPOSED INTERIM ACTION. IT WILL -- BASICALLY WILL BEGIN -- BEGIN EXTRACTION OF THE HIGHLY CONTAMINATED GROUNDWATER WHILE THE R.I./F.S. PROCESS FOR THE ENTIRE OPERABLE UNIT IS COMPLETED; AND IT WILL REDUCE THE MIGRATION OF THOSE CONTAMINANTS INTO LOWER AQUIFERS.

AS I ALREADY MENTIONED, EXTRACTING THE GROUNDWATER FROM THE SURFICIAL AQUIFER, TREAT IT WITH CARBON, AND DISCHARGE IT TO AN INFILTRATION GALLERY, THE ESTIMATED PRESENT WORTH COST OF THAT IS FIVE HUNDRED EIGHTEEN THOUSAND, NINE HUNDRED EIGHT DOLLARS ($518,908.00). THAT INCLUDES OPERATION AND MAINTENANCE FOR TWO YEARS.

JUST TO MENTION THE STATUS OF THE ENTIRE OPERABLE UNIT 5. WE FINALIZED THE REMEDIAL INVESTIGATION REPORT. WE STILL NEED TO -- WE STILL NEED TO FINALIZE THE BASELINE -- BASELINE RISK ASSESSMENT. WE STILL NEED TO FINALIZE THE FEASIBILITY STUDY REPORT.

AFTER THAT WE WILL HAVE ANOTHER PROPOSED PLAN FACT SHEET, AND ANOTHER MEETING LIKE THIS TO PROPOSE THAT FINAL ACTION FOR THE ENTIRE OPERABLE UNIT, AND THEN AFTER THAT WE WILL HAVE THE FINAL RECORD OF DECISION, OR ROD, THAT

WILL COVER THE ENTIRE OPERABLE UNIT 5; MEANING THE MCIVER DUMP AREA, THE ROUTE 211 AREA WITH ALL THE AQUIFERS.

THAT'S ALL I HAVE TO PRESENT. IF THERE ARE ANY QUESTIONS, WE WILL BE MORE THAN GLAD TO TAKE THEM. YES?

CLAUDIA MADLEY: CAN YOU TELL US WHAT THE CONCENTRATIONS WERE FOR THE VARIOUS B.H.C. ISOMERS AND FOR D.D.E. AND WHAT THE ASSOCIATED M.C.L. LEVELS OF THOSE VARIOUS CHEMICALS?

LUIS FLORES: WELL, LET ME MENTION THAT THE ONLY M.C.L. THAT WE -- THAT WE HAVE WERE B.H.C.'S FOR GAMMA WHICH IS LINDANE, AND IT'S POINT TWO PART PER BILLION. AND THAT B.H.C. WAS NOT EXCEEDED IN THE SURFICIAL AQUIFER IN ANY OF THE SAMPLES.

WE HAVE -- ONE HAD ON THIS MONITORING WELL NUMBER 4 OF TOXAPHENE, AND REALLY HIGH CONCENTRATION, I WOULD SAY, IN LIKE '84 OR '85, P.P.B. BUT THAT'S -- WE SAW IT AS A KIND OF ---

WE'RE NOT REALLY SURE THAT TOXAPHENE IS REALLY IN THERE 'CAUSE THAT WELL WAS SAMPLED BEFORE THAT, AND DETECTION OF TOXAPHENE WAS NOT DETECTED. THEN WE WENT BACK AND RESAMPLED AFTER THIS '80-- IN '84 THAT WE GOT, AND AGAIN IT WAS NOT DETECTED. WE LOOKED AT SOME OF THE DATA THAT IS PRODUCED FROM THE SAMPLES AND WE FOUND THAT THERE ARE THINGS THAT ARE NOT ---

IT'S KIND OF DIFFICULT TO SAY THAT IT'S REALLY

TOXAPHENE, SO AT THIS POINT WE'RE NOT REALLY SURE IF TOXAPHENE IS THERE OR NOT.

CLAUDIA MADLEY: WHAT ABOUT --

LUIS FLORES: (INTERPOSING) IT WAS NOT DETECTED -- I'M SORRY. IT WAS NOT DETECTED IN ANY OTHER -- IN ANY OTHER WELL OR IN THE WHOLE -- IN THE WHOLE SITE.

CLAUDIA MADLEY: HOW ABOUT D.D.E.?

LUIS FLORES: THE CONCENTRATION OF D.D.E.'S WERE -- WERE REALLY LOW. I PROBABLY ---

BILL OSTEEN: I'LL DIG THAT UP FOR YOU, LUIS. (PERUSING DOCUMENTS.)

LUIS FLORES: I THOUGHT I HAD A TRANSPARENCY WITH -- WITH THE CONCENTRATIONS.

BILL OSTEEN: D.D.E. OKAY. THIS ISN'T RIGHT. THEY WERE ALL LESS THAN -- I'M TRYING TO FIND THE HIGHEST OUT OF THAT -- OUT OF THAT BUNCH. WELL, HERE'S ONE AT POINT ZERO ZERO FOUR SIX PARTS PER BILLION.

CLAUDIA MADLEY: WHY ARE YOU GOING TO CLEAN THE GROUNDWATER THEN?

LUIS FLORES: I'M SORRY?

CLAUDIA MADLEY: WHY ARE YOU GOING TO CLEAN THE WATER IF IT DOES NOT EXCEED THE MAXIMUM CONTAMINANT LEVEL?

LUIS FLORES: WELL, THE -- WITH THE CONTAMINANTS THAT -- THAT HAS -- THAT HAVE PROMULGATED

M.C.L. OR SPECIFIC STANDARD, WE DON'T EXCEED ANY OF THOSE. WHEN WE DID PRELIMINARY CALCULATIONS FOR THE RISK ASSESSMENT, WE CALCULATED THE RISK OF DRINKING THAT WATER FOR A PROLONGED PERIOD OF TIME. THEY EXCEED THAT NUMBER.

WE ARE -- WE DON'T HAVE -- WE ARE NOT -- OR I AM NOT PRESENTING WHAT THOSE NUMBERS ARE RIGHT NOW BECAUSE WE HAVE NOT FINALIZED THE RISK ASSESSMENT. ALL THAT IS GOING TO BE PRESENTED IN THE -- WHEN WE DO THE FINAL ACTION FOR THIS OPERABLE UNIT.

AND AT THIS POINT AT THIS INTERIM ACTION, WHAT WE WANT TO DO IS JUST START PUMPING THAT. WE KNOW THAT THOSE ARE THE HIGHEST CONCENTRATIONS IN THE WHOLE -- IN THE WHOLE SITE. WE JUST WANT TO START PUMPING THAT NOW INSTEAD OF WHEN WE HAVE ALL DOCUMENTS FINISHED; AND SO THAT WE CAN MOVE AHEAD WITH THAT.

WHEN WE HAVE THE FINAL -- WHEN WE PRESENT THE FINAL REMEDY FOR THE WHOLE O.U. 5, WE WILL HAVE THOSE CLEANUP NUMBERS AND WE WILL HAVE THE GROSS NUMBERS. THE INTENT OF THIS ACTION IS NOT TO -- WE DON'T THINK THAT WE ARE GOING TO CLEAN UP THE AQUIFERS IN TWO YEARS. WE BELIEVE THAT WE ARE GOING TO ROLL UP TO -- ROLL OVER TO THE FINAL REMEDY AND -- AND THAT WAY WE WILL CLEAN UP THE AQUIFER.

DIANE BARRETT: COME ON, ASK SOME MORE QUESTIONS.

DR. ROBERT MOABS: THE ___(INAUDIBLE) AT THE

LAKE. (INAUDIBLE) ___ TOXAPHENE, B.E.K. AND B.H.C. WERE NOT __ (INAUDIBLE). HE WAS ABLE TO GET SOME IN THE OTHER END OF THE LAKE; NOT THAT END OF THE LAKE.

(DIANE BARRETT CONFERRING WITH COURT REPORTER DURING DR. MOABS' STATEMENT.)

(SPEAKER UNKNOWN): THAT'S -- THAT'S THE SAME, ROUTE 211.

DAVID WARNER: IS THIS THE TIME?

DIANE BARRETT: YES. I HAVE BEEN TALKING WITH THE COURT REPORTER HERE. PEOPLE HAVE BEEN FORGETTING TO GIVE THEIR NAMES, SO IF YOU'LL PLEASE GIVE YOUR NAME, DAVID.

CLAUDIA MADLEY: THE SECOND GENTLEMAN WAS DOCTOR ROBERT MOABS.

COURT REPORTER: THANK YOU.

DAVID WARNER: I'M DAVID WARNER. I'M A CONSULTANT FOR MOOREFORCE, MOORE HELPING SYSTEMS FOR A CLEAN ENVIRONMENT -- YEAH, MOORE FOR A CLEAN ENVIRONMENT, SOMETHING LIKE THAT.

WE'VE GOT A FEW STATEMENTS TO MAKE IN REFERENCE TO THE PROPOSED INTERIM ACTION OF THE E.P.A. AND I'M GOING TO PUT MY GLASSES ON.

I GUESS, FIRST OF ALL, WE BASICALLY HAVE THREE COMMENTS. THE FIRST COMMENT IS, FIRST OF ALL, WE WANT TO -- ON BEHALF OF MOOREFORCE, WE STRONGLY ENDORSE E.P.A.'S

INTENTIONS TO BEGIN INTERIM ACTION AT THE ROUTE 211 AREA SITE, AND MOOREFORCE ENCOURAGES THE AGENCY TO EXPEDITE NEGOTIATIONS AND BEGIN ACTIONS AS SOON AS POSSIBLE.

WITH THAT, HOWEVER, WE FEEL THE SCOPE OF THE PROPOSED INTERIM ACTION IS TOO LIMITED. TOO LIMITED FOR INTERIM ACTION TO GO THROUGH ALL THE DESIGN AND ENGINEERING IT'S GOING TO TAKE TO DO THE PROPOSED ACTION AND NOT DO A BIT MORE TO ACHIEVE THE OBJECTIVES THAT WERE PUT UP ON THE SCREEN A MOMENT AGO.

THE -- ONE OF THE QUESTIONS THAT WE HAVE -- AND WE'LL SUBMIT OUR COMMENTS AND QUESTIONS IN WRITING, BY THE WAY, AS WELL AS MY COMMENTS HERE TONIGHT.

THE REMEDIAL INVESTIGATION HAS REVEALED THAT CONTAMINATED GROUNDWATER HAS BEEN DETECTED NOT ONLY IN THE SURFICIAL AQUIFER, WHICH IS THE SUBJECT OF TONIGHT'S MEETING, BUT ALSO IN THE UPPER AND LOWER SECTIONS OF THE UPPER BLACK CREEK AQUIFER AND THE LOWER AQUIFER -- THE LOWER BLACK CREEK AQUIFER, AS WELL.

AND WE JUST RAISE THE QUESTION THAT THIS ACTION, WHICH IS DIRECTED AT JUST THE SURFICIAL AQUIFER, BE JUSTIFIED THAT JUST THE SURFICIAL AQUIFER BE ADDRESSED, WHEN WE KNOW THERE ARE HYDRAULIC LINKAGES BETWEEN THEM ALL -- THE THREE AQUIFERS THAT HAVE BEEN DISCUSSED, AND THE CONTAMINATION HAS INDEED MIGRATED THROUGH THOSE AQUIFERS. WE JUST WANT TO HAVE THAT QUESTION ADDRESSED -- OR A

RESPONSE ADDRESSED, WHY JUST THE SURFICIAL AQUIFER FOR THIS INTERIM ACTION.

IN ADDITION, AND CARRYING ON FROM THAT SAME COMMENT, IF -- IF THE SURFICIAL AQUIFER IS TO BE THE SUBJECT OF THE INITIAL INTERIM ACTION, AND WE UNDERSTAND THAT ONE -- ONE WELL WILL BE CONVERTED FROM A MONITORING WELL TO AN EXTRACTION WELL, IS THAT IN -- WELL, WHAT WELL IS --

LUIS FLORES: (INTERPOSING) THERE IS A WELL THAT'S USED FOR THE PUMP TEST.

DAVID WARNER: OKAY. THE PUMP TEST WELL THAT HAS BEEN ASSIGNED WILL BE CONVERTED TO AN EXTRACTION WELL, AND THEN A CARBON FILTRATION SYSTEM WOULD BE DESIGNED AND PUT ON LINE WITH THAT WELL TO TREAT THAT -- THE HOT SPOT AREA IN THE SURFICIAL AQUIFER, AS WE UNDERSTAND IT.

OUR POINT IN LOOKING AT THAT -- AND, AGAIN, WE THINK THAT'S A WONDERFUL IDEA AND IT'S GOOD TO GO AHEAD QUICKER, BUT IF E.P.A. IS GOING TO GO AHEAD WITH THAT INTERIM ACTION, WHY NOT TAKE IT THEN -- AND YOU'RE GOING TO DESIGN A SMALLER SCALE TREATMENT PROCESS ANYHOW TO HOOK INTO THAT EXTRACTION WELL -- WHY NOT TAKE A BIGGER CHUNK OF WHAT'S IN THE SURFICIAL AQUIFER?

THE REMEDIAL INVESTIGATION HAS INDICATED THAT, AGAIN, THEY KNOW PRETTY MUCH, ACCORDING TO THE DATA, WHERE THE PROBABLE HYDRAULIC LINKAGES ARE BETWEEN THE AQUIFERS; THEREFORE, WE HAVE AN IDEA -- THE SCIENTISTS HAVE AN IDEA OF

WHERE THE SURFICIAL AQUIFER IS LINKED TO THE NEXT -- TO THE UPPER -- UPPER BLACK CREEK AQUIFER. SO WE KIND OF KNOW WHERE THAT IS. WE KNOW WHERE THE HOT SPOTS ARE.

WE PRESUME THAT WELL WILL BE RIGHT IN THE MIDDLE OF ONE OF THE HIGHER CONCENTRATIONS FOUND IN THE SURFICIAL AQUIFER. OUR STATEMENT IS, IF YOU'RE GOING TO GO THAT FAR WITH THE FRONT END COST OF DOING THAT WITH ONE WELL, WHY NOT TAKE A BIGGER CHUNK OF THAT CONTAMINATED HOT SPOT IN THE SURFICIAL AQUIFER WHILE YOU'RE DOING THAT?

THAT'S NOT SAYING WHAT'S GOING TO HAPPEN WITH THE FINAL. THE ENTIRE PERIPHERY WILL BE ADDRESSED IN SOME WAY. BUT IF YOU'RE GOING WITH ONE WELL, OUR QUESTION IS WHY NOT GO DOWN WITH TWO OR THREE TO DO A COUPLE OF THINGS. AGAIN, THE OBJECTIVE OF KEEPING THE CONTAMINANT FROM MIGRATING; THIS WOULD ADDRESS THAT EVEN BETTER THAN ONE WELL WOULD.

YOU HAVE -- AND COST-WISE, OVER THE LONG RUN, IF WE COULD KEEP CONTAMINANTS IN THE AQUIFER -- IN THE SURFICIAL AQUIFER FROM MIGRATING DOWN TO THE LOWER ONES, IT COULD POSSIBLY BE MUCH REDUCED FROM TRYING TO TREAT HIGHER VOLUMES OF WATER LESS THOSE CONTAMINANTS IN THE GROUNDWATER LATER IN THE LOWER AQUIFERS.

SO PERHAPS AN ADDITIONAL WELL PLACEMENT NEAR THE AREA WHERE THAT HYDRAULIC CONNECTION HAS BEEN NOTED TO BE MIGHT BE PRUDENT AS WELL AS JUST PERHAPS EVEN ANOTHER

WELL YET JUST TO BUILD SOME CAPACITY, A LITTLE MORE CAPACITY INTO WHAT HAS BEEN PROPOSED.

SO THERE'S A LOT OF VALUE -- A LOT OF FUTURE VALUE PUT IN TO -- IF YOU'RE GOING TO GO THIS FAR WITH AN EXTRACTION AND A TREATMENT, WHY NOT DO A LITTLE MORE, GET -- GET -- GET A BIGGER PART OF THE BULK, GET A BIGGER PART OF THAT SURFICIAL CONTAMINANT PLUME AND HEAD OFF PROBLEMS THAT WILL HAPPEN LATER ON SHOULD THESE CONTAMINANTS MIGRATE.

AND SO THAT WAS PART B OF OUR CONCERN, NUMBER 2.

AND THEN JUST SOME OTHER REASONS FOR THIS, JUST TO BACK IT UP A LITTLE BIT. THE REMEDIAL INVESTIGATION HAD CALCULATED THE FLOW OF GROUNDWATER MOVEMENT HORIZONTALLY AND VERTICALLY. AND IN A SURFICIAL AQUIFER, THE WATER IS MOVING VERY RAPIDLY AT SIX HUNDRED AND THIRTY-FIVE FEET, I BELIEVE, A YEAR, WAS NOTED ITS HORIZONTAL MOVEMENT WITHIN THE SURFICIAL AQUIFER. THAT'S MOVING PRETTY FAST. AND, ALSO, I BELIEVE THE VERTICAL IS ALSO QUITE -- QUITE RAPID AS WELL.

AND, AGAIN, PRUDENCE MIGHT SAY IF WE -- IF WE'RE GOING TO PUT IN ONE WELL WITH A TREATMENT SYSTEM, LET'S TACK ON ANOTHER CANISTER AND PUT ANOTHER WELL OR TWO DOWN AND -- AND -- AND CAPTURE A BIGGER PIECE OF IT RIGHT NOW WHILE WE'RE GOING IN WITH THIS INTERIM ACTION. OTHERWISE, THERE WILL BE SOME SUBSTANTIAL DELAYS BEFORE THE

FINAL ROD AND REMEDIATION SYSTEMS ARE PUT IN PLACE; PERHAPS A YEAR OR TWO, THE WAY THESE THINGS GO. SO WE UNDERSTAND THAT TO BE THE CASE.

SO, AGAIN, WE'RE SUPPORTIVE. IF YOU'RE GOING TO PUT DOWN ONE, LET'S PUT DOWN A COUPLE MORE AND HEAD OFF SOME FUTURE POSSIBILITIES OF CONTAMINANT MIGRATION.

AND, FINALLY, THIS FAIRLY SUBSTANTIAL CHARACTERIZATION OF -- OF THE SOILS OF THE GROUNDWATER AQUIFER AT THE ROUTE 211 AREA SITE, THE INVESTIGATION'S REVEALED THE VERTICAL HYDRAULIC CONNECTIONS BETWEEN THE AQUIFERS.

WE HAVE A QUESTION. WHAT'S THE POSSIBILITY THAT THE INSTALLATION OF MONITORING WELLS HAS CONTRIBUTED TO SOME OF THE VERTICAL CROSS-CONTAMINATION OF THESE AQUIFERS?

AND BEYOND THAT, WHAT ABOUT HISTORICAL WELLS? WE KNOW THAT MUNICIPAL WELL NUMBER 13 IS IN THE LOWER BLACK CREEK AQUIFER, SOMEWHAT DOWNGRADIENT FROM THIS AREA, BUT IN THE PATH OF WHAT WE BELIEVE TO BE SOME OF THE CONTAMINANT PLUMES THAT HAVE BEEN IDENTIFIED IN THE REMEDIAL INVESTIGATION. AND WE'RE CONCERNED ABOUT SOME OF THE HYDRAULIC DYNAMICS OF SEVERAL THINGS.

FIRST OF ALL, THERE SEEMS TO BE KIND OF A PIN CUSHIONING GOING ON; THERE'S BEEN A LOT OF MONITORING WELLS PUT DOWN, A LOT OF SOIL BORINGS TAKEN, BOTH WITH E.P.A. AND REMEDIAL INVESTIGATION. THERE ARE PRE-EXISTING WELLS,

INCLUDING THE MUNICIPAL PUMPING WELL THAT WERE IN PLACE. THERE SEEMS TO BE A LOT OF CONDUITS FOR -- FOR GROUNDWATER MOVING VERTICALLY THROUGH THE AQUIFER SYSTEM.

SO WE'RE VERY CONCERNED ABOUT THAT AND WE URGE THAT ANY REMEDIATION ACTIONS TAKEN, EVEN AS INTERIM, GIVE CAREFUL CONSIDERATION TO CONSTRUCTION OF WHATEVER TREATMENT SYSTEMS ARE PUT ON LINE TO TRY TO PREVENT ANY CROSS-CONTAMINATION VERTICALLY BETWEEN THE AQUIFERS, IF AT ALL POSSIBLE.

AND JUST AS A SIDE NOTE TO THAT, I UNDERSTAND MUNICIPAL WELL 13 IS PUMPING AGAIN AS OF LAST NOVEMBER, AND THERE MAY BE SOME HYDRODYNAMIC EFFECTS TO THE GROUNDWATER OF THAT PUMPING.

AND, ALSO, THAT WELL ITSELF COMING THROUGH ALL THE AQUIFERS OF CONCERN OF THAT POSSIBLY PERHAPS HYDRAULICALLY SUCKING DOWN PERHAPS CONTAMINANTS FROM UPPER OR LOWER AQUIFERS OR COMING ALONG THE WELL CASING IS A POTENTIAL CONDUIT FOR CROSS-CONTAMINATION. SO, AGAIN, WE JUST WANT TO MAKE NOTE OF THAT.

AND, AGAIN, THE QUESTIONS THAT HAVE JUST BEEN ASKED WE'LL BE HAPPY TO PUT IN WRITING AND PRESENT THOSE -- OR WE'LL SUBMIT THOSE BACK TO YOU.

DIANE BARRETT: (TO MR. FLORES) DO YOU WANT TO RESPOND TO THAT?

LUIS FLORES: DO YOU WANT A RESPONSE TO THAT

NOW?

DAVID WARNER: YOU'RE WELCOME TO RESPOND.

LUIS FLORES: WELL, WHAT WAS THE FIRST ONE? (LAUGHTER) OKAY. WHY ARE WE DOING THIS --

DAVID WARNER: THE SURFICIAL AQUIFER IS THE FIRST QUESTION.

LUIS FLORES: WELL, TO DO THIS IN THIS SPECIFIC AQUIFER -- AN AQUIFER AT THIS POINT, IT SEEMS LIKE SOMETHING SIMPLE ENOUGH AND IT WILL NOT REQUIRE A LOT OF DESIGN AND A LOT OF MODELING TO BE DONE. SO THAT'S -- THAT'S BASICALLY THE REASON. IT'S SIMPLE ENOUGH TO DO IT.

WE -- WE KNOW THAT THE HIGHEST CONCENTRATIONS ARE THERE, SO BASICALLY THAT'S -- IF WE WANT TO CALL IT THE SOURCE OF THE -- THE SOURCE IN THE GROUNDWATER AND WE WANT TO TAKE CARE OF THAT. AND DOING A DESIGN TO TAKE CARE OF THE WHOLE THREE AQUIFERS IS GOING TO TAKE A LITTLE MORE EFFORT THAN THIS AND IT WILL TAKE MORE TIME, SO WE DECIDED TO GO AHEAD AND DO THIS AT THIS POINT NOW.

AND WHAT WAS THE OTHER QUESTION? OH, WHY ONLY ONE WELL? I WOULD SAY THAT WE WILL CONSIDER THAT. BUT AT THIS POINT, WHAT WE ARE PROPOSING IS ONE WELL, BUT WE WILL DO SOME MODELING AND COMPILATIONS TO CHECK THE BENEFIT OF RESTORING ANY OTHER WELLS IN THE SURFICIAL AQUIFER AND -- AND WE DEFINITELY WILL CONSIDER THAT.

DAVID WARNER: I GUESS I'D JUST LIKE TO ADD A

COMMENT HERE AT THIS POINT THAT -- THAT WE ASSUME, I GUESS, THAT -- THAT WHETHER THIS ENDS UP BEING ONE WELL, ALTHOUGH WE DO PREFER TO SEE MORE, GETTING BIGGER CHUNKS OF THE HOT SPOT IN THE SURFICIAL AQUIFER, THAT WHATEVER REMEDIATION TAKES PLACE IS GOING TO BE THE CORE OF THE FINAL ROD AT ANY RATE.

LUIS FLORES: RIGHT.

DAVID WARNER: SO OUR POINT IS, IF YOU'RE GOING TO GO IN EARLY, LET'S GO IN EARLY, YOU KNOW, SUBSTANTIALLY, AND DO MAKE A DIFFERENCE IN THE -- IN THE SOURCE OF THE GROUNDWATER CONTAMINATION RIGHT NOW AT THIS POINT.

AND WE HAD SOME LAST QUESTIONS ABOUT OUR CONCERNS ABOUT CROSS-CONTAMINATION IN VERTICAL WELLS.

LUIS FLORES: (TO MR. OSTEEN) DO YOU WANT TO ADDRESS THAT?

BILL OSTEEN: I WILL. THERE -- I DON'T BELIEVE THAT THERE ARE ANY CROSS-CONNECTIONS AS A RESULT OF THE REMEDIAL INVESTIGATION'S VARIOUS STAGES -- E.P.A.'S OR ANYBODY ELSE'S -- THAT WOULD BE ANY SORT OF A PERMANENT CONNECTION. I CAN'T SPEAK TO THAT WITH ABSOLUTE CERTAINTY, BUT OUR STANDARD PROCEDURES ARE DESIGNED TO LIMIT THE AMOUNT OF CROSS-CONNECTION THAT WILL OCCUR WHEN -- WHEN -- WHEN IT'S GOING THROUGH MULTIPLE AQUIFERS.

AND I KNOW THAT ANY WORK THAT'S DONE AS A PART

OF OUR REMEDIAL INVESTIGATION IN THE REGION FOLLOWS THE E.P.A.'S STANDARD PROCEDURES. THERE'S A WHOLE LENGTHY SUBSTANTIAL MANUAL THAT DEALS WITH EVERYTHING FROM WELL CONSTRUCTION TO SAMPLING AND STREAMS, AND CERTAINLY THE ISSUE OF CROSS-CONNECTION IS OF CONCERN TO US. AND TO THE EXTENT PRACTICABLE DURING AN INVESTIGATION, OUR -- OUR PROCEDURES ARE DESIGNED TO MINIMIZE THAT.

SO THAT WOULD BE THE LESS LIKELY OF THE TWO POSSIBILITIES -- TWO BROAD POSSIBILITIES THAT YOU SUGGESTED.

THE SECOND ONE IS A CONCERN ABOUT THE MUNICIPAL WELL AND SOME OF THE PRIVATE WELLS THAT ARE IN THE AREA OF GROUNDWATER CONTAMINATION THAT'S RELATED TO THE 211 SITE.

A COUPLE OF POINTS TO MAKE ABOUT THAT. ONE IS THAT THOSE WELLS ARE IN AREAS WHERE THE GROUNDWATER CONTAMINATION IS -- IS MUCH LOWER THAN WHAT WE'RE TALKING ABOUT IN A SURFICIAL AQUIFER, SO THAT THE CROSS-CONNECTION SITUATION IS NOT AS -- AS CRITICAL PERHAPS AS IT WOULD BE IF -- IF THERE WAS A CROSS-CONNECTION BETWEEN THE SURFICIAL WHERE THE CONCENTRATIONS ARE SUBSTANTIALLY HIGHER THAN IN SOME OF THE OTHER AQUIFERS.

NOW WE KNOW THAT IN MUNICIPAL WELL 13 THERE IS A CONNECTION, AND THERE MAY BE IN SOME OF THE OTHER PRIVATE WELLS. I DON'T THINK THAT THE CONSTRUCTION OF ALL OF THESE WELLS HAS BEEN -- BEEN FULLY CHARACTERIZED AND -- AND -- AND

THAT MIGHT NOT EVEN BE -- BE POSSIBLE.

HOWEVER, IN TERMS OF THE MOVEMENT OF CONTAMINATION FROM ONE AQUIFER TO A LOWER AQUIFER, IT'S FAIRLY CLEAR -- AND IT MAY BE ENTIRELY CLEAR, BUT I'LL -- I'LL NOT GO TOO FAR OUT ON A LIMB.

IT'S FAIRLY CLEAR FROM THE REMEDIAL INVESTIGATION THAT THE PRIMARY CROSS-CONNECTION BETWEEN THE AQUIFERS IS A RESULT OF NATURAL DISCONTINUITIES ANYWHERE IN THE LAYERS THAT SEPARATE THOSE AQUIFERS IN THE AREAS WHERE THOSE LAYERS THAT SEPARATE THE AQUIFERS MIGHT BE -- BE THIN OR MISSING OR -- OR THE HYDRAULIC PROPERTIES OF THOSE LAYERS ARE SUCH THAT IT'S MAYBE A LITTLE EASIER FOR WATER TO MOVE FROM ONE AQUIFER TO ANOTHER IN THOSE PLACES.

AND THAT, AT LEAST IN AN AREA OF THE CORE GROUNDWATER CONTAMINATION -- THE SURFICIAL, I'M TALKING ABOUT, IN THE UPPER BLACK CREEK, THE LOWER PART OF THE UPPER BLACK CREEK, AND THE LOWER BLACK CREEK, WHERE THE CONTAMINATION THERE IS PARTICULARLY SIGNIFICANT, THERE ARE AREAS THAT ARE A MUCH GREATER EXTENT THAN SAY -- SAY EVEN -- EVEN A DOZEN OR TWO DOZEN OR THREE DOZEN INDIVIDUAL PRIVATE WELLS WOULD BE WHERE -- WHERE THESE CONFINING LAYERS ARE -- ARE -- THAT WOULD IMPEDE MOVEMENT OF WATER FROM ONE AQUIFER TO ANOTHER ARE -- ARE MISSING.

SO THAT EVEN THOUGH SOME OF THE PRIVATE WELLS AND THE MUNICIPAL WELL 13 MAY BE CONSTRUCTED TO ALLOW

VERTICAL MIGRATION OF WATER ACROSS THERE, I THINK IN RELATIVE TERMS THAT'S A RELATIVELY SMALL CONTRIBUTION TO THE -- TO THE BIG PICTURE OF HOW WATER IS GETTING FROM ONE AQUIFER TO A -- TO A LOWER AQUIFER.

SO THAT WOULD BE MY -- MY ANSWER TO THAT. YOU KNOW, IT'S ACKNOWLEDGING THAT THERE MAY BE A PROBLEM THERE, BUT SAYING THAT IN -- IN -- IN RELATIVE TERMS IT'S A RELATIVELY MINOR PROBLEM.

AND THEN ON THE MONITORING WELL CONSTRUCTION, YOU KNOW, I'M NOT SAYING THERE'S NOT A POSSIBILITY THAT THERE WAS SOME -- SOME SMALL DEGREE OF CONNECTION OF ALL THE WELLS BEING DRILLED FOR WHATEVER REASON, YOU KNOW. I MEAN, WORK OUT IN THE FIELD IS NOT ALWAYS PERFECT, BUT I THINK THAT OUR WELLS -- WELLS ARE -- ARE -- ARE CONSTRUCTED TO -- TO MINIMIZE THAT -- THAT CROSS-CONTAMINATION.

DOCTOR ROBERT MOABS: I'M DOCTOR MOABS. I SAID IN A MEDICAL JOURNAL IN 1948 THAT THESE POISONS WERE CAPABLE OF CAUSING CANCER, AND I HAVE NAMED A LOT OF PEOPLE WHO DIED WITH CANCER, BREAKDOWN FROM THE CHEMICAL PLANT. AND I KNOW I LOT OF THE WORKERS AT GEIGY ALSO DIED OF CANCER. NOBODY'S CHECKED THAT EVER. ALL OF THESE CHEMICALS ARE NOW KNOWN TO BE CARCINOGENIC. D.D.E. WAS KNOWN TO BE THAT WAY IN 1945. I THINK THE FOOD AND DRUG ADMINISTRATION FOUND IT WAS CAPABLE OF CAUSING CANCER AND THEY DIDN'T DO ANYTHING ABOUT IT.

AGRICULTURISTS HAD TO DO IT. AGRICULTURE AND PUBLIC HEALTH SUPPRESSED TOXICITY DURING THE FIRST TWENTY-FIVE YEARS OF THE CHEMICAL AGE OF THE PESTICIDES. I GOT -- THE BOSTON GLOBE WROTE AN ARTICLE SAYING THAT EVERY COLLEGE AND UNIVERSITY IN AMERICA FLUNKED ECOLOGY 101 DURING THE FIRST TWENTY-FIVE YEARS THAT THEY WERE ON THE MARKET. AND THAT'S TRUE, I BELIEVE.

LUIS FLORES: THANK YOU.

HARRY HUBERT: I'M HARRY HUBERT WITH MOOREFORCE. WE'VE BEEN FAMILIAR WITH THE MODULAR APPROACH FROM OTHER GROUNDWATER CLEANUPS. AND PERHAPS IN THIS CLEANUP, IT DEVIATES SITES WITH MORE THAN ONE EXTRACTION WELL TO START WITH.

A PROVISION COULD BE MADE FURTHER DOWN THE LINE AS THE CONTAMINANTS DECREASE DUE -- DUE TO YOUR REMEDIATION EFFORTS, THAT AN ADDITIONAL WELL COULD BE TAKEN OFF LINE IN THE FUTURE IF THE CONTAMINANTS ARE DROPPING RAPIDLY.

BUT, AGAIN, WE DO BELIEVE IT'S VERY IMPORTANT HITTING THEM HARD TO START WITH AND GO WITH MORE THAN ONE WELL; AND MAYBE THEN LOOK AT THE OPTION OF MAYBE TAKING SOMETHING OFF LINE A LITTLE BIT FURTHER IN THE FUTURE RATHER THAN MAYBE ADDING SOMETHING ON LINE IF THE ONE WELL IS NOT WORKING EFFICIENTLY TO START WITH.

LUIS FLORES: YEAH, WE WILL -- WE WILL

CONSIDER THAT, TOO -- THE POSSIBILITY OF THAT WITH DAVID'S COMMENT. YES?

CLAUDIA MADLEY: CLAUDIA MADLEY. IF YOU ANTICIPATE THAT IT WILL TAKE LONGER THAN TWO YEARS OF PUMPING AND TREATING THIS WATER IN ORDER TO FULFILL THE CALCULATIONS OF THE RISK ASSESSMENT, HOW LONG DO YOU THINK IT WILL TAKE TO REACH THAT LEVEL OF CLEANLINESS?

LUIS FLORES: WELL, WHAT WE'RE GOING TO DO IS -- THIS INTERIM ACTION IS PROBABLY GOING TO -- I MEAN, I DO NOT -- A PERCENT. IT'S GOING TO BE PART OF THE FINAL REMEDY FOR THE SITE.

SO WHAT WE ARE PLANNING ON DOING IS -- IS AS SOON AS WE HAVE THE FINAL RECORD OF DECISION FOR THE ENTIRE OPERABLE UNIT, THIS INTERIM ACTION IS PART OF THAT REMEDY. THIS -- THIS INTERIM RECORD OF POSITION IS JUST GOING TO GO AWAY, THEN THE FINAL RECORD OF POSITION CAN -- IT'S GOING TO -- IT'S GOING TO SUPPRESS --

DIANE BARRETT: (INTERPOSING) SUPERCEDE.

LUIS FLORES: -- SUPERCEDE THE OTHER ONE, AND -- AND WHEN WE HAVE THE RISK -- THE FINAL RISK ASSESSMENT AND THE FINAL NUMBERS, WHAT WE WILL DO WITH THOSE COMPILATIONS TO DETERMINE HOW LONG MORE WE WILL HAVE TO KEEP PUMPING TO REACH THOSE LEVELS.

BUT THE TWO YEARS WAS -- WAS -- WAS -- WAS JUST A -- LIKE A MAXIMUM NUMBER OF YEARS THAT WE -- WE --

WE PUT IN THERE BECAUSE WE KNOW WE'LL HAVE THE FINAL ROD BEFORE THAT. SO IN THE EVENT THAT IT TAKES TWO YEARS, THEN WE'LL ALREADY HAVE THE FINAL ROD.

CLAUDIA MADLEY: THE REASON I RAISE THE QUESTION IS THAT IT HAS BEEN SUGGESTED THAT THE TWIN SITES AND FARM CHEMICALS AND FAIRWAY SIX, THAT PUMP AND TREAT WOULD BE SO INEFFICIENT AT CLEANSING ITEMS SUCH AS D.D.T., THAT IT COULD TAKE THOUSANDS OF YEARS TO DO IT THERE.

THAT'S WHY I WAS CURIOUS ABOUT THE TWO YEARS. ARE WE TALKING ---

LUIS FLORES: YEAH. BASED ON THE -- YOU'RE LOOKING AT THE NUMBERS OF THE RISK ASSESSMENT THAT WE HAVE, D.D.T. IS NOT ABOVE ANY OF OUR NUMBERS.

BILL OSTEEN: THAT WAS THE CONTAMINANT THAT WAS -- WAS REALLY RESPONSIBLE FOR THOSE LONG CLEANUP TIMES, WAS THE D.D.T. THERE. AND THAT'S NOT REALLY A PLAYER AT THE 211 SITE.

SO I -- WE'RE NOT LOOKING AT TIME FRAMES IN THE THOUSANDS OF YEARS, BUT WE ARE LOOKING AT SOMETHING THAT'S LIKELY OVER TWO YEARS. IT'S A LOT CLOSER TO TWO YEARS THAN A THOUSAND; A LOT CLOSER.

LUIS FLORES: ANY OTHER QUESTIONS?

DIANE BARRETT: IF THERE ARE NO OTHER QUESTIONS, THANK YOU VERY MUCH FOR COMING AND THANK YOU FOR THE QUESTIONS THAT WERE ASKED. AND WE WILL BE RESPONDING TO

YOUR COMMENTS THROUGH OUR RESPONSIVENESS SUMMARY AND A RECORD OF DECISION WILL BE ISSUED WITHIN AT LEAST THIRTY DAYS.

HARRY HUBERT: THE RECORD OF DECISION WILL BE ISSUED WITHIN THIRTY DAYS?

DIANE BARRETT: WELL, ON THIS.

LUIS FLORES: FOR THIS INTERIM.

DIANE BARRETT: FOR THIS INTERIM, EXCUSE ME.

HARRY HUBERT: YOU'RE GOING TO GET LUIS INTO TROUBLE TALKING LIKE THAT.

DIANE BARRETT: OKAY. THANK YOU VERY MUCH. THE MEETING IS ADJOURNED.

C E R T I F I C A T E

STATE OF NORTH CAROLINA

COUNTY OF CHATHAM

I, WANDA B. LINDLEY, CVR, A NOTARY PUBLIC FOR THE STATE OF NORTH CAROLINA, DO HEREBY CERTIFY THAT THE FOREGOING PUBLIC MEETING WAS TAKEN AND REDUCED TO TYPEWRITING PERSONALLY BY ME; THAT THE FOREGOING 27 PAGES CONSTITUTE A TRUE AND ACCURATE RECORD OF THE PROCEEDINGS TO THE BEST OF MY KNOWLEDGE AND BELIEF.

IN WITNESS WHEREOF, I HAVE HEREUNTO SET MY HAND AND OFFICIAL SEAL ON THIS, THE 4TH DAY OF AUGUST, 1997.

Wanda B. Lindley

WANDA B. LINDLEY
CERTIFIED VERBATIM REPORTER

OFFICIAL SEAL
North Carolina, Chatham County
WANDA B. LINDLEY
Notary Public
My Commission Expires 08-30-2002

WORDSERVICES, INC.
Post Office Box 751
Siler City, North Carolina 27344
(800) 266-3248

5 9 0079

MooreFORCE, Inc. Comments on Aberdeen Pesticide Dumps Sites, Operable Unit #5

Proposed Groundwater Interim Action Route 211 Area, Aberdeen, North Carolina

1. MooreFORCE, Inc. strongly endorses EPA intentions to begin interim action at Route 211 Area, and encourages the agency to expedite negotiations and begin actions as soon as possible. However, the scope of the proposed interim action is too limited.

2. The Remedial Investigation has revealed that contaminated groundwater has been detected not only in the Surficial Aquifer, but also in the upper and lower sections of the Upper Black Creek Aquifer, and the Lower Black Creek Aquifer. Why aren't these other contaminated aquifers also being addressed at this time with this proposed interim action?

3. At a minimum, the scope of the interim action should be expanded by adding (an) additional well(s) to more fully capture the "hot spots" in the Surficial Aquifer, before the contaminants have an opportunity to further migrate into the lower aquifers. The front-end cost of the carbon filtration system design would not be greatly increased to expand the system's capacity. Nor should there be any delays in permitting an expanded action. Because the Remedial Investigation has found that groundwater is moving rapdly through the Surficial Aquifer, at 635 feet per year, it is imperative that an expanded interim action be undertaken as soon as possible. It is much easier to capture and treat the more concentrated contaminants in the Surficial Aquifer now rather than wait until the contaminants move down and spread out through the lower aquifers.

4. The Remedial Investigation has revealed vertical hydraulic connections between each of the aquifers characterized at the Route 211 Area site. What is the possibility that the installation of monitoring wells has contributed to the cross-contamination of the various aquifers? Any proposed interim actions must be sensitive to this issue to prevent exacerbating the movement of contaminants down through the aquifers. Also, the restarting of Municipal Well #13, which may effect the dynamics of groundwater flow and contaminant migration, must be taken into account.

Presented to EPA Region IV at the July 10, 1997 Public Meeting in Aberdeen, North Carolina by David Warner of Warner Environmental Management, Inc. on behalf of MooreFORCE, Inc. Please direct any questions or comments to David J. Warner at (803) 327-8921.

APPENDIX B
STATE CONCURRENCE

State of North Carolina
Department of Environment,
Health and Natural Resources
Division of Waste Management

James B. Hunt, Jr., Governor
Wayne McDevitt, Secretary
William L. Meyer, Director

DEHNR

September 15, 1997

Mr. Luis Flores
Remedial Project Manager
US EPA Region IV
100 Alabama Street
Atlanta, Georgia 30303

RE: State Concurrence with the Interim Action Record of Decision (ROD)
for the Aberdeen Pesticide Dumps Site Operable Unit #5, Groundwater
Pump and Treat at the Route 211 Area
Located in Aberdeen, Moore County, NC

Dear Mr. Flores:

The State of North Carolina has reviewed the Interim Action Record of Decision (ROD) for the Pump and Treat remedy proposed for the surficial aquifer at the Route 211 Area of the Aberdeen Pesticide Dumps Site dated August 26, 1997 and concurs with the selected remedy, subject to the following conditions.

1. State concurrence on this Draft ROD and the selected remedy for the site is based solely on the information contained in the Record of Decision dated August 26, 1997. Should the State receive new or additional information which significantly affects the conclusions or remedy selection contained in the ROD, it may modify or withdraw this concurrence with written notice to EPA Region IV.

2. State concurrence on this ROD in no way binds the State to concur in future decisions or commits the State to participate, financially or otherwise, in the clean up of the site. The State reserves the right to review, overview comment, and make independent assessment of all future work relating to this site.

The State of North Carolina appreciates the opportunity to comment on the Record of Decision for the subject site, and we look forward to working with EPA on the final remedy. If you have any questions or comments, please give me a call at, (919) 733-2801, extension 291.

Sincerely,

Grover Nicholson
Remediation Branch Head
Superfund Section

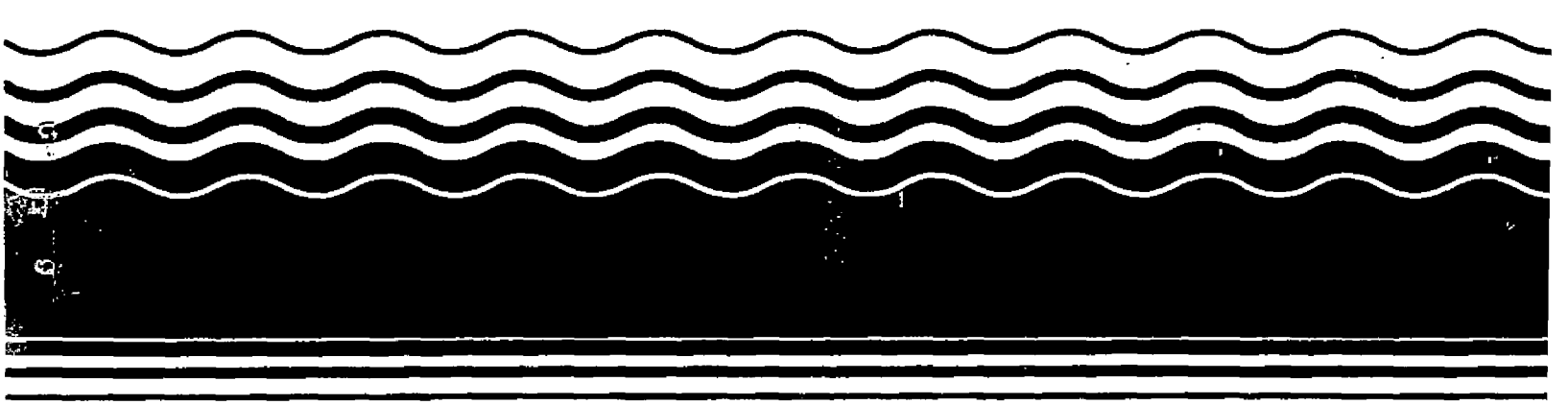
cc: Phil Vorsatz, NC Remedial Section Chief
Jack Butler, Chief NC Superfund Section
Randy McElveen, NC Superfund Section

P.O. Box 29603, Raleigh, North Carolina 27611-9603 Telephone 919-733-4996

PB97-963821
EPA/541/R-97/192
January 1998

EPA Superfund Record of Decision:

Vega Alta Public Supply Wells, OU 2
Vega Alta, PR
9/30/1997



DECLARATION FOR THE RECORD OF DECISION

SITE NAME AND LOCATION

Vega Alta Public Supply Wells, Vega Alta, Puerto Rico

STATEMENT OF BASIS AND PURPOSE

This Record of Decision (ROD) documents the U.S. Environmental Protection Agency's (EPA's) selection of a source control remedy for the Vega Alta Public Supply Wells Site (the Site) in accordance with the requirements of the Comprehensive Environmental Response, Compensation and Liability Act of 1980, as amended (CERCLA), 42 U.S.C. §9601 et seq., and to the extent practicable, the National Oil and Hazardous Substances Pollution Contingency Plan (NCP), 40 CFR Part 300. An administrative record for the Site, established pursuant to the NCP, 40 CFR 300.800, contains the documents that form the basis for EPA's selection of the remedial action (see Appendix E).

The Puerto Rico Environmental Quality Board (EQB) has been consulted on the proposed remedial action in accordance with CERCLA §121(f), 42 U.S.C. §9621(f), and it concurs with the selected remedy (see Appendix C).

ASSESSMENT OF THE SITE

Actual or threatened releases of hazardous substances from the Site, if not addressed by implementing the response action selected in this ROD, may present an imminent and substantial endangerment to public health, welfare, or the environment.

OU # 03 02 1682

DESCRIPTION OF THE SELECTED REMEDY

The remedial action described in this document represents the second of two planned phases or operable units at the Vega Alta Site. It addresses the remaining source of contamination and is designated Operable Unit II (OU-II). A ROD for Operable Unit I (OU-I), which addresses groundwater contamination at the Site, was signed in September 1987 and amended by two subsequent Explanation of Significant Differences (ESDs) in 1989 and 1994.

Currently, the groundwater is being addressed by an extraction and treatment system placed in operation in 1994 pursuant to an EPA Unilateral Administrative Order issued in 1989 to the Potentially Responsible Parties (PRPs).

The major components of the selected remedy, identified in this document as Alternative 2, include:

- Operation of a Soil Vapor Extraction (SVE) system to remove Volatile Organic Compounds (VOCs) from soil until such time as VOCs can be no longer effectively removed. Soil vapors will be treated, if necessary, by thermal/catalytic oxidation or granular activated carbon (GAC) before being emitted to the atmosphere. Emissions will comply with the requirements established by the EQB;

- Implementation of a system monitoring program which includes the collection and analysis of soil vapors before and after they are treated, if treatment is determined to be necessary; and

- Appropriate environmental monitoring to ensure the effectiveness of the remedy.

DECLARATION OF STATUTORY DETERMINATIONS

The selected remedy meets the requirements for remedial actions set forth in CERCLA §121, 42 U.S.C. §9621: (1) it is protective of human health and the environment; (2) it attains a level or standard of control of the hazardous substances, pollutants and contaminants, which at least attains the legally applicable or relevant and appropriate requirements (ARARs) under federal and state laws; (3) it is cost-effective; (4) it utilizes permanent solutions and alternative treatment (or resource recovery) technologies to the maximum extent practicable; and (5) it satisfies the statutory preference for remedies that employ treatment to reduce the toxicity, mobility, or volume of the hazardous substances, pollutants or contaminants at a site.

A review of the remedial action pursuant to CERCLA §121(c), 42 U.S.C. §9621(c), will be conducted five years after the commencement of the remedial action to ensure that the remedy continues to provide adequate protection to human health and the environment, because this remedy will result in hazardous substances remaining on the Site above health-based levels.

Jeanne M. Fox
Regional Administrator

9/30/97
Date

DECISION SUMMARY

Vega Alta Public Supply Wells Site

Vega Alta, Puerto Rico

U. S. ENVIRONMENTAL PROTECTION AGENCY

REGION II

New York, New York

TABLE OF CONTENTS

I. SITE LOCATION AND DESCRIPTION

The Vega Alta Public Supply Wells Site is located north of the town of Vega Alta in the municipality of Vega Alta, Puerto Rico. Vega Alta is a municipality of about 36,500 people (U.S. Census Bureau 1990) located in the central part of the north coast of Puerto Rico, about 20 miles west of San Juan (Figure 1). Groundwater is the primary source of water for the public water supply system, as well as for other private (industrial, commercial and agricultural) users. The Vega Alta well field and wells of the nearby municipalities of Vega Baja and Dorado have been estimated to be extracting approximately 18.7 million gallons per day (mgd) of water from the unconfined limestone aquifer.

The Site does not have specific boundaries; however, most of the data collection activities have been conducted over an area bounded by the Atlantic Ocean to the north and the U.S. Geological Survey (USGS) Vega Alta Quadrangle boundary to the south. The east and west boundaries correspond with longitudes W66° 15' and W66°23', respectively. This area is referred to as the Vega Alta Study Area (Figure 2). The Puerto Rico Industrial Development Company (PRIDCO) Industrial Park, which was the focus of the OU-II source investigation, is located within the Vega Alta Study Area along Highway 2.

PRIDCO leases the property and buildings, except for two buildings purchased from PRIDCO by The West Company, to industries for their various manufacturing operations. The industrial facilities currently in this area include: ROVIPACK (formerly Motorola Radiomobile de P.R., Inc.) , General Electric Pilot Devices Inc., Harman Automotive P.R., Inc., The West Company Plastic Container Division of P.R., Inc., Hi-Temp Corporation, Teledyne Packaging P.R., Inc. (Teledyne), and General Electric Controls Inc. (GE Controls) (Figure 3).

II. SITE HISTORY AND ENFORCEMENT ACTIVITIES

The Vega Alta municipal well field became a concern of the EPA in June 1983 after the discovery of trichloroethene (TCE) in a groundwater sample collected by the USGS from a public water supply well (Ponderosa Well). Table 1 identifies a chronology of events for the Site, starting with the discovery of TCE in groundwater in June 1983 and continuing through March 1993. The Puerto Rico Aqueduct and Sewer Authority (PRASA) shut down the Ponderosa Well in the same month. In August 1983, PRASA ceased pumping supply well GE-1. In June 1983, PRASA constructed supply well Bajura 5(3) (also referred to as either Bajura 3 or Bajura 5). Public water-supply wells Bajura 5(3), Bajura 1, and GE-2 were subsequently shut down in early 1989 after PRASA constructed a pipeline between the Vega Alta distribution system and the Maguayo well field. PRASA completed two new supply wells, Maguayo 6 and 7, in October 1988 and November 1988, respectively.

In September 1983, the EPA contracted with NUS Corporation to perform the OU-I Remedial Investigation and Feasibility Study at the Site to determine the nature and extent of the groundwater contamination. NUS Corporation, with cooperation from the USGS, conducted a field investigation from April 1984 to March 1985. The findings of the NUS Corporation OU-I investigations were documented in a Remedial Investigation Report (RI) (NUS Corporation 1986). Using the RI data, NUS conducted a Feasibility Study (FS) and recommended a groundwater remedy (NUS Corporation 1987).

The Vega Alta Site was included on the Superfund National Priorities List (NPL) on September 1, 1984.

In September 1987, the EPA issued a Record of Decision for OU-I selecting a remedial alternative for the remediation of groundwater and requiring the provision of a drinking water supply for Vega Alta. The ROD called for the extraction of groundwater using four water supply wells (GE-1, GE-2, Bajura 3, and Ponderosa) owned by PRASA and the installation of treatment systems on each of these wells. Treated water pumped from three of the wells was to be discharged to the PRASA distribution system. The ROD also indicated that a subsequent OU-II RI/FS would be needed to locate and remediate VOC sources.

In March 1989, in response to a request from EQB, EPA modified the 1987 ROD remedy through use of an ESD to require surface discharge of all treated water instead of discharge to the PRASA water supply distribution system. This action was taken pursuant to Section 117(c) of CERCLA. At the same time, EPA issued a Unilateral Administrative Order that required Caribe General Electric Products, Inc., Harman Automotive P.R. Inc., Motorola Telcarro de Puerto Rico, Inc., The West Company, and PRIDCO, to implement the OU-I ROD-selected remedy, as modified by EPA's March 1989 ESD.

The Ponderosa Well Treatment System was completed on December 22, 1993 and groundwater treatment commenced in July 1994. Treated water from the Ponderosa system is currently being discharged to Honda Creek. On August 30, 1994, EPA modified the remedy authorized by the 1987 OU-I ROD and 1989 ESD by replacing the groundwater extraction and treatment from GE-1, GE-2 and Bajura 3 with a new extraction well and treatment system to be located approximately 4,000 feet north of the Ponderosa Well. EPA made this change to the selected remedy because OU-II groundwater investigations at the Site showed that in the six years following the issuance of the OU-I ROD, the plume of groundwater contamination had migrated downgradient of three of the extraction wells (GE-1, GE-2, and Bajura 3) selected in the 1987 OU-I ROD, and that these wells were no longer capable of effectively remediating the Vega Alta aquifer.

In light of several factors, EPA has reconsidered the plan called for by the 1994 ESD and is considering an alternative approach of placing the new extraction wells closer to the primary remaining source of VOC contamination at the Site. With EPA oversight, a contractor for the potentially responsible parties (PRPs) has conducted modeling and other studies designed to help EPA evaluate such a change to the OU-I groundwater remedy. EPA expects to make a decision regarding the groundwater remedy in the near future; such a change would be documented in a separate public notice and decision document.

III. HIGHLIGHTS OF COMMUNITY PARTICIPATION

The Remedial Investigation Report, Feasibility Study Report , Proposed Plan and additional supporting documents were released to the public for comment on July 30, 1997. These documents were made available to the public in both the Administrative Record and information repositories maintained at the EPA Docket Room in the Region II New York City Office, the EPA Caribbean Environmental Protection Division, the Vega Alta Municipal Town Hall at Vega Alta, Puerto Rico, and at the EQB Library. The notices of availability for the 1997 documents were published in two local newspapers, "El Nuevo Día" and "The San Juan Star" on July 30, 1997. A public comment period was held from July 30, 1997 through August 29, 1997. On August 20, 1997, a public meeting was held in the Vega Alta Municipal Assembly Room. At that meeting, representatives from EPA presented the findings of the investigations and answered questions from the public about the Site and the remedial alternatives under consideration. Responses to the comments received during the comment period are included in the Responsiveness Summary (see Appendix D).

IV. SCOPE AND ROLE OF OPERABLE UNIT II OR RESPONSE ACTION WITHIN SITE STRATEGY

EPA is proposing soil vapor extraction (SVE) as the appropriate cleanup technology for the contaminated soils at the Site. The results of the OU-II RI and Supplemental Groundwater Investigations indicate that the southeastern area of the Industrial Park contains significant levels of VOCs in the subsurface soils that are of concern as they contribute to continued degradation of the groundwater aquifer. Treatment of the contaminated groundwater aquifer, which was addressed by the OU-I remedy, commenced on July 1994 and is currently ongoing. The treatment system is located at the Ponderosa Well and is operating at a pumping rate of approximately 600 gallons per minutes (gpm).

The application of SVE to the subsurface soils under OU-II will significantly reduce the concentrations of VOCs in soils, thus reducing their vertical migration and impact to the groundwater. In turn, this action will reduce the length of time required to achieve groundwater cleanup by preventing VOCs from continuing to enter the groundwater.

V. SUMMARY OF SITE CHARACTERISTICS

During the OU-II RI, several media were sampled for the presence of VOCs in three investigatory phases. In Phase I, a comprehensive soil-gas survey was implemented, a geophysical survey was undertaken to identify areas where metal objects may be buried, and the results of septic tank sampling were reviewed. Based on these results, locations in the PRIDCO Industrial Park were selected for drilling soil borings and excavating test pits, activities that were implemented in Phase II.

Groundwater samples were collected from public and private water-supply wells and monitoring wells during Phase I. During Phase II, grab samples of groundwater were collected from the boreholes that penetrated the water table, and two of the boreholes in the eastern portion of the Industrial Park were converted into permanent monitoring wells screened in the upper portion of the unconfined aquifer. Because relatively high VOC concentrations were detected in the eastern portion of the Industrial Park during Phases I and II, Phase III was implemented. Phase III consisted of the installation of three new multiport wells and two 6-inch diameter test wells.

A. Site Geology and Hydrology

The Vega Alta Study Area is part of the North Coast Limestone of Puerto Rico (Giusti and Bennett 1976; Monroe 1976). The surface and subsurface geologic units in this area are Oligocene to Migocene age, sedimentary formations that consist primary of limestone. These formations are overlain by semi-consolidated to unconsolidated Quaternary deposits. The dip of the limestone formations in the study area is about 2 to 4 degrees to the north. The areal distribution and detailed descriptions of these formations are presented on the USGS geologic map of the Vega Alta quadrangle (Monroe 1963). A significant feature of this area is the formation of karst landforms that has developed due to dissolution of the limestone by water.

An unconfined (or water-table) freshwater aquifer is present throughout the Vega Alta Study Area. At the center of the study area, this aquifer is as great as 350 feet thick. According to data obtained from PRASA and USGS files, approximately 6.78 billions gallons of water were extracted from the aquifer by public and private water supply wells in the study area in 1990. This water was pumped at an average rate of about 12,900 gallons per minutes (gpm) or 18.5 millions gallons per day (mgd).

Hydrogeologic units underlying the regional area consist of an unconfined (or water-table) aquifer, an aquitard, and confined aquifer. The unconfined aquifer is composed primarily of the Aguada and Aymamón Limestone, but it also occurs in some of the alluvial and blanket sand deposits. The primary groundwater flow through the

limestone aquifer occurs within solutionally enlarged primary pores and solution channels. Water occurs in primary pores and in secondary pores formed by dissolution of the limestone. Because of the large size of these secondary pores and the extent to which they are interconnected, these solution features have a significant impact on groundwater flow.

Groundwater withdrawal from wells in the north coast limestone aquifer serves as the primary source of water for drinking, agriculture, and industrial use in the Vega Alta Study Area. Prior to the 1960's and the large-scale development in the Vega Alta area, the principal discharge location for groundwater was probably the coastal plain (Gómez-Gómez and Torres Sierra 1988). In 1983, approximately 76 percent of groundwater discharge was through pumpage from water supply wells. The remaining groundwater discharged either to the ocean or to rivers close to the coast. There is no evidence of cave conduits discharging groundwater in the coastal plain nor in the submarine outcrop of the aquifer.

Along the shores of the Atlantic Ocean in the coastal plain, the bottom of the unconfined freshwater aquifer is delineated by the saltwater interface. In the study area, the saltwater interface starts below the seabed and dips to the south where it terminates at the low-permeability claystones at the top of the Cibao Formation (Torres-Gonzalez and Diaz 1984). A confined aquifer occurs below the upper member of the Cibao Formation. This upper member is a claystone with very low permeability that acts as an aquitard (Giusti 1978).

B. Nature and Extent of Contamination

1. Initial Source Investigation

The initial source investigation (Phase I) was conducted at the Vega Alta Municipal Landfill and the PRIDCO Industrial Park, since these areas had been identified as potential sources of VOCs detected in the aquifer (NUS Corporation 1986). Methods initially used to identify potential source areas for VOCs in soil and possible mechanisms for release of VOCs to soils included a soil-gas survey, a geophysical survey, and underground storage tank (UST) and septic system sampling.

a. Soil Gas Survey

A soil-gas survey was conducted from February through April 1992 at the Industrial Park and the Vega Alta Municipal Landfill. The presence of VOCs in the soil gas is an indication that VOCs are present in the general vicinity of the sampling area. Sampling and laboratory analysis of soil and groundwater in those areas confirmed their presence and along with the concentrations of these compounds in various media.

Due to the large area covered by the soil-gas survey, the sampling grid in the Industrial Park was divided into 16 survey areas; these areas are listed in Table 1. Total concentrations for target VOCs in the Industrial Park are provided in Table 2 and are shown at four concentrations ranges [e.g., 0.11 to 1.0 part per million by volume (ppmv)], on Figure 4. A statistical summary (detection frequencies and concentrations ranges) of the data in Table 2 is provided in Table 3.

As shown on Figure 4, the following areas have relatively high (greater than 1.0 ppmv) VOC soil-gas concentrations: Caribe GE Pilot Plant parking lot and the area south of the Pilot Plant Building No.1, the area north of the building formerly occupied by The West Company, the area adjacent to the east side of the Harman Automotive building, the area between the two West Company buildings, the area north of the GE Controls Plant, and the narrow area between the GE Controls Plant and the Teledyne Plant. The soil-gas survey in the municipal landfill consisted of sampling 38 soil-gas points. The location of each soil-gas collection point is shown on Figure 5 and the corresponding VOC concentrations are presented in Table 4. Total target compound concentrations ranged from 0.04 to 28.63 ppmv. VOCs were detected in 37 percent of the samples analyzed.

b. Geophysical Survey

Eight distinct areas within the Industrial Park were surveyed with magnetic and electromagnetic methods. Only limited areas were selected for the geophysical survey due to the considerable coverage of the Industrial Park buildings, fences, parking lots, and other man-made sources of magnetic interference. Figure 6 shows the surveyed areas and significant magnetic anomalies at the Industrial Park.

c. UST and Septic System Results

A comprehensive site reconnaissance for existing or abandoned underground storage tanks (USTs) and septic systems was conducted as part of the OU-II RI. No active or inactive USTs were identified within the Industrial Park. Abandoned septic system components that were identified at the GE Controls, Teledyne, and other properties located throughout the Industrial Park were either not physically accessible or did not contain adequate liquids for sampling. Therefore, no samples were collected from these septic systems. Septic tanks at the Teledyne and Motorola facilities were sampled as part of separate facility investigations. The analytical results of liquid and sludge samples collected from the septic tanks at the Teledyne facility are presented in Table 5 and Table 6.

A sample collected from a septic tank at the former Motorola facility detected only one compound 1,2-DCA, at a concentration of 14 parts per billion (ppb).

2. Soil Investigation

A soil investigation (Phase II) was conducted in the vicinity of the Industrial Park to evaluate the presence, nature, and extent of VOCs in soil and to analyze soil samples for geotechnical and microbiological parameters. Soil samples were collected from boreholes and test pits and analyzed.

Approximately 550 spit-barrel samples were collected from 40 boreholes (Figure 7) Each split-barrel soil or weathered limestone sample taken from the borehole was analyzed for VOC concentration with the field gas chromatograph (GC). Twenty-four of these samples were sent to the Contract Laboratory Program (CLP) laboratory for analysis for Target Compound List (TCL) VOCs. The laboratory analytical results and the field GC results are presented in Tables 7 and 8, respectively. Figure 5 shows the highest concentrations of TCE and PCE detected in soil samples from each borehole.

VOCs have been detected in soils beneath each of the facilities investigated at the Industrial Park by either the soil-gas survey or the borehole investigation, or both. The highest VOC concentrations were detected in the soils on the eastern section of the Industrial Park.

The highest concentration of VOCs in soil was found in a sample from Borehole BH-25A at a depth interval of 29.5 feet to 31.5 feet. Concentrations of Trichloroethene (TCE) and Perchloroethene (PCE) in this sample, as detected by the CLP laboratory, were 2,200 ppb and 1,400 ppb, respectively. This sample also had the highest concentration of VOCs, detected by field GC, of more than 500 soil samples. No individual target VOCs were detected at concentrations above 1 ppm in any soil samples collected from shallow depths. All VOCs detected above 1 ppm occurred at depths greater than 19 feet below land surface (bls).

3. Groundwater Investigation

Groundwater samples were collected throughout the Vega Alta Study Area from 57 monitoring and water-supply wells as part of Phase I of the OU II RI. These groundwater samples were analyzed for VOCs, landfill leachate parameters, and metals. Grab groundwater samples were collected from some of the boreholes drilled during Phase II and analyzed for VOCs. The two shallow monitoring wells and the three new multiport wells installed during Phase III were also sampled and analyzed for VOCs.

All groundwater samples collected from the 23 multiport wells (all zones), the six conventional monitoring wells, and the 28 water-supply wells in Phase I were analyzed for VOCs. The validated VOC results for samples collected during the OU II investigation are summarized in Table 9. VOCs were identified in the groundwater

samples collected during the 1992 sampling event. These VOCs, the frequency of their detection, and their maximum concentrations are presented in Table 10. The maximum TCE concentration (2,800 ppb) was detected in the multiport well BVAW22. Figure 8 shows the horizontal TCE distribution using the maximum concentration detected in each multiport well; this figure provides a comprehensive view of the full horizontal extent of the TCE plume. The length and width of the TCE plume, as defined on Figure 8 by the 5 ppb contour, are 2.2 and 2.4 miles, respectively.

Three multiport monitoring wells, two conventional monitoring wells, and two large diameter wells were installed along the eastern side of the Industrial Park as part of Phase II and Phase III of the OU II RI. The results of these analyses are provided in Table 11, and the frequencies of detection and maximum concentrations of VOCs are provided in Table 12. TCE was detected at a maximum concentration of 4,600 ppb. Figure 9 shows the horizontal distribution of the highest quantifiable TCE concentration in groundwater from monitoring wells in the vicinity of the eastern side of the Industrial Park.

VI. SUMMARY OF SITE RISKS

Based upon the results of the OU-II RI, a Baseline Risk Assessment was conducted to estimate the risks associated with current and future Site conditions. This Risk Assessment evaluated human health risks associated with both current and future land uses, assuming no further remedial actions were taken. Risks were evaluated based upon potential human exposure to contaminants currently present in Site groundwater. The Baseline Risk Assessment assumed that the Site would be developed for residential use in the future. This assumption is based on the local zoning and predicted future land use in the area.

The data used in the Baseline Risk Assessment included groundwater samples collected by Geraghty & Miller and CDM Federal during 1992 and 1993, and additional data collected by the Unisys Corporation, a PRP, for inorganic analyses (during May and June 1995). The assessment also included an evaluation of site-specific soil screening levels to prevent further degradation of the groundwater from subsurface soil contamination at the site. Soil screening levels were derived for the specific chemicals found in groundwater underlying the Site.

Risk to human health is defined as the likelihood that people living, working or playing on or near the Site may experience health problems as a result of their exposure to contaminants from the Site. The ecological risk evaluation appraises actual or potential effects of the Site on plants and animals.

A. Human Health Risk Assessment

A four-step process is utilized for assessing site-related human health risks for a reasonable exposure scenario: "Hazard Identification" identifies the contaminants of concern at a site based on several factors such as toxicity, frequency of occurrence and concentration. "Exposure Assessment" estimates the magnitude of actual and/or potential human exposures, and the pathways (e.g., ingestion of contaminated well water) by which humans are potentially exposed. "Toxicity Assessment" determines the types of adverse health effects associated with the chemical exposures and the relationship between the magnitude of exposure (dose) and severity of adverse effects (response). "Risk Characterization" summarizes and combines outputs of the exposure and toxicity assessments to provide a quantitative (e.g., one-in-one million excess cancer risk) assessment of site-related risks.

The Baseline Risk Assessment began with selecting contaminants of concern in the groundwater which would be representative of Site risks. Both VOCs and inorganics were identified as chemicals of potential concern. VOCs included: 1,1-dichloroethene, 1,2-dichloropropane, ethylene dibromide, tetrachloroethene, trichloroethene, and vinyl chloride. Inorganics included: arsenic, beryllium, vanadium and zinc. Many of these chemicals are known or potential human carcinogens based on either human evidence or data from laboratory animal studies.

The exposure assessment evaluated the health effects which could result from exposure to contaminants as a result of the ingestion of the groundwater, contact with the skin or inhalation of VOCs. The exposure pathways generally consist of four elements: a source and mechanism of release; a transport medium; an exposure point (point of contact); and an exposure route (ingestion, inhalation, or dermal contact) at the exposure point. Exposure scenarios involving groundwater were quantitatively assessed. Current exposures were not assessed since contaminated groundwater at the Site is not currently being used as a drinking water source. The potential exists, for further commercial or residential development of the Site in the future. Therefore, in the future, there is a potential for individuals to obtain their drinking water from wells installed into the contaminated aquifer beneath the Site. Potentially exposed individuals are: 1) future Site residents, 2) future Site workers and employees; and 3) future construction workers.

1. Evaluation of Risks

For carcinogens, risks are estimated as the incremental probability of an individual developing cancer over a lifetime as a result of exposure to the potential carcinogen. The risks of the individual chemicals are summed for each pathway to develop a total

risk estimate. The acceptable risk range is one in ten thousand to one in a million of an individual developing cancer over a 70-year lifetime from exposure to the contaminant(s).

To assess the overall noncarcinogenic effects posed by more than one contaminant, EPA has developed the Hazard Quotient (HQ) and Hazard Index (HI). The HQ is the ratio of the chronic daily intake for a contaminant to the Reference Dose for the chemical; the reference dose being a measure of the chemical's "threshold" for adverse effects with many built-in safety factors. The HQs are summed for all contaminants within an exposure pathway (e.g., groundwater ingestion) to give the HI. When the HI exceeds 1.0, there may be concern for potential noncarcinogenic health effects, if the contaminants in question are believed to cause a similar toxic effect.

EPA bases its decision to conduct site remediation (cleanup) on the risk to human health and the environment. Cleanup actions may be taken when EPA determines that risk at a site exceeds the cancer risk level of one-in-ten-thousand or if the noncarcinogenic HI exceeds a level of 1.0. Once either of these thresholds have been exceeded, remedial action alternatives are evaluated to reduce the risk levels to within EPA's acceptable risk range of one-in-ten-thousand to one-in-a-million and an HI of 1.0.

2. Toxicity Assessment/Risk Characterization

a. Future Residents

The results of the Baseline Risk Assessment indicated that the highest carcinogenic risks were attributable to groundwater ingestion exposure for future Site residents and workers/employees. Groundwater was found to pose a carcinogenic risk to future residents' human health for the ingestion and inhalation routes of exposure over a chronic duration. The ingestion route showed total carcinogenic risks for adults and children of 2.6 in 1,000 and 1.2 in 1,000, respectively. The primary chemicals contributing to this risk include: 1,1-dichloroethene, ethylene dibromide, trichloroethene, arsenic and beryllium. The inhalation route through showering showed a carcinogenic risk for future Site resident adults of 3.7 in 10,000. The main chemicals contributing to the risk are 1,1-dichloroethene and trichloroethene. Dermal exposure was associated with a risk of 3.8 in 1,000,000 which is within EPA's acceptable risk range.

The carcinogenic risks for future Site residents are greater than the upper-bound of EPA's target risk range.

Non-carcinogenic hazards were also assessed. For non-carcinogenic effects, the HI for adults and children for ingestion of contaminated groundwater are 9.4 and 22,

respectively. The main chemicals contributing to this risk are trichloroethene and arsenic. These values exceed EPA's target level of 1.0.

b. Future Site Workers/Employees

Groundwater was found to pose an unacceptable carcinogenic risk to human health through ingestion for future Site workers and employees. The ingestion route showed a carcinogenic risk for Site workers/employees of 7.8 in 10,000. This risk exceeds the upper-bound of the target risk range. The chemicals contributing to this risk are: 1,1-dichloroethene, ethylene dibromide, and arsenic. The HI for potential future Site workers/employees ingestion of groundwater is 3.4, exceeding the target level of 1.0 for non-carcinogens. The chemicals contributing to the hazard is trichloroethene.

c. Future Construction Workers

The carcinogenic risk and HI for future construction workers at the Site are 8.1 in one million and 0.26, respectively. These risks and hazards do not exceed EPA's risk range for carcinogens and non-carcinogens.

3. Contribution of Soil Contaminants to Groundwater

To prevent further degradation of the groundwater at the Site from subsurface soil contamination, soil screening levels (SSLs) were derived for specific chemicals found in the groundwater. The chemicals selected for evaluation were those determined to be of potential public health concern based on the risk assessment discussed in the previous section. The SSLs developed represent concentrations in soils that would be protective of groundwater use based on the maximum concentration levels in the groundwater.

An SSL is defined as "a chemical concentration in soil below which there is no concern for ingestion, inhalation, and migration to groundwater exposure pathways, provided certain conditions are met." The SSLs were calculated using site-specific data (i.e., aquifer thickness, aquifer recharge rate, source area length, organic carbon content, etc.). The analysis was developed using EPA's 1994 Final Soil Screening Level Guidance (EPA OSWER Guidance 540-R-96-018).

The available subsurface soil samples for organic chemicals were limited. A model was used to calculate SSLs for the following chemicals of concern: 1,1-dichloroethene, 1,2-dichloropropane, ethylene dibromide, tetrachloroethene, trichloroethene, and vinyl chloride. Inorganics included arsenic, beryllium, and zinc. Vanadium was not evaluated based on the lack of appropriate partition coefficients.

Based on the results from this model, the predicted SSLs were exceeded by the maximum concentrations detected in soil. Comparison of the predicted SSLs based on the Maximum Contaminant Levels (MCLs) to the maximum concentrations in soil resulted in exceedances ranging from 3.5 to 95 for tetrachloroethene, trichloroethene and 1,1-dichloroethene.

4. Conclusions

The Baseline Risk Assessment results indicate that ingestion of groundwater poses an unacceptable risk for carcinogens and/or noncarcinogens for future Site residents and future Site workers/employees. Actual or threatened releases of hazardous substances from the Vega Alta Site, if not addressed by the selected remedy or one of the other active measures considered, may present a current or potential threat to public health, welfare or the environment. The analysis of the comparison of the SSL based on the MCL of the contaminant in groundwater to the maximum concentration in soil resulted in exceedances ranging from 3.5 to 95 times the value.

B. Ecological Risk Assessment

Subsurface soils and groundwater contamination do not present a risk to ecological receptors at the Site. There is no ecological receptor exposure to subsurface soils. Groundwater is not considered to pose a concern to ecological receptors for the following reasons:

- Maximum VOC concentrations in groundwater samples collected from 1984 to 1993 indicate that the VOCs for which there are Ambient Water Quality Criteria (AWQC) are not likely to pose an ecological risk to fresh water aquatic receptors at the Site. In the unlikely event that the highest detected concentrations of the groundwater plume were to reach an aquatic receptor, the maximum concentrations are distinctly lower than the AWQC values for the VOCs that possess such values.

- Groundwater discharge into the marshland north of the Site is expected to be minimal, if it occurs at all. The watertable surface has declined considerably in the past 20 years due to such factors as increased groundwater pumping, the presence of man-made marshland drainage channels, and reduced yearly rainfall.

VII. REMEDIAL ACTION OBJECTIVES

Remedial action objectives are specific goals to protect human health and the environment. They specify the contaminant(s) of concern, the exposure route(s),

receptor(s), and acceptable contaminant level(s) for each exposure route. These objectives are based on available information and standards such as applicable or relevant and appropriate requirements (ARARs) and risk-based levels established in the risk assessment.

The overall remedial action objective for the Site is to prevent human ingestion and inhalation through showering of Site-related VOCs in excess of the Maximum Contaminant Levels (MCLs) in groundwater or the more stringent contaminant levels specified in the OU-I Administrative Order. While doing so, it will restore the aquifer to its previous conditions and will remove the contaminants in the soils known to contain the highest concentrations as a source control measure to prevent further groundwater contamination.

The implementation of this proposed action in the subsurface soils will significantly reduce the concentrations of VOCs in soils, thus reducing their vertical migration to the groundwater. This action will also reduce the length of time required to achieve groundwater cleanup.

The specific objectives of the OU-II remedial action are:

To reduce the concentrations of VOCs in the areas of the Site known to contain the highest concentrations of VOCs in the soil matrix, to the extent technologically feasible, and thereby reduce the potential risk to human health through exposure to groundwater.

To reduce the leaching of VOCs from the areas of the Site known to contain the highest VOC concentrations into the groundwater and thereby enhance the existing OU-I groundwater remedy.

VIII. DESCRIPTION OF ALTERNATIVES

CERCLA (commonly referred to as "Superfund") requires that each selected site remedy be protective of human health and the environment, be cost effective, comply with other statutory laws, and utilize permanent solutions and alternative treatment technologies and resource recovery technologies to the maximum extent practicable. In addition, the statute includes a preference for the use of treatment as a principal element for the reduction of toxicity, mobility, or volume of the hazardous substances.

The FS Report evaluated three presumptive soil remediation alternatives for addressing the contamination associated with OU-II. Construction times for each alternative include the time to construct and implement the remedy but do not include the time required to design the remedy, negotiate with the PRPs, or procure contracts for design and construction.

Presumptive remedies, as defined by the EPA, are "preferred technologies for common categories of sites, based on historical patterns of remedy selection and EPA's scientific and engineering evaluation of performance data on technology implementation" (EPA OSWER Directive 540-F-93-047). Presumptive technologies are expected to be used at appropriate sites. The benefit of the presumptive remedies initiative is that it streamlines the remedy selection process by eliminating such steps as: identifying potential treatment technologies and containment/disposal requirements; screening those technologies; assembling the remaining technologies into alternatives; and screening alternatives as necessary to reduce the number subject to detailed analysis.

The EPA presumptive remedies for Superfund sites containing VOC-contaminated soil and meeting certain criteria are soil vapor extraction (SVE), thermal desorption, and incineration (EPA OSWER Directive 540-F-93-048). These technologies have been chosen based upon EPA's experience at other Superfund sites and are discussed below.

The time to implement the remedy includes an estimated time frame for the design of the remedy, construction of the remedy, and period of negotiation with the responsible parties for implementation of the remedy.

Alternative 1: No Action

The Superfund program requires that the "No-Action" alternative be considered as a baseline for comparison with the other alternatives. The "No Action" alternative for soils would involve no effort to prevent the further leaching of compounds from the soils to the ground water. This alternative would result in the continued leaching of chemical compounds into the aquifer for an unknown period of time, affecting the quality of the groundwater at the Site. The costs for the No Action alternative are as follows:

Capital Cost	$ 0
Annual O&M	$ 0
Present Worth Cost	$ 0
Construction Time	Not Applicable

Alternative 2: Soil Vapor Extraction

The Soil Vapor Extraction (SVE) alternative removes volatile organic compounds from the unsaturated zone as vapors, without excavation. SVE is accomplished in-situ (in place), by installing vents of various designs consisting of gravel packs extending to the surface, slotted or unslotted well casings installed with or without gravel pack, or any other configuration that allows gases to move from the soil. Passive systems

consist of vents that are open to the atmosphere and do not require energy for extraction of gases. Active systems make use of negative pressure or vacuum pumps to accelerate the removal of vapors from the soil.

With SVE, the vapors are either discharged to the atmosphere or treated before discharging, depending on vapor concentrations and regulatory requirements.

The limitations of the SVE are associated with soil characteristics that impede the movement of vapors to the extraction well, emissions of volatiles, and explosion hazards. Soils with limited pore space would require the use of more closely spaced wells and possibly higher capacity pumps. The air emissions may be controlled by using granular activated carbon (GAC) at the discharge point. Explosion hazards associated with vapors can be overcome by using intrinsically safe equipment, and by ensuring that adequate volumes of air are moved through the system to keep vapor concentrations below the lower explosion limit (LEL).

From August 16 through September 14, 1995, a soil vapor extraction performance study was conducted at the General Electric Controls facility. The study was conducted to determined if SVE is an appropriate remedial technology to mitigate the presence of VOCs. A total of 553 pounds of VOCs were recovered during the study indicating that SVE will effectively remove the VOC contamination from the on-site soils.

The SVE system under this alternative will have the following characteristics:

- approximately 30 to 50 extraction wells, each with shallow and deep extraction focused on soils within the GE Controls facility.

- the effective radius (zone of influence) for extraction wells has been estimated to be 32 to 60 feet, assuming a single well nest.

- connecting piping will be installed in order to transmit vapors containing VOCs to a central removal point and treatment of the exhaust air, if necessary,

- the SVE unit(s) may contain an air treatment system to ensure that air discharges do not exceed permissible limits. Air treatment may consist of thermal/catalytic oxidation or granular activated carbon. No treatment will be necessary if the untreated discharges meet acceptable limits; this will be determined during the remedial design (RD) stage.

- the proposed SVE system will be designed and implemented in a staged approach which will involve the use of at least one mobile or permanent SVE unit. The mobile SVE unit will be operated at a designated area until no more VOCs can be effectively

removed at that location. The unit will then be moved to another designated area for treatment. The designated areas of operation, type (mobile and/or permanent) and number of SVE unit(s) to be used will be determined during the RD phase.

Capital Cost	$ 2,777,000
Annual O&M	$ 502,900
Present Worth Cost (10 year operation)	$ 7,473,000
Present Worth Cost (4 year operation)	$ 4,270,541
Construction Time	8 months

Alternative 3: Incineration

Incineration is an ex-situ technology which employs thermal decomposition via oxidation at temperatures usually greater than 900 °C to destroy the organic fraction of the waste. As an ex-situ technology, the soil of concern must be excavated and either transported to an off-site incineration facility or fed through an on-site mobile incineration system. The primary benefit of incineration is that this method of treatment destroys the hazardous material rather than transferring it from one media to another.

Incineration is not considered a feasible remedy for this Site due to its poor implementability and high cost. Although incineration has relatively high destruction efficiencies, it would be difficult to implement as a component of the remedy since extensive soil excavation would be required. At this Site, VOCs in the "hot spots" are found at depths of up to 90 feet below ground surface. Not only would the excavation of this soil be difficult from an engineering standpoint, but it would also likely cause a significant safety risk while the on-site facilities are operational.

Due to its impracticability, the incineration alternative will not be further evaluated and/or considered.

Alternative 4: Low Temperature Thermal Desorption

Low Temperature Thermal Desorption (LTTD) is an ex-situ technology which uses direct or indirect heat to vaporize organic compounds from soil, sediment, sludge, or other solid and semisolid matrices. The vapors are then collected for further treatment. As with incineration, LTTD requires the excavation and transportation of contaminated soils to either an off-site treatment and disposal facility or to an on-site mobile unit. Unlike incineration, LTTD only transfers the VOCs from the soil matrix to the vapor phase. The VOCs must still be captured or destroyed using another technology such as granular activated carbon filters or catalytic oxidation.

The logistical difficulties described above for the incineration alternative would also apply to LTTD. LTTD would require extensive excavation and transportation of contaminated soil to either an on-site mobile unit or an off-site facility.

Due to its impracticability, the LTTD alternative will not be further evaluated and/or considered.

IX. SUMMARY OF COMPARATIVE ANALYSIS OF ALTERNATIVES

EPA has developed nine criteria (EPA OSWER Directive # 9355.3-01), codified in the NCP § 300.430(e) and (f), to evaluate potential alternatives to ensure all important considerations are factored into remedy selection. This analysis is comprised of an individual assessment of the alternatives against each criterion and a comparative analysis designed to determine the relative performance of the alternatives and identify major trade-offs, that is, relative advantages and disadvantages, among them.

The nine evaluation criteria against which the alternatives are evaluated are as follows:

Threshold Criteria - The first two criteria must be satisfied in order for an alternative to be eligible for selection.

1. o **Overall Protection of Human Health and the Environment** addresses whether or not a remedial alternative provides adequate protection and describes how risks posed through each exposure pathway (based on a reasonable maximum exposure scenario) are eliminated, reduced, or controlled through treatment, engineering controls, or institutional controls.

2. o **Compliance with ARARs** addresses whether or not a remedial alternative would meet all of the applicable or relevant and appropriate requirements (ARARs) of other Federal and State environmental statutes and/or satisfy the criteria for invoking a waiver as set forth in CERCLA § 121(d)(4).

Primary Balancing Criteria - The next five "primary balancing criteria" are to be used to weigh trade-offs among the different hazardous waste management strategies.

3. o **Long-Term Effectiveness and Permanence** refers to the ability of a remedial alternative to maintain reliable protection of human health and the environment over time, once cleanup goals have been met.

4. o **Reduction of Toxicity, Mobility, or Volume** evaluates the anticipated performance of the treatment technologies that a remedial alternative may

employ, or how successfully particular treatment methods could reduce the harmfulness or volume of contaminants, or their potential to move in the environment.

5. o **Short-Term Effectiveness** addresses the period of time needed to achieve protection and any adverse impacts on human health that may be posed during the construction and implementation period until cleanup goals are achieved.

6. o **Implementability** evaluates the technical and administrative feasibility of a remedial alternative, including the availability of materials and services needed to implement a particular option.

7. o **Cost** considers estimated capital and operation and maintenance costs, and net present worth cost of the alternatives.

Modifying Criteria - The next two criteria are regarded as "modifying criteria," and are to be taken into account after the above criteria have been evaluated. They are generally to be focused upon after public comments are received.

8. o **State Acceptance** indicates whether, based on its review of the SI Report and the Proposed Plan, the Commonwealth of Puerto Rico concurs with, opposes, or has no comment on the preferred alternatives at the present time.

9. o **Community Acceptance** refers to the public's general response to the alternatives described in the Proposed Plan.

The following is a summary of the comparison of each alternative's strengths and weaknesses with respect to the nine evaluation criteria.

1. Overall Protection of Human Health and the Environment

Alternative 1 (No-Action) does not reduce the indirect human health risk posed by VOC's present in soils that could migrate into groundwater. Alternative 2 (SVE) provides both short and long-term protection of human health and the environment by reducing the concentration of VOCs in the soil. The only potential future risk of human health at this Site is from possible future ingestion of groundwater and inhalation through showering. Alternative 2 will be protective of human health and the environment by enhancing the existing groundwater remedy by reducing the mass of VOCs in the soils, thus preventing the further migration of the VOCs to the groundwater.

2. Compliance with ARARs

Alternative 1 would not comply with ARARs since no remedial action is contemplated in the alternative. ARARs related to air quality are established by the Puerto Rico Regulation for the Control of Atmospheric Pollution (PRRCAP), Rule 419 (Volatile Organic Compounds). The PRRCAP rule establishes emission limits of 3 lb/hr of total VOCs and 15 lbs/day. While Alternative 2 would require an examination of air quality standards to ensure that emission limits are not exceeded, with the appropriate monitoring and possible treatment controls placed on the SVE system, this alternative will comply with air quality standards.

It should be noted that while there are no chemical-specific ARARs with respect to the extent of soil cleanup that is necessary at the Site, Alternative 2 will enhance the goal of the OU-I groundwater remedy to attain groundwater standards, while Alternative 1 will not.

3. Long-Term Effectiveness and Permanence

Alternative 1 does not provide long-term effectiveness because the risk posed by the VOCs in on-site soils for potential future use of groundwater would not be reduced. More specifically, the volume, toxicity and mobility of untreated wastes remaining in the soils will not be reduced. While Alternative 2 would require some operational time to ensure that VOCs have been effectively reduced, it will provide long-term effectiveness by reducing VOC concentrations at the source, thereby enhancing the existing OU-I groundwater remedy and reducing the future risk posed by the VOCs leaching from the soils into the groundwater.

4. Reduction in Toxicity, Mobility, or Volume

Alternative 1 would not cause a reduction in the toxicity, mobility or volume of the hazardous substances. Alternative 2 successfully reduces the volume, toxicity and mobility of VOCs in the soils as VOCs will be removed from the source and either treated through the use of vapor phase treatment techniques or released into the atmosphere at levels complying with air quality standards. If concentrations are such that air emissions do not require treatment, then the only waste stream which may require some treatment would be the water collected from the air/water separator. The mobility of the VOCs will also be reduced by Alternative 2 because the SVE system will prevent the leaching of VOCs from the soils into the groundwater.

5. Short-Term Effectiveness

Alternative 1 does not present any short-term risks to the community or on-site workers, but the future risk posed by the leaching of VOCs from Site soils into the groundwater will remain unabated. In the absence of construction or mitigating activities, there would be no short-term impacts under Alternative 1. Alternative 2 generally does not present substantive risks to on-site workers or the community. Considerations must be made for the prevention of dust emissions during the boring of extraction wells, the disposal of soil cuttings from the wells, and potential air emission controls if levels are higher than air quality standards would allow. The installation of an SVE system at the GE Controls facility could involve the interruption of plant operations. Precautions would be taken to safeguard the safety of plant personnel during construction of the system.

6. Implementability

Both alternatives evaluated could be implemented. Minor implementability problems could be presented by Alternative 2 because of the limited space available at the GE Controls facility for the installation of extraction wells and interconnecting header pipes. Depending on the designated extraction well locations and the piping route, it is possible that some of the construction may disrupt plant operations. Technically, Alternative 2 should be relatively simple to implement. SVE technology has been widely used at Superfund sites to address the problem of VOCs in soils; both the necessary equipment and experienced contractors are readily available.

7. Cost

The cost estimate associated with Alternative 2 is provided above. There are no capital or long-term operation and maintenance costs associated with Alternative 1. For Alternative 2, the estimated total net present worth for the construction and operation of a SVE system over a four year period at a discount rate of 5% is $4,270,541. Typically, successful SVE systems operate for time periods much shorter than thirty years.

8. State Acceptance

The EQB concurs with the preferred remedy. EQB's concurrence letter is attached hereto as Appendix C.

9. Community Acceptance

All comments are addressed in the Responsiveness Summary, which is attached hereto as Appendix D.

X. DESCRIPTION OF THE SELECTED REMEDY

Based on the results of the RI and FS Reports, and after careful consideration of all reasonable alternatives, EPA and the EQB have determined that Alternative 2 (SVE), is the appropriate remedy for OU-II at the Site. Specifically, the selected alternative will consist of the following:

- Operation of a mobile or permanent SVE treatment system(s) to remove VOCs from contaminated soils until no more VOCs can be effectively removed. Soil vapors will be treated, if necessary, before being emitted to the atmosphere.

- Implementation of a system monitoring program for soil vapor collection and analysis before and after air treatment, if necessary treatment is determined to be necessary.

- Appropriate environmental monitoring to ensure the effectiveness of the remedy.

EPA and EQB believe that the selected remedy will provide a high level of protection of human health and the environment by reducing the concentrations of VOCs in the soil. Toxicity, mobility and volume will be reduced permanently through treatment. Moreover, this alternative will provide overall protection because it should reduce the presence of VOCs at the Site through in-situ treatment such that the contaminated soil no longer acts, as a source of contamination to the groundwater, thus enhancing the existing OU-I groundwater remedy.

The selected remedy will provide the best balance of trade-offs among alternatives with respect to the evaluation criteria. EPA and EQB believe that the selected remedy will be protective of human health and the environment, will comply with ARARs, will be cost effective, and will utilize permanent solutions and alternative treatment technologies or resource recovery technologies to the maximum extent practicable. The remedy also will meet the statutory preference for the use of treatment as a principal element.

XI. STATUTORY DETERMINATIONS

As was previously noted, CERCLA §121(b)(1), 42 U.S.C. §9621(b)(1), mandates that a remedial action must be protective of human health and the environment, cost-effective, and utilize permanent solutions and alternative treatment technologies or resource recovery technologies to the maximum extent practicable. Section 121(b)(1) also establishes a preference for remedial actions which employ treatment to permanently and significantly reduce the volume, toxicity, or mobility of the hazardous substances,

pollutants, or contaminants at a site. CERCLA §121(d), 42 U.S.C. §9621(d), further specifies that a remedial action must attain a degree of cleanup that satisfies ARARs under federal and state laws, unless a waiver can be justified pursuant to CERCLA §121(d)(4), 42 U.S.C. §9621(d)(4).

For the reasons discussed below, EPA has determined that the selected remedy meets the requirements of CERCLA §121, 42 U.S.C. §9621.

1. **Protection of Human Health and the Environment**

In order to meet the remedial objectives outlined in the previous section, the risk associated with exposure to the contaminated groundwater must fall within the acceptable risk range for carcinogens.

Alternative 2 will provide the best overall protection because it will eliminate the presence of VOCs at the Site through in-situ treatment until no residual impacted soil remains.

2. **Compliance with Applicable, Relevant and Appropriate Requirements**

There are no chemical specific cleanup standards for contaminated soils. ARARs related to air quality are established by PRRCAP. The PRRCAP establishes emission limits of 3 lb/hr of total VOCs and 15 lbs/day. At the present time, it is expected that air emissions from the SVE will not be a problem. Air emissions will be monitored and, if necessary, emissions controls will be placed on the system.

3. **Cost Effectiveness**

The selected remedy provides for overall effectiveness in proportion to its cost in mitigating the risk posed by the contaminated soils. Section 300.430(f) (ii) (d) of the NCP requires EPA to evaluate cost-effectiveness by comparing all the alternatives which meet the threshold criterion of protection of human health and the environment, against the three additional balancing criteria of long-term effectiveness and permanence; reduction of toxicity, mobility or volume through treatment; and short-term effectiveness. The selected remedy meets these criteria and provides for overall effectiveness in proportion to its cost. The selected remedy has a capital cost of $2,277,000, annual O&M of $1,992,980, and a present worth of $4,270,000.

4. **Utilization of Permanent Solutions and Alternative Treatment Technologies to the Maximum Extent Practicable**

The selected remedy utilizes permanent solutions and alternative (innovative) treatment technologies to the maximum extent practicable. SVE will significantly reduce the

concentrations of VOCs in soil, thus reducing their vertical migration to the groundwater. In turn, this action will reduce the length of time required to achieve groundwater cleanup by preventing the VOCs from continuing to enter the groundwater.

5. Preference for Treatment as a Principal Element

The selected remedy's utilization of SVE to treat source area soils satisfies the statutory preference for remedies that permanently and significantly reduce the toxicity, mobility, or volume of hazardous substances.

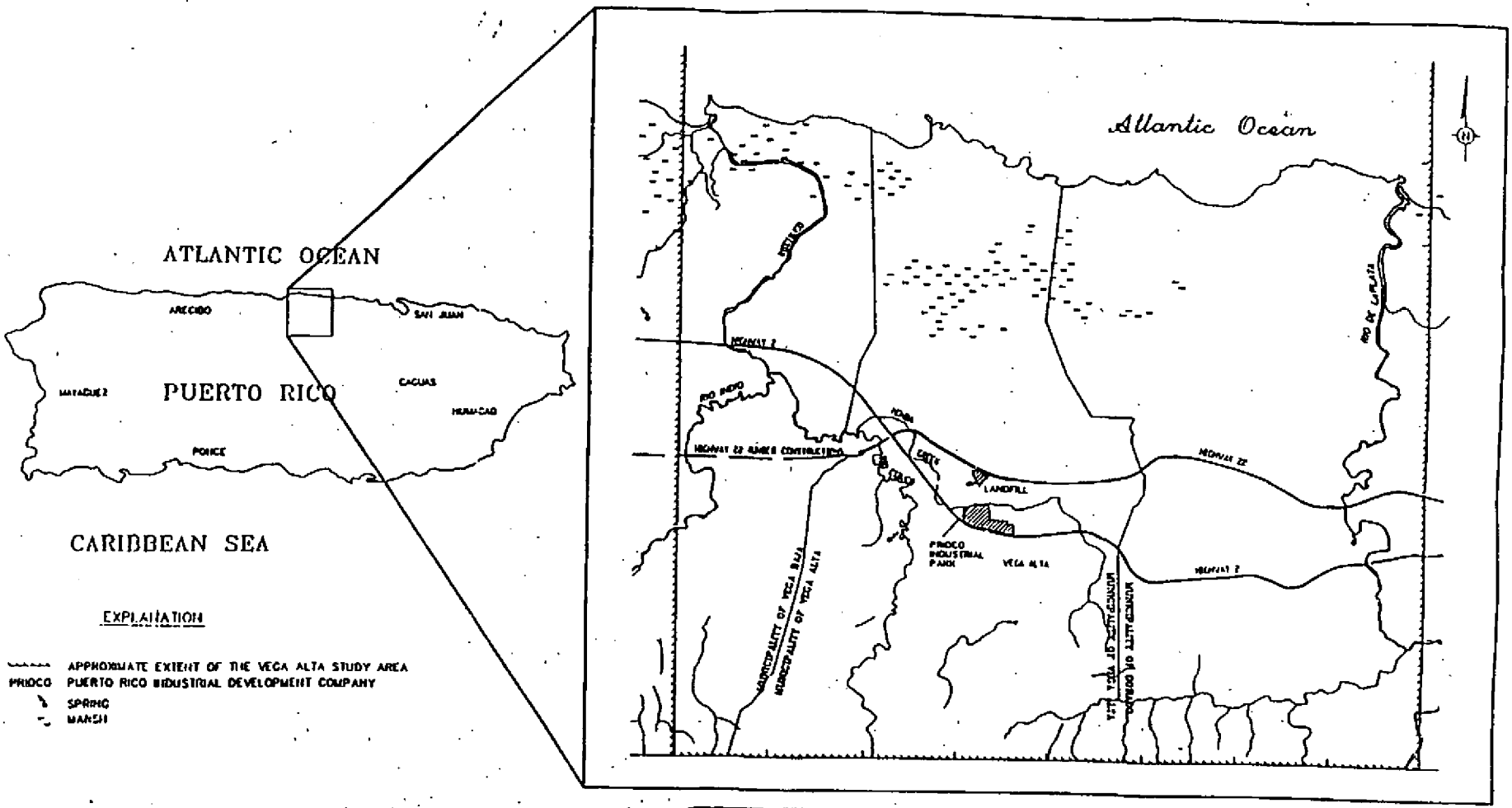
DOCUMENTATION OF SIGNIFICANT CHANGES

There are no significant changes from the selected remedial alternative presented in the Proposed Plan.

FIGURES

VEGA ALTA PUBLIC SUPPLY WELLS SITE
VEGA ALTA, PUERTO RICO

APPENDIX A



GERAGHTY & MILLER, INC.
Environmental Services

MAP OF PUERTO RICO
AND STUDY AREA
CARIBE GENERAL ELECTRIC PRODUCTS, INC.
VEGA ALTA, PUERTO RICO

fig. 1

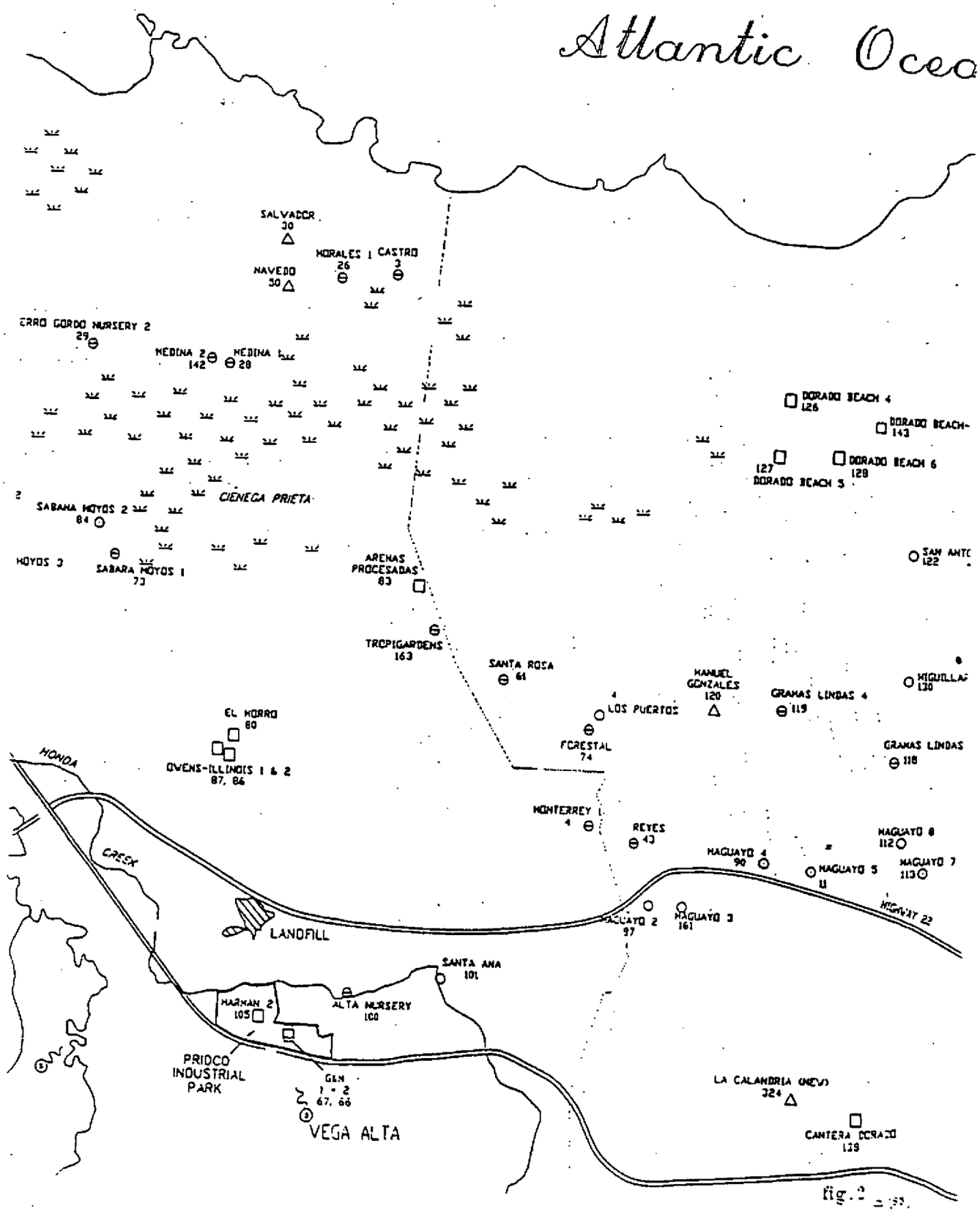
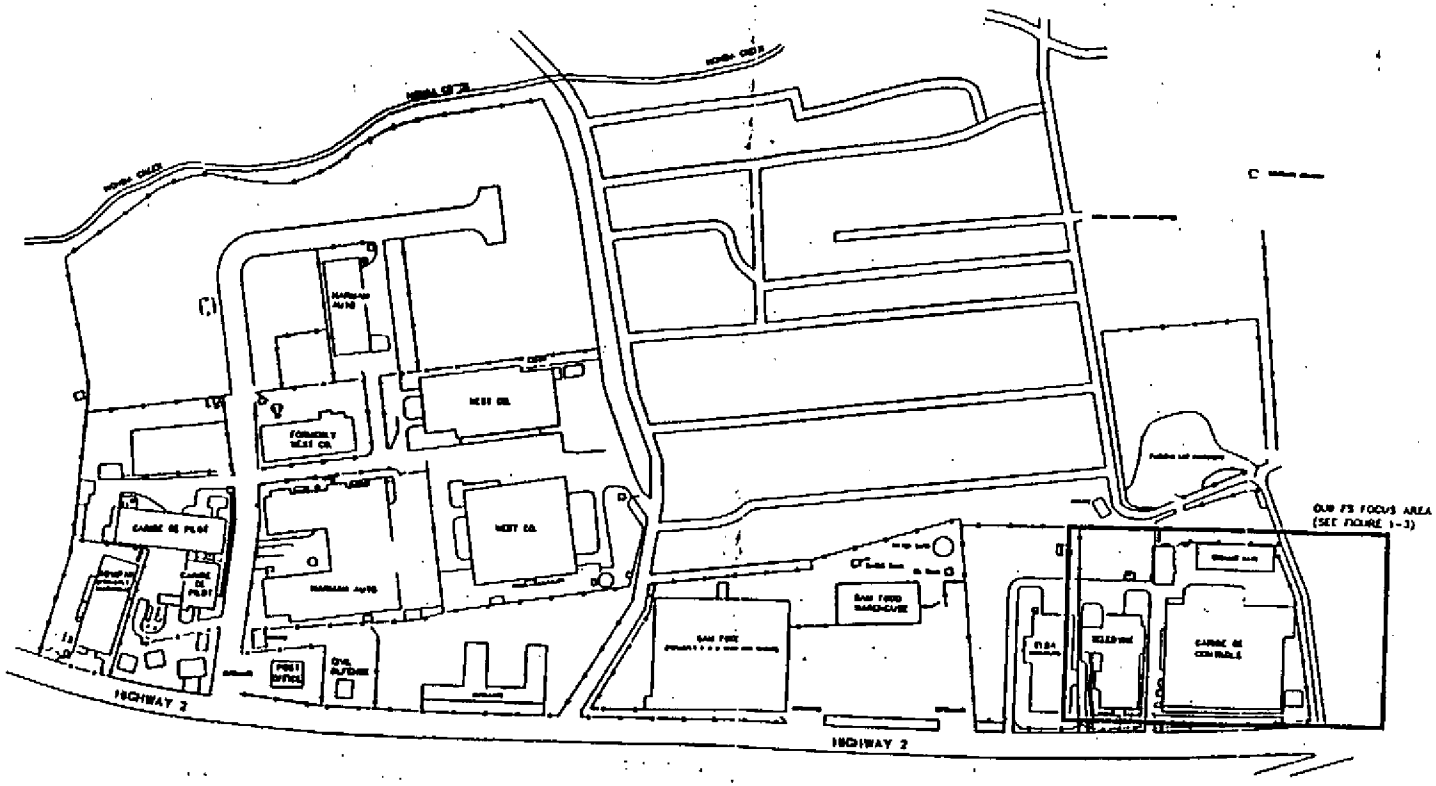

Atlantic Ocea
SALVADOR 30
NAVEDO 30
MORALES 1 CASTRO 26 3
CRRO GORDO NURSERY 2 29
MEDINA 2 142
MEDINA 1 28
CIENEGA PRIETA
SABANA HOYOS 2 84
HOYOS 3
SABANA HOYOS 1 73
ARENAS PROCESADAS 83
TROPIGARDENS 163
SANTA ROSA 61
DORADO BEACH 4 126
DORADO BEACH 143
DORADO BEACH 6 128
127 DORADO BEACH 5
SAN ANTC 122
MANUEL GONZALES 120
GRANAS LINDAS 4 119
HIGUILLAS 130
LOS PUERTOS
FORESTAL 74
GRANAS LINDAS 118
EL MORRO 80
OWENS-ILLINOIS 1 & 2 87, 86
HONDA
CREEK
MONTERREY 4
REYES 43
HAGUAYO 8 112
HAGUAYO 4 90
HAGUAYO 5 11
HAGUAYO 7 113
HAGUAYO 2 97
HAGUAYO 3 161
HIGHWAY 22
LANDFILL
SANTA ANA 101
HARMAN 2 105
ALTA NURSERY 100
PRIDCO INDUSTRIAL PARK
GEN 1 • 2 67, 66
VEGA ALTA
LA CALANDRIA (NEW) 324
CANTERA DORADO 139

fig. 2



DATE	5/8/95
SCALE	1"=300'
DRAWN BY	D.A.P.
CHK. BY:	M.D.S.
ENG. SUP.:	M.P.S.
PROJ. NO.:	92082
ISSUED	5/8/95

PRIDCO INDUSTRIAL PA
VEGA ALTA, PUERTO RI

UNISYS

fig. 3

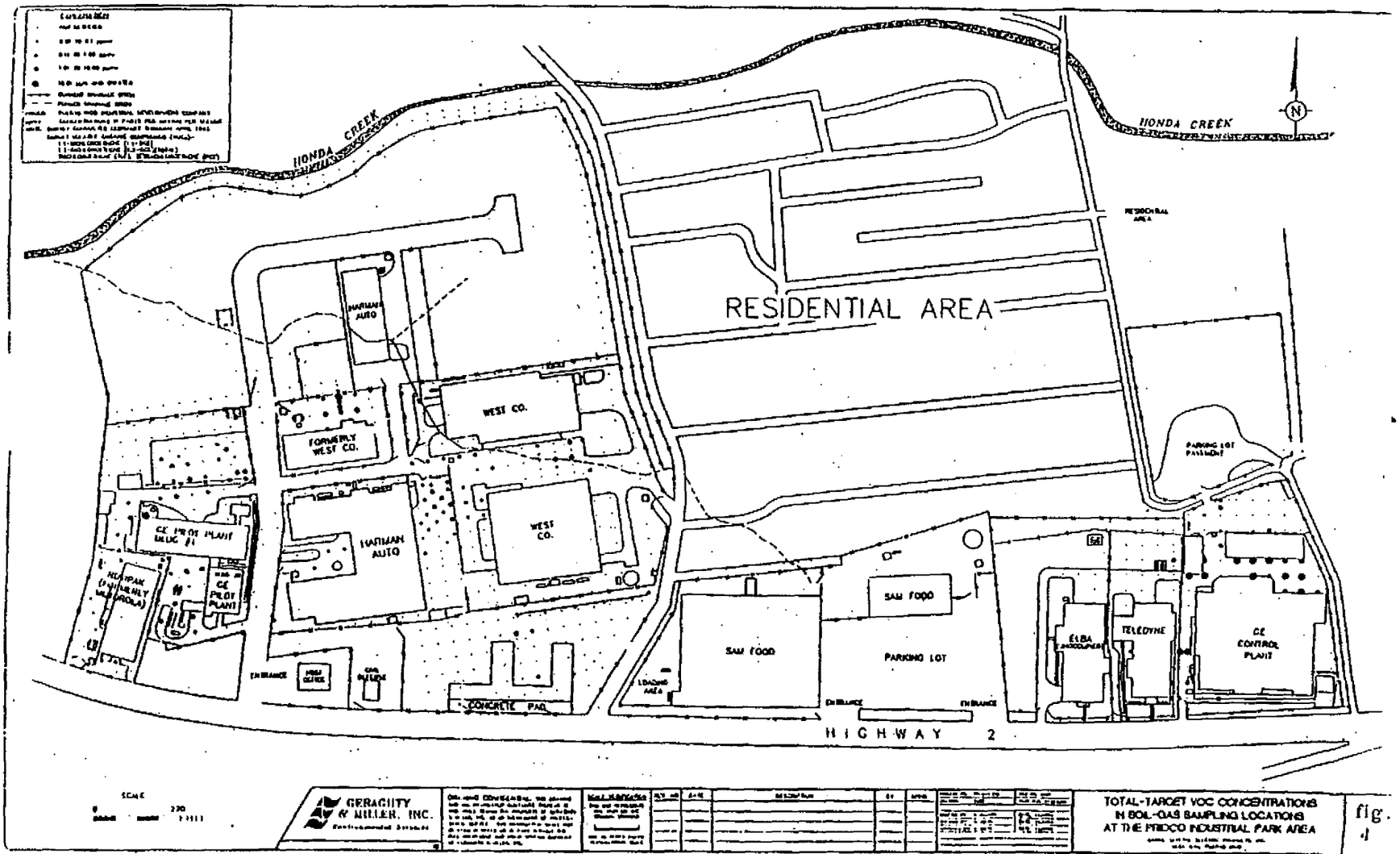
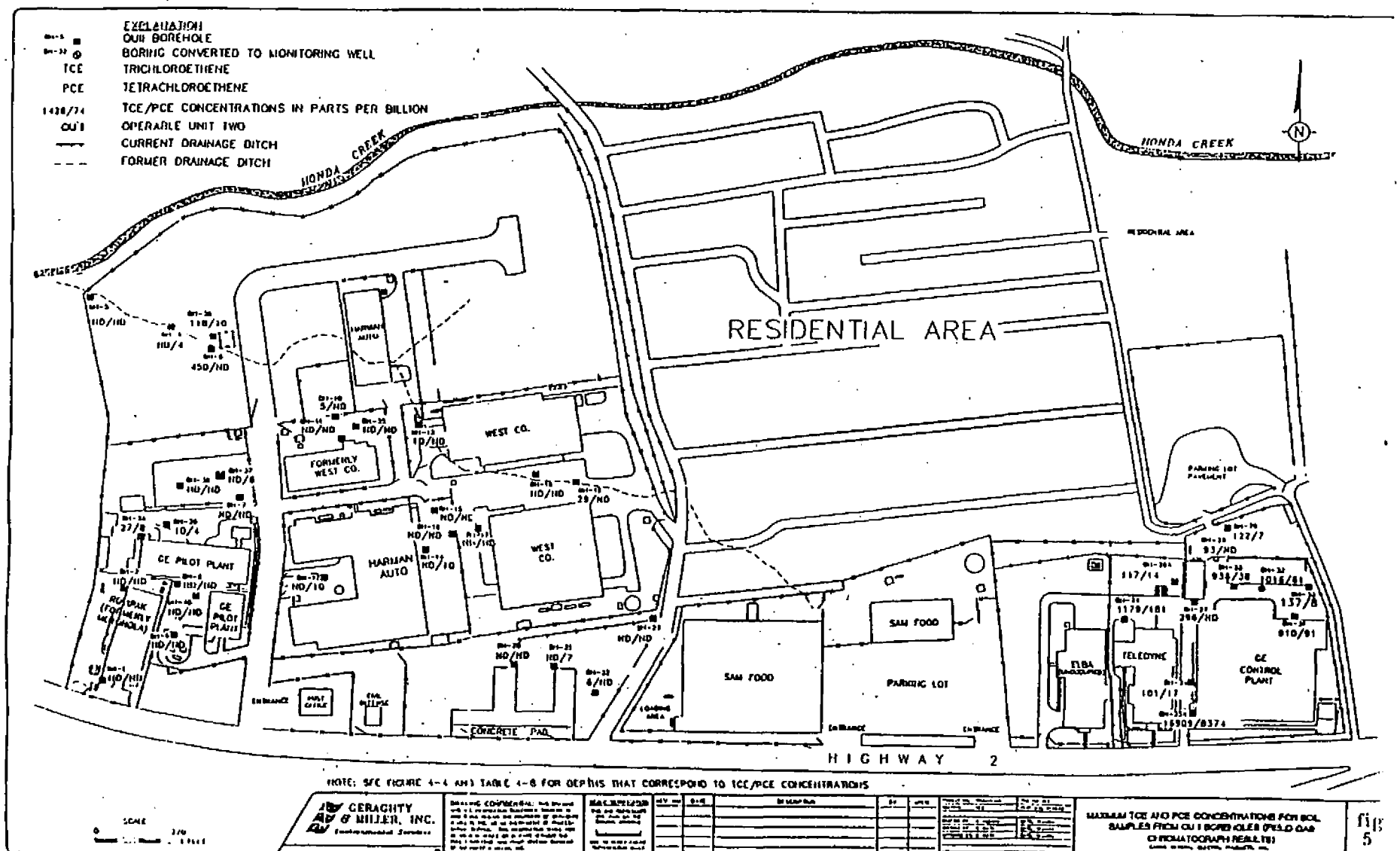

HONDA CREEK
HONDA CREEK
RESIDENTIAL AREA
WEST CO.
FORMERLY WEST CO.
WEST CO.
HARMAN AUTO
HARMAN AUTO
GE PILOT PLANT
SAW FOOD
SAW FOOD
PARKING LOT
TELEDYNE
GE CONTROL PLANT
CONCRETE PAD
LOADING AREA
ENTRANCE
ENTRANCE
HIGHWAY 2
GERAGHTY & MILLER, INC.
TOTAL-TARGET VOC CONCENTRATIONS IN SOIL-GAS SAMPLING LOCATIONS AT THE FRIDCO INDUSTRIAL PARK AREA

fig. 4



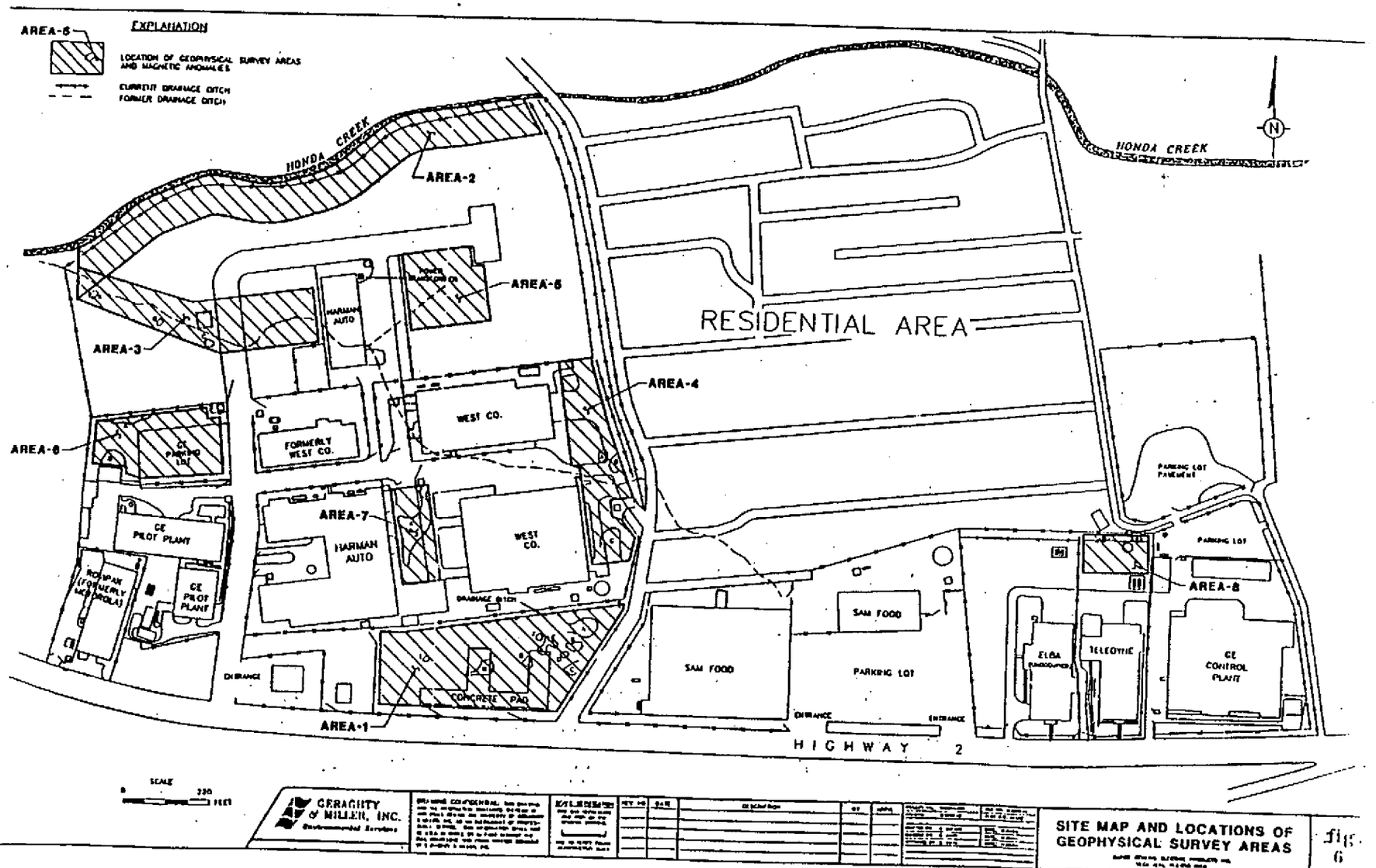
NOTE: SEE FIGURE 4-4 AND TABLE 4-6 FOR DEPTHS THAT CORRESPOND TO TCE/PCE CONCENTRATIONS

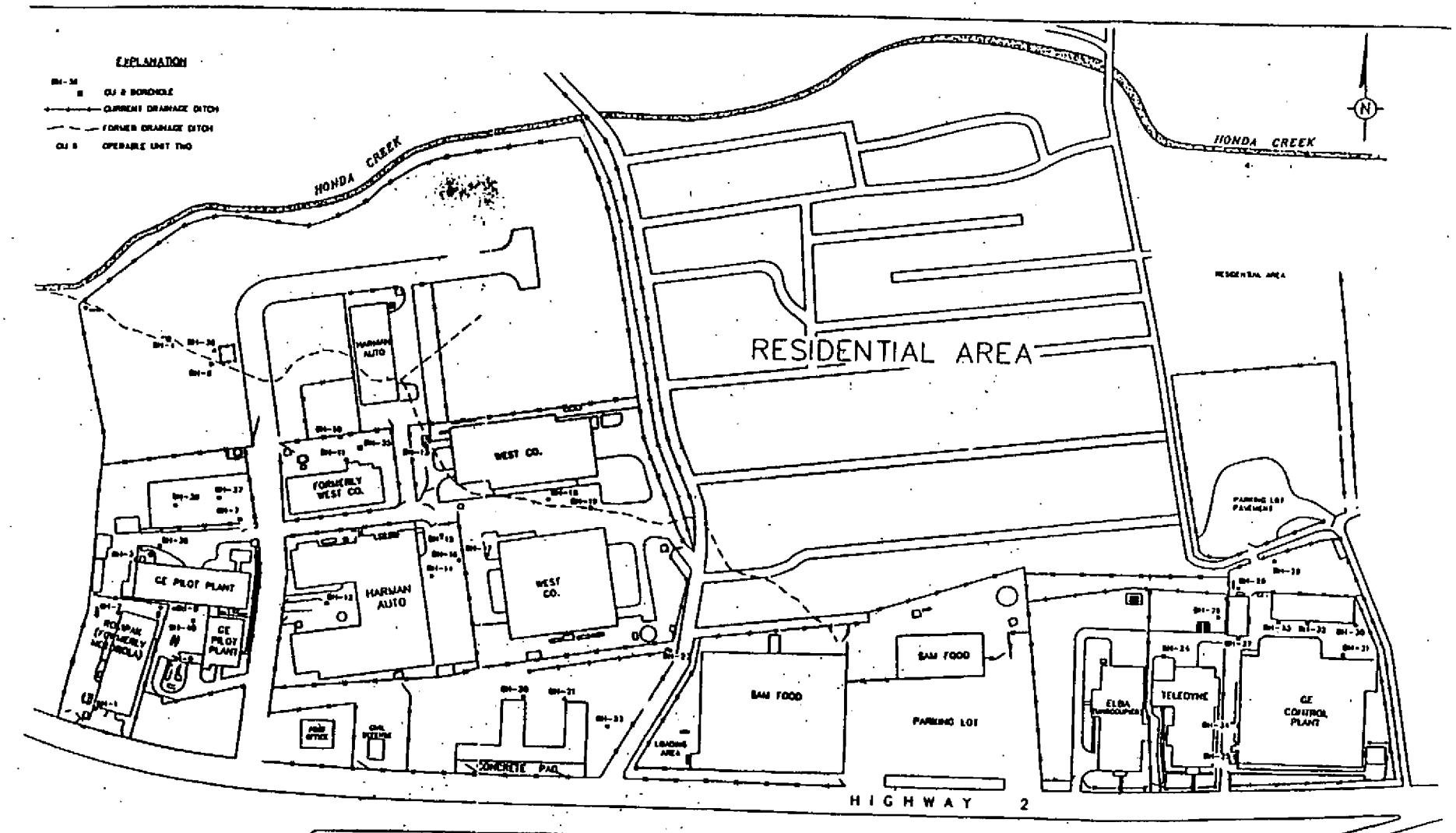
SCALE

GERAGHTY & MILLER, INC.

MAXIMUM TCE AND PCE CONCENTRATIONS FOR SOIL SAMPLES FROM OU I BORE HOLES (FIELD GAS CHROMATOGRAPH RESULTS)

fig 5

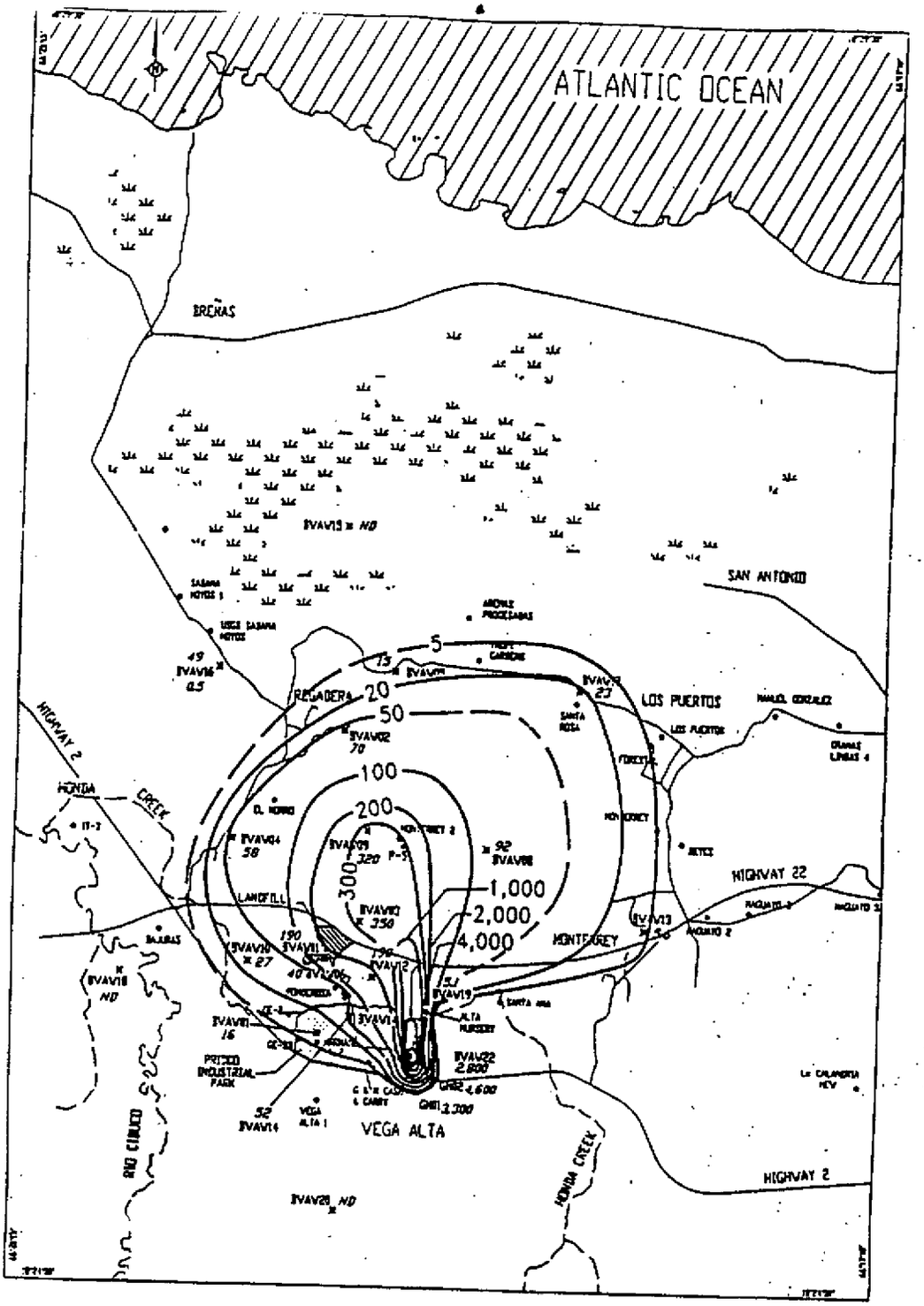

AREA-5
EXPLANATION
LOCATION OF GEOPHYSICAL SURVEY AREAS AND MAGNETIC ANOMALIES
CURRENT DRAINAGE DITCH
FORMER DRAINAGE DITCH
HONDA CREEK
HONDA CREEK
AREA-2
AREA-5
AREA-3
RESIDENTIAL AREA
AREA-4
AREA-6
HARMAN AUTO
FORMERLY WEST CO.
WEST CO.
GE PILOT PLANT
AREA-7
HARMAN AUTO
WEST CO.
GE PILOT PLANT
ROMPAK (FORMERLY MICROMOLA)
DRAINAGE DITCH
DRIVEWAY
CONCRETE PAD
AREA-1
SAM FOOD
PARKING LOT
SAM FOOD
PARKING LOT PAVEMENT
PARKING LOT
AREA-8
ELSA
TELEDYNE
GE CONTROL PLANT
ENTRANCE
ENTRANCE
HIGHWAY 2
N
SCALE
0
330
FEET
GERAGHTY & MILLER, INC.
SITE MAP AND LOCATIONS OF GEOPHYSICAL SURVEY AREAS
Fig. 6



GERACITY & MILLER, INC.

INDUSTRIAL AREA BORING LOCATIONS FOR THE OU II REMEDIAL INVESTIGATION

Fig. 7



EXPLANATION

- MULTIPORT MONITORING WELL
- PRODUCTION OR MONITORING WELL
- MARSH
- STREAM
- TCE — TRICHLOROETHENE
- 1.6 — CONCENTRATIONS OF TCE IN PARTS PER BILLION
- —20— LINE OF EQUAL TCE CONCENTRATION (DASHED WHERE LESS CERTAIN)
- ND — NOT DETECTED
- PRIDCO — PUERTO RICO INDUSTRIAL DEVELOPMENT COMPANY

SCALE 1/2 MILES

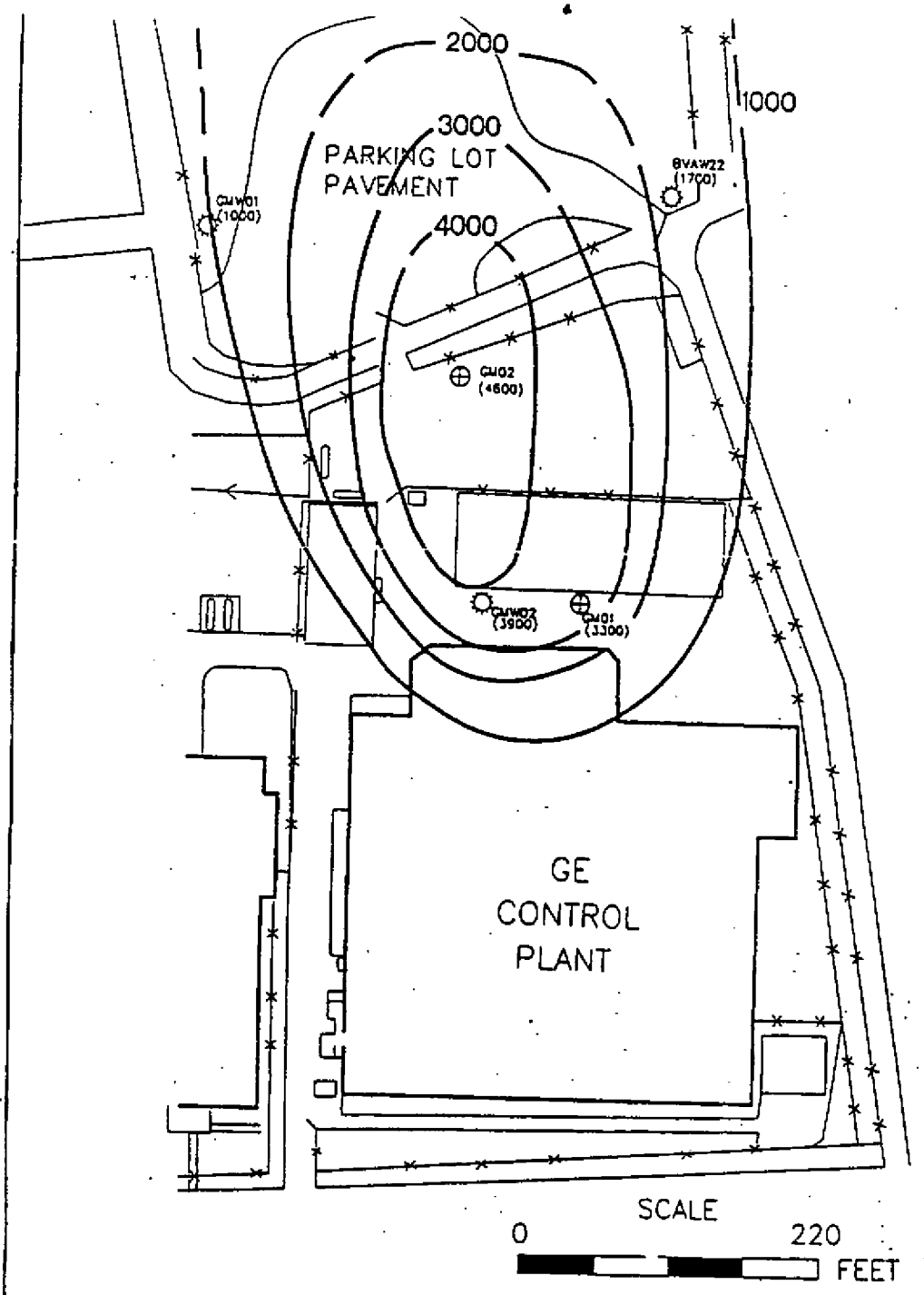
NOTE:
ISOCONCENTRATION CONTOURS WERE DRAWN BASED ONLY ON DATA FROM MULTIPORT WELLS AND FROM MONITORING WELLS GW01 AND GW02

GERAGHTY & MILLER, INC.
Environmental Services

HIGHEST QUANTIFIABLE TCE CONCENTRATIONS (DEPTH-INDEPENDENT) (JANUARY TO MARCH 1992, AND AUGUST TO SEPTEMBER 1993) VEGA ALTA STUDY AREA

CARIBE GENERAL ELECTRIC PRODUCTS, INC.
VEGA ALTA, PUERTO RICO

fig. 8



EXPLANATION

⊕	MULTIPORT MONITORING WELL	(3900)	CONCENTRATIONS OF TCE IN PARTS PER BILLION
⊖	4-INCH DIAMETER WELL	—1000—	LINE OF EQUAL TCE CONCENTRATION (DASHED WHERE LESS CERTAIN)
TCE	TRICHLOROETHENE		
PRIDCO	PUERTO RICO INDUSTRIAL DEVELOPMENT COMPANY		

GERAGHTY & MILLER, INC.
Environmental Services

HIGHEST QUANTIFIABLE TCE CONCENTRATIONS IN GROUNDWATER
EASTERN SIDE OF THE PRIDCO INDUSTRIAL PARK, AUGUST TO SEPTEMBER 1990

CARIBE GENERAL ELECTRIC PRODUCTS, INC.
VEGA ALTA, PUERTO RICO

fig. 9

TABLES

VEGA ALTA PUBLIC SUPPLY WELLS SITE
VEGA ALTA, PUERTO RICO

APPENDIX B

Table 1 Chronology of Events (June 1983 to March 1993), Vega Alta, Puerto Rico.

Date	Description of Event(s)
June 1983	The U.S. Geological Survey (USGS) discovered volatile organic compounds (VOCs) in a groundwater sample from the Ponderosa water-supply well located south of the municipal landfill.
September 1983 - March 1984	The U.S. Environmental Protection Agency (USEPA) Technical Assistance Team (TAT) (Roy F. Weston, Inc.) collected and analyzed samples from the public water distribution system and supply wells on a monthly basis.
April 1984 - March 1985	NUS Corporation, under contract to the USEPA, conducted RI field work at the Vega Alta Site.
May 1986	NUS Corporation issued the RI Report.
July 1987	Draft Feasibility Study Report prepared by NUS was submitted to the USEPA.
September 1987	The USEPA issued a Record of Decision (ROD) selecting a remedial alternative for remediation of groundwater and provision of drinking water supply for Vega Alta. The ROD required the construction of treatment systems at four public supply wells, the pumpage and treatment of groundwater, and the reintroduction of treated water into the public distribution system.
1988	The USGS published a report entitled "Hydrology and Effects of Development on the Water Table Aquifer in the Vega Alta Quadrangle, Puerto Rico."

Table 1 Chronology of Events (June 1983 to March 1993), Vega Alta, Puerto Rico.

Date	Description of Event(s)
1988	The USEPA invited several companies, including General Electric (GE), Harman, Motorola, West Company, and the Puerto Rico Industrial Development Company (PRIDCO) to implement the selected ROD remedy.
September 1988	Caribe GE, Inc. retained Bechtel Environmental, Inc. to evaluate data from the Vega Alta Superfund Site.
March 1989	In response to concerns expressed by the above companies and with input from the Puerto Rico Environmental Quality Board (PREQB) and the Puerto Rico Aqueduct and Sewer Authority (PRASA), the ROD was modified to require surface discharge of all treated water. The USEPA issued an Administrative Order (Index No. II-CERCLA-90302) which ordered the above companies to implement the modified ROD remedy.
May 1989	Caribe GE submitted a Groundwater Investigation Work Plan prepared by Bechtel to the USEPA.
1989	Ebasco prepared and submitted work plans to the USEPA for Operable Unit Two (OU II) (Source) and Supplemental Groundwater Investigations (SGI).
July 1989 - February 1990	Bechtel conducted field activities (soil-gas survey, geophysical survey, surface-water sampling, multiport monitoring well installations, and well sampling) associated with the groundwater investigation.
January 1990	Six potentially responsible parties (PRPs) received a "Special Notice Letter" from the USEPA that extended the opportunity to conduct the work proposed in Ebasco's Remedial Investigation/Feasibility Study (RI/FS) Work Plan.

Table 1 Chronology of Events (June 1983 to March 1993), Vega Alta, Puerto Rico.

Date	Description of Event(s)
February 1990	Bechtel submitted a Technical Memorandum to the USEPA summarizing the results of the groundwater investigation.
September 1990	The USEPA issued an Administrative Order (Index II-CERCLA-00301) and a final work plan for OU II (source) and supplemental groundwater investigations at the Vega Alta Site.
November 1990	Caribe GE submitted Bechtel's Groundwater Investigation Report (Bechtel 1990) to the USEPA, USGS, and Commonwealth agencies in conjunction with a Field Sampling and Analysis Plan for OU II.
November 1991	Caribe GE submitted Geraghty & Miller's report "Field Sampling Plan, Operable Unit Two (Source) and Supplemental Groundwater Investigation, Vega Alta, Puerto Rico" (Source) to the USEPA.
November 1991	Caribe GE submitted Geraghty & Miller's report "Results of the 1991 Field Effort, Caribe GE Groundwater Investigation, Vega Alta, Puerto Rico" to the USEPA.
January - April 1992	Geraghty & Miller implemented Phase I of the OU II RI field activities.
October 1992 - March 1993	Geraghty & Miller implemented Phase II of the OU II RI field activities.
July 1992	Geraghty & Miller submitted the report "Technical Memorandum, Summary of Initial Field Activities for the Operable Unit Two Remedial Investigation; Vega Alta, Puerto Rico" to the USEPA on behalf of GE.

Table 1 Chronology of Events (June 1983 to March 1993), Vega Alta, Puerto Rico.

Date	Description of Event(s)
April 1992	Environmental Resources Management, Inc. (ERM) issued a report entitled "Annual Report of Historical VOC Distribution in Groundwater at the Vega Alta Superfund Site".
March - June 1993	ERM constructed an air stripper and treatment system at the Ponderosa Well in compliance with the OU I.
March 1993 - January 1994	Geraghty & Miller implemented Phase II and Phase III of the OU II RI and SGI field activities.

PR0044.005
#PR044.**-WP1/Events.tbl

Table 2. Summary of Analytical Results for the Soil-Gas Survey at the PRIDCO Industrial Park, February Through April 1992, OU II Remedial Investigation, Vega Alta, Puerto Rico.

Sample I.D.	Date	Coordinates	1,1-DCE (ppmv)	trans-1,2-DCE (ppmv)	cis-1,2-DCE (ppmv)	TCE (ppmv)	PCE (ppmv)	Total Target VOCs (ppmv)	Unknowns
Concrete Pad Area									
A-4	2/20/92	E 20360 N 9440	<0.08	<0.03	<0.07	<0.07	<0.05	0	0
A-5	2/20/92	E 20360 N 9480	<0.08	<0.03	<0.07	<0.07	<0.05	0	0
A-6	2/20/92	E 20360 N 9520	<0.08	<0.03	<0.07	<0.07	<0.05	0	0
A-7	2/20/92	E 20360 N 9600	<0.08	<0.03	<0.07	<0.07	<0.05	0	0
A-8	2/20/92	E 20400 N 9560	<0.08	<0.03	<0.07	<0.07	<0.05	0	0
A-9	2/20/92	E 20400 N 9480	<0.08	<0.03	<0.07	<0.07	<0.05	0	0
A-10	2/20/92	E 20400 N 9440	<0.08	<0.03	<0.07	<0.07	<0.05	0	0
A-11	2/20/92	E 20440 N 9480	<0.08	<0.03	<0.07	<0.07	<0.05	0	0
A-12	2/20/92	E 20480 N 9520	<0.08	<0.03	<0.07	<0.07	<0.05	0	0
A-13	2/20/92	E 20520 N 9520	<0.08	<0.03	<0.07	<0.07	<0.05	0	0
A-13*	2/20/92	E 20520 N 9520	<0.08	<0.03	<0.07	<0.07	<0.05	0	1
A-14	2/20/92	E 20520 N 9560	<0.08	<0.03	<0.07	<0.07	<0.05	0	0
A-15	2/20/92	E 20440 N 9600	<0.08	<0.03	<0.07	<0.07	<0.05	0	0
A-16	2/20/92	E 20560 N 9600	<0.08	<0.03	<0.07	<0.07	<0.05	0	0
B-1	2/20/92	E 20360 N 9560	<0.09	<0.05	<0.09	<0.10	<0.08	0	0
B-2	2/20/92	E 20400 N 9600	<0.09	<0.05	<0.09	<0.10	<0.08	0	0
B-3	2/20/92	E 20400 N 9520	<0.09	<0.05	<0.09	<0.10	<0.08	0	0
B-4	2/20/92	E 20440 N 9440	<0.09	<0.05	<0.09	<0.10	<0.08	0	0
B-5	2/20/92	E 20440 N 9520	<0.09	<0.05	<0.09	<0.10	<0.08	0	0
B-6	2/20/92	E 20480 N 9480	<0.09	<0.05	<0.09	<0.10	<0.08	0	0
B-7	2/20/92	E 20440 N 9560	<0.09	<0.05	<0.09	<0.10	<0.08	0	0
B-8	2/20/92	E 20480 N 9560	<0.09	<0.05	<0.09	<0.10	<0.08	0	0
B-9	2/20/92	E 20520 N 9600	<0.09	<0.05	<0.09	<0.10	<0.08	0	0
B-10	2/20/92	E 20480 N 9600	<0.09	<0.05	<0.09	<0.10	<0.08	0	0
B-11	2/20/92	E 20560 N 9560	<0.09	<0.05	<0.09	<0.10	<0.08	0	0

See last page for footnotes.

Table 2. Summary of Analytical Results for the Soil-Gas Survey at the PRIDCO Industrial Park, February Through April 1992, OU II Remedial Investigation, Vega Alta, Puerto Rico.

Sample I.D.	Date	Coordinates	1,1-DCE (ppmv)	trans-1,2-DCE (ppmv)	cis-1,2-DCE (ppmv)	TCE (ppmv)	PCE (ppmv)	Total Target VOCs (ppmv)	Unknowns
A-17	2/21/92	E 20480 N 9440	<0.08	<0.04	<0.08	<0.07	<0.06	0	0
A-18	2/21/92	E 20520 N 9440	<0.08	<0.04	<0.08	<0.07	<0.06	0	0
A-19	2/21/92	E 20560 N 9520	<0.08	<0.04	<0.08	<0.07	<0.06	0	0
A-20	2/21/92	E 20560 N 9400	<0.08	<0.04	<0.08	<0.07	<0.06	0	0
A-21	2/21/92	E 20600 N 9400	<0.08	<0.04	<0.08	<0.07	<0.06	0	0
A-22	2/21/92	E 20600 N 9520	<0.08	<0.04	<0.08	<0.07	<0.06	0	0
A-23	2/21/92	E 20600 N 9480	<0.08	<0.04	<0.08	<0.07	<0.06	0	11
A-24	2/21/92	E 20600 N 9440	<0.08	<0.04	<0.08	<0.07	<0.06	0	0
A-25	2/21/92	E 20800 N 9520	<0.08	<0.04	<0.08	<0.07	<0.06	0	0
A-25*	2/21/92	E 20800 N 9520	<0.08	<0.04	<0.08	<0.07	<0.06	0	0
A-26	2/21/92	E 20760 N 9400	<0.08	<0.04	<0.08	<0.07	<0.06	0	0
A-27	2/21/92	E 20840 N 9560	<0.08	<0.04	<0.08	<0.07	<0.06	0	0
A-28	2/21/92	E 20840 N 9520	<0.08	<0.04	<0.08	<0.07	<0.06	0	0
B-12	2/21/92	E 20520 N 9480	<0.08	<0.04	<0.08	<0.07	<0.06	0	0
B-12*	2/21/92	E 20520 N 9480	<0.08	<0.04	<0.08	<0.08	<0.06	0	0
B-13	2/21/92	E 20560 N 9480	<0.08	<0.04	<0.08	<0.08	<0.06	0	0
B-14	2/21/92	E 20560 N 9440	<0.08	<0.04	<0.08	<0.08	<0.06	0	0
B-15	2/21/92	E 20640 N 9480	<0.08	<0.04	<0.08	<0.08	<0.06	0	0
B-16	2/21/92	E 20800 N 9480	<0.08	<0.04	<0.08	<0.08	<0.06	0	5
B-17	2/21/92	E 20760 N 9480	<0.08	<0.04	<0.08	<0.08	<0.06	0	0
B-18	2/21/92	E 20760 N 9440	<0.08	<0.04	<0.08	<0.08	<0.06	0	0
B-19	2/21/92	E 20800 N 9560	<0.08	<0.04	<0.08	<0.08	<0.06	0	0
A-29	2/24/92	E 20640 N 9400	<0.03	<0.02	<0.06	<0.07	<0.04	0	0
A-30	2/24/92	E 20640 N 9440	<0.03	<0.02	<0.06	0.17	0.24	0.41	1
A-31	2/24/92	E 20680 N 9400	<0.03	<0.02	<0.06	<0.07	<0.04	0	0
A-32	2/24/92	E 20680 N 9520	<0.03	<0.02	<0.06	<0.07	<0.04	0	0

See last page for footnotes.

Table 2. Summary of Analytical Results for the Soil-Gas Survey at the PRIDCO Industrial Park, February Through April 1992, OU II Remedial Investigation, Vega Alta, Puerto Rico.

Sample I.D.	Date	Coordinates	1,1-DCE (ppmv)	trans-1,2-DCE (ppmv)	cis-1,2-DCE (ppmv)	TCE (ppmv)	PCE (ppmv)	Total Target VOCs (ppmv)	Unknowns
A-33	2/24/92	E 20760 N 9520	<0.03	<0.02	<0.06	<0.07	<0.04	0	0
A-33*	2/24/92	E 20760 N 9520	<0.03	<0.02	<0.06	<0.07	<0.04	0	0
A-34	2/24/92	E 20720 N 9400	<0.03	<0.02	<0.06	<0.07	<0.04	0	0
A-35	2/24/92	E 20680 N 9560	<0.03	<0.02	<0.06	<0.07	<0.04	0	0
A-36	2/24/92	E 20640 N 9600	<0.03	<0.02	<0.06	<0.07	<0.04	0	0
A-37	2/24/92	E 20800 N 9600	<0.03	<0.02	<0.06	<0.07	<0.04	0	0
A-38	2/24/92	E 20880 N 9600	<0.03	<0.02	<0.06	<0.07	<0.04	0	0
A-39	2/24/92	E 20600 N 9600	<0.03	<0.02	<0.06	<0.07	<0.04	0	0
A-40	2/24/92	E 20800 N 9440	<0.03	<0.02	<0.06	<0.07	<0.04	0	0
A-41	2/24/92	E 20720 N 9480	<0.03	<0.02	<0.06	<0.07	<0.04	0	0
A-42	2/24/92	E 20720 N 9520	<0.03	<0.02	<0.06	<0.07	<0.04	0	0
B-20	2/24/92	E 20640 N 9520	<0.05	<0.03	<0.19	<0.13	<0.06	0	0
B-20*	2/24/92	E 20640 N 9520	<0.05	<0.03	<0.19	<0.13	<0.06	0	0
B-21	2/24/92	E 20680 N 9440	<0.05	<0.03	<0.19	<0.13	<0.06	0	0
B-22	2/24/92	E 20680 N 9480	<0.05	<0.03	<0.19	<0.13	<0.06	0	0
B-23	2/24/92	E 20760 N 9560	<0.05	<0.03	<0.19	<0.13	<0.06	0	0
B-24	2/24/92	E 20720 N 9440	<0.05	<0.03	<0.19	<0.13	<0.06	0	0
B-25	2/24/92	E 20680 N 9600	<0.05	<0.03	<0.19	<0.13	<0.06	0	0
B-26	2/24/92	E 20760 N 9600	<0.05	<0.03	<0.19	<0.13	<0.06	0	0
B-27	2/24/92	E 20840 N 9600	<0.05	<0.03	<0.19	<0.13	<0.06	0	0
B-28	2/24/92	E 20920 N 9600	<0.05	<0.03	<0.19	<0.13	<0.06	0	0
B-29	2/24/92	E 20880 N 9560	<0.05	<0.03	<0.19	<0.13	<0.06	0	0
B-30	2/24/92	E 20770 N 9450	<0.05	<0.03	<0.19	<0.13	<0.06	0	0
B-30*	2/24/92	E 20770 N 9460	<0.05	<0.03	<0.19	<0.13	<0.06	0	0
B-31	2/24/92	E 20720 N 9560	<0.05	<0.03	<0.19	<0.13	<0.06	0	0

See last page for footnotes.

Table 2. Summary of Analytical Results for the Soil-Gas Survey at the PRIDCO Industrial Park, February Through April 1992, OU II Remedial Investigation, Vega Alta, Puerto Rico.

Sample I.D.	Date	Coordinates	1,1-DCE (ppmv)	trans-1,2-DCE (ppmv)	cis-1,2-DCE (ppmv)	TCE (ppmv)	PCE (ppmv)	Total Target VOCs (ppmv)	Unknowns
A-43	2/25/92	E 20600 N 9560	<0.10	<0.03	0.53	1.81	4.40	6.74	20
A-43*	2/25/92	E 20600 N 9560	<0.10	<0.03	0.53	1.81	4.54	6.88	20
A-44	2/25/92	E 20620 N 9540	<0.10	<0.03	<0.10	<0.07	<0.06	0	1
B-32	2/25/92	E 20640 N 9560	<0.09	<0.03	<0.10	0.10	0.05	0.15	9
B-33	2/25/92	E 20720 N 9600	<0.09	<0.03	<0.10	<0.06	<0.05	0	0
B-34	2/25/92	E 20600 N 9540	<0.09	<0.03	<0.10	<0.06	<0.05	0	4
B-34*	2/25/92	E 20600 N 9540	<0.09	<0.03	<0.10	<0.06	<0.05	0	4
B-35	2/25/92	E 20580 N 9540	<0.09	<0.03	<0.10	<0.06	<0.05	0	0
Honda Creek									
A-1	2/19/92	E 20000 N 10800	<0.08	<0.03	<0.07	<0.07	<0.05	0	0
A-2	2/19/92	E 20040 N 10800	<0.08	<0.03	<0.07	<0.07	<0.05	0	0
A-3	2/19/92	E 19960 N 10800	<0.08	<0.03	<0.07	<0.07	<0.05	0	0
A-45	2/25/92	E 19680 N 10711	<0.10	<0.03	<0.10	<0.07	<0.06	0	0
A-46	2/25/92	E 19720 N 10771	<0.10	<0.03	<0.10	<0.07	<0.06	0	0
A-47	2/25/92	E 19760 N 10757	<0.10	<0.03	<0.10	<0.07	<0.06	0	0
A-48	2/25/92	E 19840 N 10808	<0.10	<0.03	<0.10	<0.07	<0.06	0	0
A-49	2/25/92	E 19880 N 10823	<0.10	<0.03	<0.10	<0.07	<0.06	0	0
A-50	2/25/92	E 19760 N 10720	<0.10	<0.03	<0.10	<0.07	<0.06	0	0
A-51	2/25/92	E 19840 N 10760	<0.10	<0.03	<0.10	<0.07	<0.06	0	0
A-52	2/25/92	E 19880 N 10780	<0.10	<0.03	<0.10	<0.07	<0.06	0	0
A-53	2/25/92	E 19800 N 10760	<0.10	<0.0_	<0.10	<0.07	<0.06	0	0
B-36	2/25/92	E 19680 N 10680	<0.09	<0.03	<0.10	<0.06	<0.05	0	0
B-37	2/25/92	E 19720 N 10680	<0.09	<0.03	<0.10	<0.06	<0.05	0	0
B-38	2/25/92	E 19800 N 10757	<0.09	<0.03	<0.10	<0.06	<0.05	0	0
A-54	2/26/92	E 19920 N 10833	<0.12	<0.03	<0.06	<0.07	<0.05	0	0

See last page for footnotes.

Table 2. Summary of Analytical Results for the Soil-Gas Survey at the PRIDCO Industrial Park, February Through April 1992, OU II Remedial Investigation, Vega Alta, Puerto Rico.

Sample I.D.	Date	Coordinates	1,1-DCE (ppmv)	trans-1,2-DCE (ppmv)	cis-1,2-DCE (ppmv)	TCE (ppmv)	PCE (ppmv)	Total Target VOCs (ppmv)	Unknowns
A-55	2/26/92	E 19920 N 10800	<0.12	<0.03	<0.06	<0.07	<0.05	0	0
A-55*	2/26/92	E 19920 N 10800	<0.12	<0.03	<0.06	<0.07	<0.05	0	0
A-57	2/26/92	E 19960 N 10845	<0.12	<0.03	<0.06	<0.07	<0.05	0	0
A-58	2/26/92	E 20040 N 10855	<0.12	<0.03	<0.06	<0.07	<0.05	0	0
A-59	2/26/92	E 20000 N 10850	<0.12	<0.03	<0.06	<0.07	<0.05	0	0
A-60	2/26/92	E 20080 N 10845	<0.12	<0.03	<0.06	<0.07	<0.05	0	0
A-61	2/26/92	E 20120 N 10831	<0.12	<0.03	<0.06	<0.07	<0.05	0	0
A-62	2/26/92	E 20160 N 10820	<0.12	<0.03	<0.06	<0.07	<0.05	0	0
A-63	2/26/92	E 20080 N 10800	<0.12	<0.03	<0.06	<0.07	<0.05	0	0
A-64	2/26/92	E 20120 N 10800	<0.12	<0.03	<0.06	<0.07	<0.05	0	0
A-65	2/26/92	E 20160 N 10800	<0.12	<0.03	<0.06	<0.07	<0.05	0	0
A-65*	2/26/92	E 20160 N 10800	<0.12	<0.03	<0.06	<0.07	<0.05	0	0
A-66	2/26/92	E 20200 N 10817	<0.12	<0.03	<0.06	<0.07	<0.05	0	0
A-67	2/26/92	E 20200 N 10800	<0.12	<0.03	<0.06	<0.07	<0.05	0	0
A-68	2/26/92	E 20240 N 10800	<0.12	<0.03	<0.06	<0.07	<0.05	0	0
A-69	2/26/92	E 20240 N 10827	<0.12	<0.03	<0.06	<0.07	<0.05	0	0
A-70	2/27/92	E 20320 N 10821	<0.14	<0.03	<0.10	<0.07	<0.04	0	0
A-71	2/27/92	E 20320 N 10800	<0.14	<0.03	<0.10	<0.07	<0.04	0	0
A-72	2/27/92	E 20360 N 10842	<0.14	<0.03	<0.10	<0.07	<0.04	0	0
A-73	2/27/92	E 20360 N 10800	<0.14	<0.03	<0.10	<0.07	<0.04	0	0
A-74	2/27/92	E 20400 N 10867	<0.14	<0.03	<0.10	<0.07	<0.04	0	0
A-75	2/27/92	E 20440 N 10895	<0.14	<0.03	<0.10	<0.07	<0.04	0	0
A-75*	2/27/92	E 20440 N 10895	<0.14	<0.03	<0.10	<0.07	<0.04	0	0
A-76	2/27/92	E 20520 N 10931	<0.14	<0.03	<0.10	<0.07	<0.04	0	0
A-77	2/27/92	E 20560 N 10920	<0.14	<0.03	<0.10	<0.07	<0.04	0	0
A-78	2/27/92	E 20640 N 10947	<0.14	<0.03	<0.10	<0.07	<0.04	0	0
A-79	2/27/92	E 20600 N 10920	<0.14	<0.03	<0.10	<0.07	<0.04	0	0

See last page for footnotes.

Table 2. Summary of Analytical Results for the Soil-Gas Survey at the PRIDCO Industrial Park, February Through April 1992, OU II Remedial Investigation, Vega Alta, Puerto Rico.

Sample I.D.	Date	Coordinates	1,1-DCE (ppmv)	trans-1,2-DCE (ppmv)	cis-1,2-DCE (ppmv)	TCE (ppmv)	PCE (ppmv)	Total Target VOCs (ppmv)	Unknowns
A-80	2/27/92	E 20680 N 10945	<0.14	<0.03	<0.10	<0.07	<0.04	0	0
A-81	2/27/92	E 20680 N 10920	<0.14	<0.03	<0.10	<0.07	<0.04	0	0
A-82	2/27/92	E 20720 N 10950	<0.14	<0.03	<0.10	<0.07	<0.04	0	0
A-83	2/27/92	E 20760 N 10951	<0.14	<0.03	<0.10	<0.07	<0.04	0	0
A-84	2/27/92	E 20800 N 10920	<0.14	<0.03	<0.10	<0.07	<0.04	0	0
B-39	2/27/92	E 20280 N 10800	<0.21	<0.05	<0.18	<0.10	<0.06	0	1
B-40	2/27/92	E 20320 N 10830	<0.21	<0.05	<0.18	<0.10	<0.06	0	0
B-40*	2/27/92	E 20320 N 10830	<0.21	<0.05	<0.18	<0.10	<0.06	0	0
B-41	2/27/92	E 20400 N 10840	<0.21	<0.05	<0.18	<0.10	<0.06	0	0
B-42	2/27/92	E 20440 N 10840	<0.21	<0.05	<0.18	<0.10	<0.06	0	0
B-43	2/27/92	E 20480 N 10880	<0.21	<0.05	<0.18	<0.10	<0.06	0	0
B-44	2/27/92	E 20480 N 10920	<0.21	<0.05	<0.18	<0.10	<0.06	0	0
B-45	2/27/92	E 20520 N 10880	<0.21	<0.05	<0.18	<0.10	<0.06	0	0
B-46	2/27/92	E 20600 N 10945	<0.21	<0.05	<0.18	<0.10	<0.06	0	0
B-47	2/27/92	E 20640 N 10920	<0.21	<0.05	<0.18	<0.10	<0.06	0	0
B-48	2/27/92	E 20560 N 10945	<0.21	<0.05	<0.18	<0.10	<0.06	0	0
B-49	2/27/92	E 20720 N 10920	<0.21	<0.05	<0.18	<0.10	<0.06	0	0
B-50	2/27/92	E 20760 N 10920	<0.21	<0.05	<0.18	<0.10	<0.06	0	0
B-50*	2/27/92	E 20760 N 10920	<0.21	<0.05	<0.18	<0.10	<0.06	0	0
B-51	2/28/92	E 20800 N 10960	<0.16	<0.07	<0.22	<0.06	<0.08	0	0
B-52	2/28/92	E 20840 N 10920	<0.16	<0.07	<0.22	<0.06	<0.08	0	0
A-222	3/20/92	E 20840 N 10940	<0.12	<0.04	<0.10	<0.06	<0.04	0	0
C-94	3/20/92	E 20840 N 10935	<0.16	<0.05	<0.13	<0.08	<0.06	0	0
Caribe GE Parking Lot									
A-85	2/28/92	E 19720 N 10200	<0.10	<0.03	<0.10	<0.04	<0.04	0	0
A-85*	2/28/92	E 19720 N 10200	<0.10	<0.03	<0.10	<0.04	<0.04	0	0

See last page for footnotes.

Table 2. Summary of Analytical Results for the Soil-Gas Survey at the PRIDCO Industrial Park, February Through April 1992, OU II Remedial Investigation, Vega Alta, Puerto Rico.

Sample I.D.	Date	Coordinates	1,1-DCE (ppmv)	trans-1,2-DCE (ppmv)	cis-1,2-DCE (ppmv)	TCE (ppmv)	PCE (ppmv)	Total Target VOCs (ppmv)	Unknowns
A-86	2/28/92	E 19760 N 10160	<0.10	<0.03	<0.10	<0.04	<0.04	0	0
A-87	2/28/92	E 19760 N 10120	<0.10	<0.03	<0.10	<0.04	<0.03	0	0
A-88	2/28/92	E 19840 N 10200	<0.10	<0.03	<0.10	<0.04	<0.04	0	0
A-89	2/28/92	E 19960 N 10200	<0.10	<0.03	<0.10	<0.04	<0.04	0	0
A-90	2/28/92	E 19920 N 10240	<0.10	<0.03	<0.10	<0.04	<0.04	0	0
A-91	2/28/92	E 19840 N 10240	<0.10	<0.03	<0.10	<0.04	<0.04	0	0
B-53	2/28/92	E 19680 N 10200	<0.16	<0.07	<0.22	<0.06	<0.08	0	0
B-54	2/28/92	E 19800 N 10160	<0.16	<0.07	<0.22	<0.06	<0.08	0	0
B-55	2/28/92	E 19800 N 10200	<0.16	<0.07	<0.22	<0.06	<0.08	0	0
B-56	2/28/92	E 19760 N 10200	<0.16	<0.07	<0.22	<0.06	<0.08	0	0
B-57	2/28/92	E 19880 N 10200	<0.16	<0.07	<0.22	<0.06	<0.08	0	0
B-58	2/28/92	E 19920 N 10200	<0.16	<0.07	<0.22	<0.06	<0.08	0	0
I-59	2/28/92	E 19880 N 10240	<0.16	<0.07	<0.22	<0.06	<0.08	0	0
A-92	3/2/92	E 19720 N 10160	<0.10	<0.04	<0.10	<0.07	<0.06	0	0
A-93	3/2/92	E 19800 N 10120	0.15	<0.04	<0.10	0.15	0.77	1.07	0
A-94	3/2/92	E 19840 N 10160	<0.10	<0.04	<0.10	<0.07	<0.06	0	0
A-95	3/2/92	E 19640 N 10120	<0.10	<0.04	<0.10	<0.07	<0.06	0	0
A-95*	3/2/92	E 19640 N 10120	<0.10	<0.04	<0.10	<0.07	<0.06	0	0
A-96	3/2/92	E 19720 N 10240	<0.10	<0.04	<0.10	<0.07	<0.06	0	0
A-97	3/2/92	E 19760 N 10240	<0.10	<0.04	<0.10	<0.07	<0.06	0	0
A-98	3/2/92	E 19640 N 10080	<0.10	<0.04	<0.10	<0.07	<0.06	0	0
A-99	3/2/92	E 19840 N 10080	0.34	<0.04	<0.10	0.39	0.66	1.39	0
A-100	3/2/92	E 19880 N 10080	<0.10	<0.04	<0.10	<0.07	0.51	0.51	0
A-101	3/2/92	E 19920 N 10080	<0.10	<0.04	<0.10	<0.07	<0.06	0	0
A-102	3/2/92	E 19920 N 10120	<0.10	<0.04	<0.10	0.28	0.29	0.57	0

See last page for footnotes.

Table 2. Summary of Analytical Results for the Soil-Gas Survey at the PRIDCO Industrial Park, February Through April 1992, OU II Remedial Investigation, Vega Alta, Puerto Rico.

Sample I.D.	Date	Coordinates	1,1-DCE (ppmv)	trans-1,2-DCE (ppmv)	cis-1,2-DCE (ppmv)	TCE (ppmv)	PCE (ppmv)	Total Target VOCs (ppmv)	Unknowns
B-60	3/2/92	E 19680 N 10160	<0.18	<0.08	<0.18	<0.10	<0.09	0	0
B-60*	3/2/92	E 19680 N 10160	<0.18	<0.08	<0.18	<0.10	<0.09	0	0
B-61	3/2/92	E 19720 N 10120	<0.18	<0.08	<0.18	<0.10	<0.09	0	0
B-62	3/2/92	E 19680 N 10120	<0.18	<0.08	<0.18	<0.10	<0.09	0	0
B-63	3/2/92	E 19640 N 10160	<0.18	<0.08	<0.18	<0.10	<0.09	0	0
B-64	3/2/92	E 19680 N 10240	<0.18	<0.08	<0.18	<0.10	<0.09	0	0
B-65	3/2/92	E 19800 N 10240	<0.18	<0.08	<0.18	<0.10	<0.09	0	0
B-67	3/2/92	E 19960 N 10080	1.0	<0.08	<0.18	1.05	0.94	2.99	0
A-103	3/3/92	E 20000 N 10240	<0.09	<0.04	<0.10	<0.06	<0.06	0	0
A-104	3/3/92	E 20000 N 10120	<0.09	<0.04	<0.10	<0.06	<0.06	0	0
A-105	3/3/92	E 20000 N 10080	<0.09	<0.04	<0.10	<0.06	<0.06	0	0
A-105*	3/3/92	E 20000 N 10080	<0.09	<0.04	<0.10	<0.06	<0.06	0	0
B-69	3/3/92	E 20000 N 10200	<0.14	<0.08	<0.16	<0.10	<0.09	0	0
B-70	3/3/92	E 20000 N 10160	<0.14	<0.08	<0.16	<0.10	<0.09	0	0
B-70*	3/3/92	E 20000 N 10160	<0.14	<0.08	<0.16	<0.10	<0.09	0	0
A-284	3/30/92	E 19960 N 10280	<0.10	<0.03	<0.08	<0.04	<0.03	0	0
A-285	3/30/92	E 19920 N 10280	<0.10	<0.03	<0.08	<0.04	<0.03	0	0
A-286	3/30/92	E 19840 N 10280	<0.10	<0.03	<0.08	<0.04	<0.03	0	0
A-287	3/30/92	E 19720 N 10280	<0.10	<0.03	<0.08	<0.04	<0.03	0	0
A-287*	3/30/92	E 19720 N 10280	<0.10	<0.03	<0.08	<0.04	<0.03	0	0
C-117	3/30/92	E 20000 N 10280	<0.13	<0.05	<0.13	<0.06	<0.05	0	0
C-118	3/30/92	E 19880 N 10280	<0.13	<0.05	<0.13	<0.06	<0.05	0	0
C-119	3/30/92	E 19800 N 10280	<0.13	<0.05	<0.13	<0.06	<0.05	0	0
C-120	3/30/92	E 19760 N 10280	<0.13	<0.05	<0.13	<0.06	<0.05	0	0
C-120*	3/30/92	E 19760 N 10280	<0.13	<0.05	<0.13	<0.06	<0.05	0	0
C-121	3/30/92	E 19680 N 10280	<0.13	<0.05	<0.13	<0.06	<0.05	0	0

See last page for footnotes.

Table 2. Summary of Analytical Results for the Soil-Gas Survey at the PRIDCO Industrial Park, February Through April 1992, OU II Remedial Investigation, Vega Alta, Puerto Rico.

Sample I.D.	Date	Coordinates	1,1-DCE (ppmv)	trans-1,2-DCE (ppmv)	cis-1,2-DCE (ppmv)	TCE (ppmv)	PCE (ppmv)	Total Target VOCs (ppmv)	Unknowns
A-290	3/31/92	E 19920 N 10160	<0.10	<0.03	<0.08	<0.04	0.43	0.43	1
A-291	3/31/92	E 19960 N 10120	<0.10	<0.03	<0.08	<0.04	0.06	0.06	2
A-292	3/31/92	E 19880 N 10120	<0.10	<0.03	<0.08	<0.04	<0.03	0	1
A-293	3/31/92	E 19800 N 10080	0.16	<0.03	<0.08	0.17	0.55	0.88	1
A-294	3/31/92	E 19920 N 10060	<0.10	<0.03	<0.08	<0.04	0.04	0.04	0
A-295	3/31/92	E 19980 N 10080	1.10	<0.03	<0.08	0.87	0.99	2.96	0
A-296	3/31/92	E 19980 N 10060	1.10	<0.03	<0.08	0.18	0.35	1.63	0
C-123	3/31/92	E 19880 N 10160	<0.13	<0.05	<0.13	<0.06	<0.05	0	2
C-124	3/31/92	E 19960 N 10160	<0.13	<0.05	<0.13	<0.06	<0.05	0	0
C-125	3/31/92	E 19840 N 10120	<0.13	<0.05	<0.13	<0.06	0.34	0.34	0
C-126	3/31/92	E 19760 N 10080	<0.13	<0.05	<0.13	<0.06	0.11	0.11	0
C-127	3/31/92	E 19800 N 10060	<0.13	<0.05	<0.13	<0.06	0.20	0.20	0
C-128	3/31/92	E 19940 N 10140	<0.13	<0.05	<0.13	<0.06	1.09	1.09	0
C-129	3/31/92	E 19780 N 10140	<0.13	<0.05	<0.13	<0.06	0.21	0.21	0
A-382	4/10/92	E 19920 N 10180	<0.14	<0.05	<0.07	<0.06	<0.05	0	0
Caribe GE Pilot Bldg. No. 1									
A-106	3/3/92	E 19920 N 10040	<0.09	<0.04	<0.10	<0.06	<0.06	0	0
A-107	3/3/92	E 19840 N 10040	<0.09	<0.04	<0.10	<0.06	0.09	0.09	0
A-108	3/3/92	E 19760 N 10040	<0.09	<0.04	<0.10	0.16	<0.06	0.16	1
A-109	3/3/92	E 19720 N 10000	12.60	1.08	55.74	2.33	18.70	91	13
A-110	3/3/92	E 19640 N 9960	<0.09	<0.04	0.32	<0.06	<0.06	0.32	1
B-71	3/3/92	E 20000 N 10040	<0.14	<0.08	<0.16	<0.10	<0.09	0	0
B-72	3/3/92	E 19960 N 10040	<0.14	<0.08	<0.16	<0.10	<0.09	0	0
B-73	3/3/92	E 19850 N 10040	<0.14	<0.08	<0.16	0.11	0.31	0.42	0
B-74	3/3/92	E 19800 N 10040	0.24	<0.08	<0.16	0.54	0.94	1.72	0

See last page for footnotes.

Table 2. Summary of Analytical Results for the Soil-Gas Survey at the PRIDCO Industrial Park, February Through April 1992, OU II Remedial Investigation, Vega Alta, Puerto Rico.

Sample I.D.	Date	Coordinates	1,1-DCE (ppmv)	trans-1,2-DCE (ppmv)	cis-1,2-DCE (ppmv)	TCE (ppmv)	PCE (ppmv)	Total Target VOCs (ppmv)	Unknowns
B-75	3/3/92	E 19800 N 10000	<0.14	<0.08	<0.16	<0.10	<0.09	0	0
B-76	3/3/92	E 19840 N 10000	<0.14	<0.08	<0.16	<0.10	<0.09	0	0
B-77	3/3/92	E 19720 N 10040	<0.14	<0.08	<0.16	<0.10	<0.09	0	0
B-78	3/3/92	E 19680 N 10040	<0.14	<0.08	0.53	<0.10	<0.09	0.53	1
B-79	3/3/92	E 19640 N 10000	<0.14	<0.08	<0.16	<0.10	<0.09	0	0
B-80	3/3/92	E 19640 N 9920	<0.14	<0.08	<0.16	<0.10	<0.09	0	0
B-80*	3/3/92	E 19640 N 9920	<0.14	<0.08	<0.16	<0.10	<0.09	0	0
A-111	3/4/92	E 19920 N 10000	<0.15	<0.04	<0.11	<0.07	<0.05	0	0
A-112	3/4/92	E 19920 N 9960	<0.15	<0.04	<0.11	<0.07	<0.05	0	0
B-81	3/4/92	E 19960 N 10000	<0.24	<0.08	<0.21	<0.13	<0.08	0	0
B-82	3/4/92	E 19680 N 10000	<0.15	<0.04	5.03	<0.07	<0.05	5.03	1
B-83	3/4/92	E 19760 N 9880	3.45	<0.08	<0.21	0.34	0.42	4.21	2
A-121	3/5/92	E 19960 N 9880	<0.10	<0.03	<0.08	<0.07	<0.05	0	0
A-122	3/5/92	E 20000 N 9920	<0.10	<0.03	<0.08	<0.07	<0.05	0	0
B-93	3/5/92	E 19960 N 9840	<0.15	<0.06	<0.14	<0.12	<0.09	0	0
B-94	3/5/92	E 20000 N 9880	<0.15	<0.06	<0.14	<0.12	<0.09	0	0
B-95	3/5/92	E 20000 N 9960	<0.15	<0.06	<0.14	<0.12	<0.09	0	0
Caribe GE Pilot Bldg. No. 2									
A-113	3/3/92	E 19760 N 9840	0.21	<0.04	<0.11	0.09	0.19	0.49	1
A-114	3/3/92	E 19840 N 9800	<0.15	<0.04	<0.11	<0.07	<0.05	0	0
A-115	3/3/92	E 19840 N 9680	<0.15	<0.04	<0.11	<0.07	<0.05	0	0
B-84	3/4/92	E 19800 N 9840	3.68	<0.08	<0.21	0.33	0.63	4.64	1
B-85	3/4/92	E 19840 N 9840	2.30	<0.08	<0.21	<0.13	<0.08	2.30	0
B-86	3/4/92	E 19800 N 9760	<0.24	<0.08	<0.21	<0.13	<0.08	0	0
B-87	3/4/92	E 19720 N 9760	<0.24	<0.08	<0.21	<0.13	<0.08	0	0

See last page for footnotes.

Table 2. Summary of Analytical Results for the Soil-Gas Survey at the PRIDCO Industrial Park, February Through April 1992, OU II Remedial Investigation, Vega Alta, Puerto Rico.

Sample I.D.	Date	Coordinates	1,1-DCE (ppmv)	trans-1,2-DCE (ppmv)	cis-1,2-DCE (ppmv)	TCE (ppmv)	PCE (ppmv)	Total Target VOCs (ppmv)	Unknowns
B-88	3/4/92	E 19720 N 9680	<0.24	<0.08	<0.21	<0.13	<0.08	0	0
B-89	3/4/92	E 19720 N 9680	<0.24	<0.08	<0.21	<0.13	<0.08	0	0
A-116	3/5/92	E 19800 N 9680	0.42	<0.03	<0.08	<0.07	0.36	0.78	2
A-116*	3/5/92	E 19800 N 9680	0.42	<0.03	<0.08	<0.07	0.50	0.92	2
A-117	3/5/92	E 19800 N 9720	3.04	<0.03	<0.08	1.23	2.33	6.60	3
A-118	3/5/92	E 19920 N 9680	<0.10	<0.03	<0.08	<0.07	<0.05	0	0
A-119	3/5/92	E 19960 N 9760	<0.10	<0.03	<0.08	<0.07	<0.05	0	0
A-120	3/5/92	E 19960 N 9720	<0.10	<0.03	<0.08	<0.07	<0.05	0	0
B-90	3/5/92	E 19880 N 9680	<0.15	<0.06	<0.14	<0.12	<0.09	0	0
B-90*	3/5/92	E 19880 N 9680	<0.15	<0.06	<0.14	<0.12	<0.09	0	0
B-91	3/5/92	E 19920 N 9720	<0.15	<0.06	<0.14	<0.12	<0.09	0	0
B-92	3/5/92	E 19960 N 9800	<0.15	<0.06	<0.14	<0.12	<0.09	0	0
A-134	3/9/92	E 19800 N 9800	<0.09	<0.02	<0.07	<0.03	0.05	0.05	0
A-135	3/9/92	E 19760 N 9760	1.50	<0.02	<0.07	0.31	0.66	2.47	2
C-8	3/9/92	E 19760 N 9800	<0.11	<0.04	<0.11	<0.04	<0.06	0	0
C-9	3/9/92	E 19720 N 9720	1.38	<0.04	0.11	0.44	0.92	2.85	2
C-9*	3/9/92	E 19720 N 9720	0.95	<0.04	<0.11	0.32	0.69	1.96	2
Rovioak									
A-123	3/5/92	E 19680 N 9880	<0.10	<0.03	<0.08	<0.07	<0.05	0	0
A-124	3/5/92	E 19600 N 9900	<0.10	<0.03	<0.08	<0.07	<0.05	0	0
B-96	3/5/92	E 19740 N 9840	<0.15	<0.06	<0.14	<0.12	<0.09	0	1
B-97	3/5/92	E 19640 N 9880	0.15	<0.06	<0.14	<0.12	0.12	0.27	2
A-125	3/6/92	E 19600 N 9880	<0.10	<0.03	<0.10	<0.04	<0.04	0	1
A-125*	3/6/92	E 19600 N 9880	<0.10	<0.03	<0.10	<0.04	<0.04	0	1
A-126	3/6/92	E 19560 N 9800	<0.10	<0.03	<0.10	<0.04	0.05	0.05	0

See last page for footnotes.

Table 2. Summary of Analytical Results for the Soil-Gas Survey at the PRIDCO Industrial Park, February Through April 1992, OU II Remedial Investigation, Vega Alta, Puerto Rico.

Sample I.D.	Date	Coordinates	1,1-DCE (ppmv)	trans-1,2-DCE (ppmv)	cis-1,2-DCE (ppmv)	TCE (ppmv)	PCE (ppmv)	Total Target VOCs (ppmv)	Unknowns
A-127	3/6/92	E 19600 N 9800	<0.10	<0.03	<0.10	<0.04	<0.04	0	0
A-128	3/6/92	E 19520 N 9720	<0.10	<0.03	<0.10	<0.04	<0.04	0	0
A-129	3/6/92	E 19520 N 9680	<0.10	<0.03	<0.10	<0.04	<0.04	0	0
A-130	3/6/92	E 19480 N 9640	<0.10	<0.03	<0.10	<0.04	<0.04	0	1
A-131	3/6/92	E 19520 N 9640	<0.10	<0.03	<0.10	<0.04	<0.04	0	1
A-132	3/6/92	E 19560 N 9600	<0.10	<0.03	<0.10	<0.04	<0.04	0	0
A-133	3/6/92	E 19600 N 9640	0.60	<0.03	<0.10	0.04	0.27	0.91	2
C-1	3/6/92	E 19600 N 9840	<0.11	<0.03	<0.12	<0.05	<0.04	0	1
C-2	3/6/92	E 19560 N 9760	<0.11	<0.03	<0.12	<0.05	0.10	0.10	1
C-3	3/6/92	E 19560 N 9720	<0.11	<0.03	<0.12	<0.05	0.06	0.06	1
C-4	3/6/92	E 19560 N 9640	<0.11	<0.03	<0.12	<0.05	0.06	0.06	1
C-5	3/6/92	E 19640 N 9600	<0.11	<0.03	<0.12	<0.05	<0.04	0	0
C-6	3/9/92	E 19600 N 9600	<0.11	<0.04	<0.11	<0.04	<0.06	0	0
Drainage Ditch									
A-136	3/9/92	E 20920 N 10280	<0.09	<0.02	<0.07	<0.03	<0.04	0	0
A-136*	3/9/92	E 20920 N 10280	<0.09	<0.02	<0.07	<0.03	<0.04	0	0
A-137	3/9/92	E 20920 N 10400	<0.09	<0.02	<0.07	<0.03	<0.04	0	0
A-138	3/9/92	E 20920 N 10480	<0.09	<0.02	<0.07	<0.03	<0.04	0	0
A-139	3/9/92	E 20920 N 10560	<0.09	<0.02	<0.07	<0.03	<0.04	0	0
A-140	3/9/92	E 20920 N 10640	<0.09	<0.02	<0.07	<0.03	<0.04	0	0
A-141	3/9/92	E 20920 N 10720	<0.09	<0.02	<0.07	<0.03	<0.04	0	0
A-142	3/9/92	E 20902 N 10800	<0.09	<0.02	<0.07	<0.03	<0.04	0	0
A-143	3/9/92	E 20875 N 10880	<0.09	<0.02	<0.07	<0.03	<0.04	0	0
C-10	3/9/92	E 20920 N 10360	<0.11	<0.04	<0.11	<0.04	<0.06	0	0
C-11	3/9/92	E 20920 N 10360	<0.11	<0.04	<0.11	<0.04	<0.06	0	0
C-12	3/9/92	E 20920 N 10440	<0.11	<0.04	<0.11	<0.04	<0.06	0	0

See last page for footnotes.

Table 2. Summary of Analytical Results for the Soil-Gas Survey at the PRIDCO Industrial Park, February Through April 1992, OU II Remedial Investigation, Vega Alta, Puerto Rico.

Sample I.D.	Date	Coordinates	1,1-DCE (ppmv)	trans-1,2-DCE (ppmv)	cis-1,2-DCE (ppmv)	TCE (ppmv)	PCE (ppmv)	Total Target VOCs (ppmv)	Unknowns
C-13	3/9/92	E 20920 N 10520	<0.11	<0.04	<0.11	<0.04	<0.06	0	0
C-14	3/9/92	E 20920 N 10600	<0.11	<0.04	<0.11	<0.04	<0.06	0	0
C-15	3/9/92	E 20920 N 10680	<0.11	<0.04	<0.11	<0.04	<0.06	0	0
C-16	3/9/92	E 20914 N 10760	<0.11	<0.04	<0.11	<0.04	<0.06	0	0
C-17	3/9/92	E 20892 N 10840	<0.11	<0.04	<0.11	<0.04	<0.06	0	0
C-93	3/20/92	E 20825 N 10920	<0.16	<0.05	<0.13	<0.08	<0.06	0	0
Former Drainage Ditch									
A-270	3/27/92	217	<0.10	<0.04	<0.10	<0.06	<0.06	0	0
A-271	3/27/92	220	<0.10	<0.04	<0.10	<0.06	<0.06	0	0
A-272	3/27/92	215	<0.10	<0.04	<0.10	<0.06	<0.06	0	0
A-273	3/27/92	214	<0.10	<0.04	<0.10	<0.06	<0.06	0	0
A-274	3/27/92	211	<0.10	<0.04	<0.10	<0.06	<0.06	0	0
A-275	3/27/92	210	<0.10	<0.04	<0.10	<0.06	<0.06	0	0
A-276	3/27/92	222	<0.10	<0.04	<0.10	<0.06	<0.06	0	0
D-20	3/27/92	218	<0.28	<0.15	<0.31	<0.17	<0.15	0	0
D-21	3/27/92	219	<0.28	<0.15	<0.31	<0.17	<0.15	0	0
D-22	3/27/92	216	<0.28	<0.15	<0.31	<0.17	<0.15	0	0
D-23	3/27/92	213	<0.28	<0.15	<0.31	<0.17	<0.15	0	0
D-24	3/27/92	212	<0.28	<0.15	<0.31	<0.17	<0.15	0	0
D-25	3/27/92	209	<0.28	<0.15	<0.31	<0.17	<0.15	0	0
D-26	3/27/92	221	<0.28	<0.15	<0.31	<0.17	<0.15	0	0
A-277	3/30/92	223	<0.10	<0.03	<0.08	<0.04	<0.03	0	0
A-277*	3/30/92	223	<0.10	<0.03	<0.08	<0.04	<0.03	0	0
A-278	3/30/92	207	<0.10	<0.03	<0.08	<0.04	<0.03	0	1
A-279	3/30/92	206	<0.10	<0.03	<0.08	<0.04	<0.03	0	0
A-280	3/30/92	205	<0.10	<0.03	<0.08	<0.04	<0.03	0	0

See last page for footnotes.

Table 2. Summary of Analytical Results for the Soil-Gas Survey at the PRIDCO Industrial Park, February Through April 1992, OU II Remedial Investigation, Vega Alta, Puerto Rico.

Sample I.D.	Date	Coordinates	1,1-DCE (ppmv)	trans-1,2-DCE (ppmv)	cis-1,2-DCE (ppmv)	TCE (ppmv)	PCE (ppmv)	Total Target VOCs (ppmv)	Unknowns
A-281	3/30/92	204	<0.10	<0.03	<0.08	<0.04	<0.03	0	0
A-282	3/30/92	201	<0.10	<0.03	<0.08	<0.04	<0.03	0	0
A-283	3/30/92	226	<0.10	<0.03	<0.08	<0.04	<0.03	0	0
C-111	3/30/92	224	<0.13	<0.05	<0.13	<0.06	<0.05	0	0
C-112	3/30/92	208	<0.13	<0.05	<0.13	<0.06	<0.05	0	1
C-113	3/30/92	225	<0.13	<0.05	<0.13	<0.06	<0.05	0	1
C-114	3/30/92	203	<0.13	<0.05	<0.13	<0.06	<0.05	0	0
C-115	3/30/92	202	<0.13	<0.05	<0.13	<0.06	<0.05	0	0
C-116	3/30/92	227	<0.13	<0.05	<0.13	<0.06	<0.05	0	1
Formerly West Co.									
A-144	3/10/92	E 20040 N 10240	<0.10	<0.02	<0.08	<0.03	<0.04	0	0
A-145	3/10/92	E 20080 N 10240	<0.10	<0.02	<0.08	<0.03	<0.04	0	0
A-146	3/10/92	E 20120 N 10200	<0.10	<0.02	<0.08	0.16	0.44	0.60	0
A-146*	3/10/92	E 20120 N 10200	<0.10	<0.02	<0.08	0.16	0.44	0.60	0
A-147	3/10/92	E 20240 N 10240	1.50	<0.02	12.00	3.80	2.80	20.10	16
A-148	3/10/92	E 20240 N 10200	1.20	<0.02	<0.08	0.85	0.40	2.45	1
A-149	3/10/92	E 20280 N 10200	5.50	<0.02	<0.08	0.79	0.34	6.63	3
A-150	3/10/92	E 20240 N 10260	<0.10	<0.02	<0.08	<0.03	<0.04	0	0
C-18	3/10/92	E 20040 N 10200	<0.17	<0.05	<0.16	<0.06	<0.08	0	0
C-19	3/10/92	E 20080 N 10200	<0.17	<0.05	<0.16	<0.06	<0.08	0	0
C-19*	3/10/92	E 20080 N 10200	<0.17	<0.05	<0.16	<0.06	<0.08	0	0
C-20	3/10/92	E 20020 N 10240	<0.17	<0.05	<0.16	<0.06	<0.08	0	0
C-21	3/10/92	E 20160 N 10240	<0.17	<0.05	<0.16	<0.06	<0.08	0	0
C-22	3/10/92	E 20200 N 10240	<0.10	<0.02	<0.08	0.09	0.29	0.38	0
C-23	3/10/92	E 20160 N 10200	<0.17	<0.05	<0.16	<0.06	<0.08	0	0
C-24	3/10/92	E 20200 N 10200	0.30	<0.05	<0.16	0.70	0.70	1.70	0

See last page for footnotes.

Table 2. Summary of Analytical Results for the Soil-Gas Survey at the PRIDCO Industrial Park, February Through April 1992, OU II Remedial Investigation, Vega Alta, Puerto Rico.

Sample I.D.	Date	Coordinates	1,1-DCE (ppmv)	trans-1,2-DCE (ppmv)	cis-1,2-DCE (ppmv)	TCE (ppmv)	PCE (ppmv)	Total Target VOCs (ppmv)	Unknowns
C-25	3/10/92	E 20240 N 10280	<0.17	<0.05	<0.16	<0.06	<0.08	0	0
C-26	3/10/92	E 20280 N 10240	0.80	<0.05	<0.16	<0.06	<0.08	0.80	0
C-27	3/10/92	E 20320 N 10200	<0.17	<0.05	<0.16	<0.06	<0.08	0	0
C-28	3/10/92	E 20320 N 10240	<0.17	<0.05	<0.16	<0.06	<0.08	0	0
C-29	3/10/92	E 20320 N 10160	<0.17	<0.05	<0.16	<0.06	<0.08	0	--
A-151	3/11/92	E 20240 N 10255	<0.11	<0.03	<0.11	0.50	<0.04	0.50	7
A-152	3/11/92	E 20160 N 10260	<0.11	<0.03	<0.11	<0.05	<0.04	0	0
A-153	3/11/92	E 20160 N 10280	<0.11	<0.03	<0.11	<0.05	<0.04	0	0
A-154	3/11/92	E 20240 N 10233	1.10	<0.03	<0.11	0.60	0.40	2.10	5
A-155	3/11/92	E 20360 N 10200	<0.11	<0.03	<0.11	<0.05	<0.04	0	0
A-156	3/11/92	E 20360 N 10120	<0.11	<0.03	<0.11	<0.05	<0.04	0	0
A-157	3/11/92	E 20320 N 10120	<0.11	<0.03	<0.11	<0.05	<0.04	0	0
A-157*	3/11/92	E 20320 N 10120	<0.11	<0.03	<0.11	<0.05	<0.04	0	0
A-158	3/11/92	E 20320 N 10065	<0.11	<0.03	<0.11	<0.05	<0.04	0	0
A-159	3/11/92	E 20240 N 10065	<0.11	<0.03	<0.11	<0.05	<0.04	0	0
C-30	3/11/92	E 20200 N 10260	<0.14	<0.05	<0.15	<0.07	<0.07	0	0
C-30*	3/11/92	E 20200 N 10260	<0.14	<0.05	<0.15	<0.07	<0.08	0	0
C-31	3/11/92	E 20200 N 10280	<0.14	<0.05	<0.15	<0.07	<0.07	0	0
C-32	3/11/92	E 20240 N 10220	1.14	<0.05	<0.15	0.50	0.50	1.14	3
C-33	3/11/92	E 20340 N 10280	<0.14	<0.05	<0.15	<0.07	<0.07	0	0
C-34	3/11/92	E 20345 N 10160	<0.14	<0.05	<0.15	<0.07	<0.07	0	0
C-35	3/11/92	E 20340 N 10080	<0.14	<0.05	<0.15	<0.07	<0.07	0	0
C-36	3/11/92	E 20320 N 10080	<0.14	<0.05	<0.15	<0.07	<0.07	0	0
C-37	3/11/92	E 20280 N 10065	<0.14	<0.05	<0.15	<0.07	<0.07	0	0
A-160	3/12/92	E 20200 N 10065	<0.13	<0.03	<0.10	<0.07	<0.04	0	0

See last page for footnotes.

Table 2. Summary of Analytical Results for the Soil-Gas Survey at the PRIDCO Industrial Park, February Through April 1992, OU II Remedial Investigation, Vega Alta, Puerto Rico.

Sample I.D.	Date	Coordinates	1,1-DCE (ppmv)	trans-1,2-DCE (ppmv)	cis-1,2-DCE (ppmv)	TCE (ppmv)	PCE (ppmv)	Total Target VOCs (ppmv)	Unknowns
A-161	3/12/92	E 20120 N 10065	<0.13	<0.03	<0.10	<0.07	<0.04	0	0
A-162	3/12/92	E 20080 N 10065	<0.13	<0.03	<0.10	<0.07	<0.04	0	0
A-163	3/12/92	E 20080 N 10160	<0.13	<0.03	<0.10	<0.07	<0.04	0	0
A-164	3/12/92	E 20120 N 10160	<0.13	<0.03	<0.10	<0.07	<0.04	0	0
C-38	3/12/92	E 20160 N 10065	<0.16	<0.04	<0.13	<0.09	<0.05	0	0
C-39	3/12/92	E 20040 N 10080	<0.16	<0.04	<0.13	<0.09	<0.05	0	0
C-40	3/12/92	E 20080 N 10120	<0.16	<0.04	<0.13	<0.09	<0.05	0	0
C-40*	3/12/92	E 20080 N 10120	<0.16	<0.04	<0.13	<0.09	<0.05	0	0
C-41	3/12/92	E 20200 N 10160	<0.16	<0.04	<0.13	0.24	0.36	0.60	1
A-258	3/30/92	E 20080 N 10280	<0.10	<0.03	<0.08	<0.04	<0.03	0	0
A-259	3/30/92	E 20040 N 10280	<0.10	<0.03	<0.08	<0.04	<0.03	0	0
C-122	3/30/92	E 20120 N 10280	<0.13	<0.05	<0.13	<0.06	<0.05	0	0
West Company No. 1									
A-165	3/12/92	E 20400 N 10040	0.23	<0.03	<0.10	<0.07	<0.04	0.23	1
A-165*	3/12/92	E 20400 N 10040	0.14	<0.03	<0.10	<0.07	<0.04	0.14	1
A-166	3/12/92	E 20480 N 10040	<0.13	<0.03	<0.10	<0.07	0.17	0.17	0
A-167	3/12/92	E 20480 N 10080	<0.13	<0.03	<0.10	<0.07	<0.04	0	0
A-168	3/12/92	E 20480 N 10120	<0.13	<0.03	<0.10	<0.07	<0.04	0	0
A-169	3/12/92	E 20400 N 10200	<0.13	<0.03	<0.10	<0.07	<0.04	0	0
A-170	3/12/92	E 20440 N 10120	<0.13	<0.03	<0.10	<0.07	<0.04	0	0
C-42	3/12/92	E 20440 N 10040	<0.16	<0.04	<0.13	0.11	0.21	0.32	1
C-43	3/12/92	E 20440 N 10080	<0.16	<0.04	<0.13	<0.09	<0.05	0	1
C-44	3/12/92	E 20400 N 10080	<0.16	<0.04	<0.13	<0.09	<0.05	0	0
C-45	3/12/92	E 20400 N 10120	<0.16	<0.04	<0.13	<0.09	<0.05	0	0
C-46	3/12/92	E 20400 N 10160	<0.16	<0.04	<0.13	<0.09	<0.05	0	0
C-47	3/12/92	E 20440 N 10160	<0.16	<0.04	<0.13	<0.09	<0.05	0	0

See last page for footnotes.

Table 2. Summary of Analytical Results for the Soil-Gas Survey at the PRIDCO Industrial Park, February Through April 1992, OU II Remedial Investigation, Vega Alta, Puerto Rico.

Sample I.D.	Date	Coordinates	1,1-DCE (ppmv)	trans-1,2-DCE (ppmv)	cis-1,2-DCE (ppmv)	TCE (ppmv)	PCE (ppmv)	Total Target VOCs (ppmv)	Unknowns
A-171	3/13/92	E 20400 N 10240	<0.16	<0.03	<0.09	<0.05	<0.05	0	0
A-172	3/13/92	E 20440 N 10240	<0.16	<0.03	<0.09	<0.05	<0.05	0	0
A-173	3/13/92	E 20560 N 10240	<0.16	<0.03	<0.09	<0.05	<0.05	0	0
A-174	3/13/92	E 20640 N 10240	<0.16	<0.03	<0.09	<0.05	<0.05	0	0
A-175	3/13/92	E 20680 N 10240	<0.16	<0.03	<0.09	<0.05	<0.05	0	0
A-176	3/13/92	E 20720 N 10240	<0.16	<0.03	<0.09	<0.05	<0.05	0	0
A-176*	3/13/92	E 20720 N 10240	<0.16	<0.03	<0.09	<0.05	<0.05	0	0
A-177	3/13/92	E 20840 N 10240	<0.16	<0.03	<0.09	<0.05	<0.05	0	0
A-178	3/13/92	E 20800 N 10200	<0.16	<0.03	<0.09	<0.05	<0.05	0	0
A-179	3/13/92	E 20760 N 10240	<0.16	<0.03	<0.09	<0.05	<0.05	0	0
A-180	3/13/92	E 20960 N 10080	<0.16	<0.03	<0.09	<0.05	<0.05	0	0
A-183	3/13/92	E 20920 N 10160	<0.16	<0.03	<0.09	<0.05	<0.05	0	0
C-48	3/13/92	E 20520 N 10240	<0.19	<0.04	<0.12	<0.07	<0.06	0	0
C-49	3/13/92	E 20480 N 10240	<0.19	<0.04	<0.12	<0.07	<0.06	0	0
C-50	3/13/92	E 20600 N 10240	<0.19	<0.04	<0.12	<0.07	<0.06	0	0
C-50*	3/13/92	E 20600 N 10240	<0.19	<0.04	<0.12	<0.07	<0.06	0	0
C-51	3/13/92	E 20440 N 10200	2.91	<0.04	1.81	<0.07	<0.06	4.72	8
C-52	3/13/92	E 20880 N 10240	<0.19	<0.04	<0.12	<0.07	<0.06	0	0
C-53	3/13/92	E 20920 N 10240	<0.19	<0.04	<0.12	<0.07	<0.06	0	0
C-54	3/13/92	E 20840 N 10200	<0.19	<0.04	<0.12	<0.07	<0.06	0	0
A-184	3/16/92	E 20920 N 10200	<0.07	<0.02	<0.08	<0.04	<0.03	0	1
A-185	3/16/92	E 20840 N 10160	<0.07	<0.02	<0.08	<0.04	<0.03	0	1
A-186	3/16/92	E 20840 N 10120	<0.07	<0.02	<0.08	<0.04	<0.03	0	1
A-186*	3/16/92	E 20840 N 10120	<0.07	<0.02	<0.08	<0.04	<0.03	0	1
A-187	3/16/92	E 20960 N 10000	<0.07	<0.02	<0.08	<0.04	<0.03	0	1
A-188	3/16/92	E 20860 N 10040	<0.07	<0.02	<0.08	<0.04	<0.03	0	1

See last page for footnotes.

Table 2. Summary of Analytical Results for the Soil-Gas Survey at the PRIDCO Industrial Park, February Through April 1992, OU II Remedial Investigation, Vega Alta, Puerto Rico.

Sample I.D.	Date	Coordinates	1,1-DCE (ppmv)	trans-1,2-DCE (ppmv)	cis-1,2-DCE (ppmv)	TCE (ppmv)	PCE (ppmv)	Total Target VOCs (ppmv)	Unknowns
C-56	3/16/92	E 20920 N 10120	<0.09	<0.03	<0.14	<0.07	<0.05	0	0
C-57	3/16/92	E 20980 N 10080	<0.09	<0.03	<0.14	<0.07	<0.05	0	0
C-59	3/16/92	E 20960 N 10040	<0.09	<0.03	<0.14	<0.07	<0.05	0	2
C-60	3/16/92	E 20880 N 10000	<0.09	<0.03	<0.14	<0.07	<0.05	0	0
C-60*	3/16/92	E 20880 N 10000	<0.09	<0.03	<0.14	<0.07	<0.05	0	0
C-84	3/18/92	E 20560 N 10000	<0.17	<0.07	<0.14	<0.10	<0.07	0	0
A-212	3/19/92	E 20640 N 10000	<0.11	<0.03	<0.10	<0.04	<0.05	0	0
A-213	3/19/92	E 20560 N 10080	<0.11	<0.03	<0.10	<0.04	<0.05	0	0
A-215	3/19/92	E 20720 N 10020	<0.11	<0.03	<0.10	<0.04	<0.05	0	3
A-218	3/19/92	E 20760 N 10000	2.00	<0.03	<0.10	<0.04	<0.05	2.00	1
A-219	3/19/92	E 20800 N 10000	2.53	<0.03	<0.10	<0.04	<0.05	2.53	1
C-85	3/19/92	E 20600 N 10000	0.38	<0.04	<0.13	<0.05	0.05	0.43	0
C-86	3/19/92	E 20520 N 10040	<0.13	<0.04	<0.13	<0.05	0.19	0.19	0
C-87	3/19/92	E 20520 N 10080	<0.13	<0.04	<0.13	<0.05	<0.05	0	0
C-88	3/19/92	E 20680 N 10000	<0.13	<0.04	<0.13	<0.05	<0.05	0	1
C-89	3/19/92	E 20720 N 10000	<0.13	<0.04	<0.13	<0.05	<0.05	0	1
C-91	3/19/92	E 20720 N 10040	<0.13	<0.04	<0.13	0.07	0.05	0.12	0
C-92	3/19/92	E 20760 N 10040	<0.13	<0.04	<0.13	<0.05	<0.05	0	1
A-220	3/20/92	E 20800 N 10040	<0.12	<0.04	<0.10	2.25	0.13	2.38	0
A-221	3/20/92	E 20800 N 10020	<0.12	<0.04	<0.10	<0.06	<0.04	0	2
A-227	3/23/92	E 20680 N 10040	<0.15	<0.03	<0.08	<0.04	<0.04	0	0
A-228	3/23/92	E 20560 N 10040	<0.15	<0.03	<0.08	<0.04	0.12	0.12	1
A-229	3/23/92	E 20525 N 10000	<0.15	<0.03	<0.08	<0.04	<0.04	0	2
C-97	3/23/92	E 20760 N 10020	<0.17	<0.04	<0.12	<0.07	<0.05	0	2
C-98	3/23/92	E 20640 N 10040	<0.17	<0.04	<0.12	<0.07	<0.05	0	2
C-99	3/23/92	E 20600 N 10040	<0.17	<0.04	<0.12	<0.07	<0.05	0	1

See last page for footnotes.

Table 2. Summary of Analytical Results for the Soil-Gas Survey at the PRIDCO Industrial Park, February Through April 1992, OU II Remedial Investigation, Vega Alta, Puerto Rico.

Sample I.D.	Date	Coordinates	1,1-DCE (ppmv)	trans-1,2-DCE (ppmv)	cis-1,2-DCE (ppmv)	TCE (ppmv)	PCE (ppmv)	Total Target VOCs (ppmv)	Unknowns
C-100	3/23/92	E 20825 N 10040	<0.17	<0.04	<0.12	0.37	<0.05	0.37	0
C-100*	3/23/92	E 20825 N 10040	<0.17	<0.04	<0.12	0.40	<0.05	0.40	1
West Company No. 2									
A-181	3/13/92	E 20920 N 9880	<0.16	<0.03	<0.09	<0.05	<0.05	0	0
A-182	3/13/92	E 21000 N 9920	<0.16	<0.03	<0.09	<0.05	<0.05	0	0
C-55	3/13/92	E 20920 N 9840	<0.19	<0.04	<0.12	<0.07	<0.06	0	0
A-189	3/16/92	E 20960 N 9920	<0.07	<0.02	<0.08	<0.04	<0.03	0	1
A-190	3/16/92	E 20880 N 9800	<0.07	<0.02	<0.08	<0.04	<0.03	0	0
A-191	3/16/92	E 20840 N 9880	<0.07	<0.02	<0.08	<0.04	<0.03	0	0
A-192	3/16/92	E 20840 N 9840	<0.07	<0.02	<0.08	<0.04	<0.03	0	0
A-193	3/16/92	E 20840 N 9760	<0.07	<0.02	<0.08	<0.04	<0.03	0	0
C-61	3/16/92	E 20960 N 9960	<0.09	<0.03	<0.14	<0.07	<0.05	0	1
C-62	3/16/92	E 20880 N 9840	<0.09	<0.03	<0.14	<0.07	<0.05	0	0
C-63	3/16/92	E 20920 N 9800	<0.09	<0.03	<0.14	<0.07	<0.05	0	0
C-64	3/16/92	E 20880 N 9880	<0.09	<0.03	<0.14	<0.07	<0.05	0	0
C-65	3/16/92	E 20840 N 9800	<0.09	<0.03	<0.14	<0.07	<0.05	0	0
A-194	3/17/92	E 20960 N 9800	<0.10	<0.02	<0.09	<0.05	<0.04	0	0
A-195	3/17/92	E 20960 N 9720	<0.10	<0.02	<0.09	<0.05	<0.04	0	0
A-196	3/17/92	E 20920 N 9720	<0.10	<0.02	<0.09	<0.05	<0.04	0	0
A-196*	3/17/92	E 20920 N 9720	<0.10	<0.02	<0.09	<0.05	<0.04	0	0
A-197	3/17/92	E 20920 N 9640	<0.10	<0.02	<0.09	<0.05	<0.04	0	0
A-198	3/17/92	E 20880 N 9640	<0.10	<0.02	<0.09	<0.05	<0.04	0	0
A-199	3/17/92	E 20840 N 9680	<0.10	<0.02	<0.09	<0.05	<0.04	0	0
A-200	3/17/92	E 20800 N 9640	<0.10	<0.02	<0.09	<0.05	<0.04	0	0
A-201	3/17/92	E 20720 N 9640	<0.10	<0.02	<0.09	<0.05	<0.04	0	0

See last page for footnotes.

Table 2. Summary of Analytical Results for the Soil-Gas Survey at the PRIDCO Industrial Park, February Through April 1992, OU II Remedial Investigation, Vega Alta, Puerto Rico.

Sample I.D.	Date	Coordinates	1,1-DCE (ppmv)	trans-1,2-DCE (ppmv)	cis-1,2-DCE (ppmv)	TCE (ppmv)	PCE (ppmv)	Total Target VOCs (ppmv)	Unknowns
A-202	3/17/92	E 20640 N 9680	<0.10	<0.02	<0.09	<0.05	<0.04	0	0
A-203	3/17/92	E 20600 N 9640	<0.10	<0.02	<0.09	<0.05	<0.04	0	1
A-204	3/17/92	E 20560 N 9680	<0.10	<0.02	<0.09	<0.05	<0.04	0	0
A-205	3/17/92	E 20560 N 9720	<0.10	<0.02	<0.09	<0.05	<0.04	0	0
C-66	3/17/92	E 20960 N 9760	<0.14	<0.04	<0.15	<0.07	<0.05	0	0
C-67	3/17/92	E 20920 N 9760	<0.14	<0.04	<0.15	<0.07	<0.05	0	0
C-68	3/17/92	E 20880 N 9760	<0.14	<0.04	<0.15	<0.07	<0.05	0	0
C-69	3/17/92	E 20960 N 9680	<0.14	<0.04	<0.15	<0.07	<0.05	0	0
C-70	3/17/92	E 20880 N 9680	<0.14	<0.04	<0.15	<0.07	<0.05	0	0
C-70*	3/17/92	E 20880 N 9680	<0.14	<0.04	<0.15	<0.07	<0.05	0	0
C-71	3/17/92	E 20840 N 9640	<0.14	<0.04	<0.15	<0.07	<0.05	0	0
C-72	3/17/92	E 20800 N 9680	<0.14	<0.04	<0.15	<0.07	<0.05	0	0
C-73	3/17/92	E 20680 N 9640	<0.14	<0.04	<0.15	<0.07	<0.05	0	0
C-74	3/17/92	E 20640 N 9640	<0.14	<0.04	<0.15	<0.07	<0.05	0	0
C-75	3/17/92	E 20560 N 9640	<0.14	<0.04	<0.15	<0.07	<0.05	0	0
C-76	3/17/92	E 20520 N 9680	<0.14	<0.04	<0.15	<0.07	<0.05	0	0
A-206	3/18/92	E 20520 N 9800	<0.13	<0.05	<0.11	<0.09	<0.10	0	1
A-206*	3/18/92	E 20520 N 9800	<0.13	<0.05	<0.11*	<0.09	<0.10	0	1
A-207	3/18/92	E 20520 N 9760	<0.13	<0.05	<0.11	<0.09	<0.10	0	0
A-208	3/18/92	E 20520 N 9620	<0.13	<0.05	<0.11	<0.09	<0.10	0	0
A-209	3/18/92	E 20560 N 9880	0.17	<0.05	<0.11	<0.09	<0.10	0.17	0
A-210	3/18/92	E 20520 N 9920	<0.13	<0.05	<0.11	<0.09	0.21	0.21	1
A-211	3/18/92	E 20520 N 9960	0.14	<0.05	<0.11	<0.09	<0.10	0.14	0
C-77	3/18/92	E 20520 N 9840	<0.17	<0.07	<0.14	<0.10	<0.07	0	0
C-78	3/18/92	E 20550 N 9840	<0.17	<0.07	<0.14	<0.10	<0.07	0	0
C-79	3/18/92	E 20550 N 9800	<0.17	<0.07	<0.14	<0.10	<0.07	0	0

See last page for footnotes.

Table 1, Summary of Analytical Results for the Soil-Gas Survey at the PRIDCO Industrial Park, February Through April 1992, OU II Remedial Investigation, Vega Alta, Puerto Rico.

Sample I.D.	Date	Coordinates	1,1-DCE (ppmv)	trans-1,2-DCE (ppmv)	cis-1,2-DCE (ppmv)	TCE (ppmv)	PCE (ppmv)	Total Target VOCs (ppmv)	Unknowns
C-80	3/18/92	E 20560 N 9760	<0.17	<0.07	<0.14	<0.10	<0.07	0	0
C-80*	3/18/92	E 20560 N 9760	<0.17	<0.07	<0.14	<0.10	<0.07	0	0
C-81	3/18/92	E 20520 N 9880	<0.17	<0.07	<0.14	<0.10	0.34	0.34	1
C-82	3/18/92	E 20550 N 9920	<0.17	<0.07	<0.14	<0.10	0.15	0.15	1
C-83	3/18/92	E 20545 N 9960	<0.17	<0.07	<0.14	<0.10	<0.07	0	0
A-214	3/19/92	E 20680 N 9960	<0.11	<0.03	<0.10	<0.04	<0.05	0	0
A-216	3/19/92	E 20720 N 9960	<0.11	<0.03	<0.10	<0.04	<0.05	0	0
A-217	3/19/92	E 20720 N 9980	<0.11	<0.03	<0.10	<0.04	<0.05	0	1
A-217*	3/19/92	E 20720 N 9980	<0.11	<0.03	<0.10	<0.04	<0.05	0	1
C-90	3/19/92	E 20760 N 9960	<0.13	<0.04	<0.13	<0.05	<0.05	0	0
C-90*	3/19/92	E 20760 N 9960	<0.13	<0.04	<0.13	<0.05	<0.05	0	0
A-223	3/20/92	E 20800 N 9960	<0.12	<0.04	<0.10	<0.06	<0.04	0	2
A-224	3/20/92	E 20840 N 9960	0.78	<0.04	<0.10	<0.06	<0.04	0.78	3
A-225	3/20/92	E 20920 N 9960	<0.12	<0.04	<0.10	<0.06	<0.04	0	1
C-95	3/20/92	E 20800 N 9980	<0.16	<0.05	<0.13	<0.08	<0.06	0	2
C-96	3/20/92	E 20880 N 9960	<0.16	<0.05	<0.13	<0.08	<0.06	0	3
A-226	3/23/92	E 20760 N 9980	<0.15	<0.03	<0.08	0.08	<0.04	0.08	2
A-226*	3/23/92	E 20760 N 9980	<0.15	<0.03	<0.08	0.10	<0.04	0.10	1
Eibs Cerv... ..e									
A-297	4/1/92	E 23820 N 9695	<0.12	<0.04	<0.10	<0.05	<0.05	0	0
A-297*	4/1/92	E 23820 N 9695	<0.12	<0.04	<0.10	<0.05	<0.05	0	0
A-298	4/1/92	E 23845 N 9698	<0.12	<0.04	<0.10	<0.05	<0.05	0	0
A-299	4/1/92	E 23940 N 9707	<0.12	<0.04	<0.10	<0.05	<0.05	0	0
A-300	4/1/92	E 24020 N 9720	<0.12	<0.04	<0.10	<0.05	<0.05	0	0
A-301	4/1/92	E 24020 N 9560	<0.12	<0.04	<0.10	<0.05	<0.05	0	0

See last page for footnotes.

Table 2. Summary of Analytical Results for the Soil-Gas Survey at the PRIDCO Industrial Park, February Through April 1992, OU II Remedial Investigation, Vega Alta, Puerto Rico.

Sample I.D.	Date	Coordinates	1,1-DCE (ppmv)	trans-1,2-DCE (ppmv)	cis-1,2-DCE (ppmv)	TCE (ppmv)	PCE (ppmv)	Total Target VOCs (ppmv)	Unknowns
A-302	4/1/92	E 23940 N 9600	<0.12	<0.04	<0.10	<0.05	<0.05	0	0
A-303	4/1/92	E 23980 N 9600	<0.12	<0.04	<0.10	<0.05	<0.05	0	0
C-130	4/1/92	E 23860 N 9698	<0.15	<0.06	<0.15	<0.08	<0.07	0	0
C-130*	4/1/92	E 23860 N 9698	<0.15	<0.06	<0.15	<0.08	<0.07	0	0
C-131	4/1/92	E 23900 N 9720	<0.15	<0.06	<0.15	<0.08	<0.07	0	0
C-132	4/1/92	E 23980 N 9709	<0.15	<0.06	<0.15	<0.08	<0.07	0	0
C-133	4/1/92	E 24020 N 9600	<0.15	<0.06	<0.15	<0.08	<0.07	0	1
C-134	4/1/92	E 24020 N 9680	<0.15	<0.06	<0.15	<0.08	<0.07	0	0
Harman Auto									
A-230	3/23/92	E 20480 N 9680	<0.15	<0.03	<0.08	<0.04	<0.04	0	0
A-231	3/23/92	E 20480 N 9760	<0.15	<0.03	<0.08	<0.04	<0.04	0	0
A-232	3/23/92	E 20480 N 9840	<0.15	<0.03	<0.08	0.25	0.57	0.82	1
A-233	3/23/92	E 20480 N 9800	<0.15	<0.03	<0.08	<0.04	<0.04	0	0
A-234	3/23/92	E 20440 N 9760	<0.15	<0.03	<0.08	<0.04	<0.04	0	0
A-235	3/23/92	E 20440 N 9680	<0.15	<0.03	<0.08	<0.04	<0.04	0	0
A-236	3/23/92	E 20400 N 9720	<0.15	<0.03	<0.08	<0.04	<0.04	0	0
C-101	3/23/92	E 20480 N 9720	<0.17	<0.04	<0.12	<0.07	<0.05	0	2
C-102	3/23/92	E 20440 N 9840	<0.17	<0.04	<0.12	<0.07	<0.05	0	1
C-103	3/23/92	E 20440 N 9800	<0.17	<0.04	<0.12	<0.07	<0.05	0	2
C-104	3/23/92	E 20440 N 9720	<0.17	<0.04	<0.12	<0.07	<0.05	0	0
C-105	3/23/92	E 20440 N 9680	<0.17	<0.04	<0.12	<0.07	<0.05	0	0
A-237	3/24/92	E 20480 N 9920	<0.12	<0.04	<0.10	0.35	0.72	1.07	2
A-237*	3/24/92	E 20480 N 9920	<0.12	<0.04	<0.10	0.45	0.96	1.41	2
A-238	3/24/92	E 20440 N 9880	<0.12	<0.04	<0.10	<0.06	0.25	0.25	1
A-239	3/24/92	E 20480 N 9960	<0.12	<0.04	<0.10	0.47	0.27	0.74	1

See last page for footnotes.

Table 2. Summary of Analytical Results for the Soil-Gas Survey at the PRIDCO Industrial Park, February Through April 1992, OU II Remedial Investigation, Vega Alta, Puerto Rico.

Sample I.D.	Date	Coordinates	1,1-DCE (ppmv)	trans-1,2-DCE (ppmv)	cis-1,2-DCE (ppmv)	TCE (ppmv)	PCE (ppmv)	Total Target VOCs (ppmv)	Unknowns
A-240	3/24/92	E 20400 N 9960	<0.12	<0.04	<0.10	<0.06	<0.05	0	0
A-241	3/24/92	E 20400 N 9880	<0.12	<0.04	<0.10	<0.06	0.41	0.41	1
A-242	3/24/92	E 20400 N 9760	<0.12	<0.04	<0.10	<0.06	<0.05	0	1
A-243	3/24/92	E 20400 N 9800	<0.12	<0.04	<0.10	<0.06	0.12	0.12	1
A-244	3/24/92	E 20440 N 10000	<0.12	<0.04	<0.10	<0.06	0.05	0.05	0
C-106	3/24/92	E 20480 N 9880	<0.13	<0.04	<0.11	0.67	1.41	2.08	2
C-107	3/24/92	E 20440 N 9920	<0.13	<0.04	<0.11	0.22	0.94	1.16	2
C-108	3/24/92	E 20440 N 9960	<0.13	<0.04	<0.11	0.52	0.85	1.37	2
C-109	3/24/92	E 20400 N 9960	<0.13	<0.04	<0.11	<0.07	<0.05	0	1
C-110	3/24/92	E 20440 N 9860	<0.13	<0.04	<0.11	<0.07	0.10	0.10	1
C-110*	3/24/92	E 20440 N 9860	<0.13	<0.04	<0.11	<0.07	0.09	0.09	1
A-245	3/25/92	E 20440 N 9980	<0.12	<0.03	<0.10	0.36	0.45	0.81	1
A-246	3/25/92	E 20420 N 9940	<0.12	<0.03	<0.10	<0.06	0.31	0.31	0
A-247	3/25/92	E 20420 N 9900	<0.12	<0.03	<0.10	<0.06	0.41	0.41	0
A-247*	3/25/92	E 20420 N 9900	<0.12	<0.03	<0.10	0.08	0.86	0.94	1
A-248	3/25/92	E 20440 N 9780	<0.12	<0.03	<0.10	<0.06	<0.05	0	1
A-249	3/25/92	E 20460 N 9820	<0.12	<0.03	<0.10	<0.06	0.08	0.08	1
A-250	3/25/92	E 20420 N 9930	<0.12	<0.03	<0.10	<0.06	0.14	0.14	1
A-251	3/25/92	E 20360 N 10000	<0.12	<0.03	<0.10	<0.06	<0.05	0	1
A-252	3/25/92	E 20320 N 10000	<0.12	<0.03	<0.10	<0.06	<0.05	0	1
A-253	3/25/92	E 20280 N 10000	<0.12	<0.03	<0.10	<0.06	<0.05	0	1
D-1	3/25/92	E 20460 N 9940	<0.26	<0.07	<0.24	0.55	0.56	1.11	1
D-2	3/25/92	E 20560 N 9980	<0.26	<0.07	<0.24	0.35	0.27	0.62	1
D-3	3/25/92	E 20420 N 9860	<0.26	<0.07	<0.24	<0.13	0.21	0.21	0
D-4	3/25/92	E 20460 N 9900	<0.26	<0.07	<0.24	<0.13	0.32	0.32	1
A-254	3/26/92	E 20410 N 9646	<0.12	<0.03	<0.10	<0.06	<0.05	0	2

See last page for footnotes.

Table 2. Summary of Analytical Results for the Soil-Gas Survey at the PRIDCO Industrial Park, February Through April 1992, OU II Remedial Investigation, Vega Alta, Puerto Rico.

Sample I.D.	Date	Coordinates	1,1-DCE (ppmv)	trans-1,2-DCE (ppmv)	cis-1,2-DCE (ppmv)	TCE (ppmv)	PCE (ppmv)	Total Target VOCs (ppmv)	Unknowns
A-255	3/26/92	E 20160 N 9646	<0.12	<0.03	<0.10	<0.06	<0.05	0	0
A-256	3/26/92	E 20120 N 9646	<0.12	<0.03	<0.10	<0.06	<0.05	0	0
A-257	3/26/92	E 20240 N 9646	<0.12	<0.03	<0.10	<0.06	<0.05	0	0
A-258	3/26/92	E 20103 N 9646	<0.12	<0.03	<0.10	<0.06	<0.05	0	0
A-258*	3/26/92	E 20103 N 9646	<0.12	<0.03	<0.10	<0.06	<0.05	0	0
A-259	3/26/92	E 20040 N 9646	<0.12	<0.03	<0.10	<0.06	<0.05	0	0
A-260	3/26/92	E 20000 N 9720	<0.12	<0.03	<0.10	<0.06	<0.05	0	0
A-261	3/26/92	E 20020 N 9760	<0.12	<0.03	<0.10	<0.06	<0.05	0	0
A-262	3/26/92	E 20120 N 9840	<0.12	<0.03	<0.10	<0.06	<0.05	0	0
A-263	3/26/92	E 20080 N 9880	<0.12	<0.03	<0.10	<0.06	<0.05	0	0
A-264	3/26/92	E 20120 N 9800	<0.12	<0.03	<0.10	<0.06	0.98	0.98	0
A-265	3/26/92	E 20200 N 9840	<0.12	<0.03	<0.10	<0.06	0.22	0.22	0
D-5	3/26/92	E 20280 N 9646	<0.29	<0.13	<0.32	<0.20	<0.14	0	0
D-6	3/26/92	E 20200 N 9646	<0.29	<0.13	<0.32	<0.20	<0.14	0	0
D-7	3/26/92	E 20160 N 9646	<0.29	<0.13	<0.32	<0.20	<0.14	0	0
D-8	3/26/92	E 20080 N 9646	<0.29	<0.13	<0.32	<0.20	<0.14	0	0
D-9	3/26/92	E 20000 N 9680	<0.29	<0.13	<0.32	<0.20	<0.14	0	0
D-9*	3/26/92	E 20000 N 9680	<0.29	<0.13	<0.32	<0.20	0.25	0.25	0
D-10	3/26/92	E 20040 N 9720	<0.29	<0.13	<0.32	<0.20	<0.14	0	0
D-11	3/26/92	E 20020 N 9800	<0.29	<0.13	<0.32	<0.20	<0.14	0	0
D-12	3/26/92	E 20080 N 9840	<0.29	<0.13	<0.32	<0.20	<0.14	0	0
D-13	3/26/92	E 20040 N 9840	<0.29	<0.13	<0.32	<0.20	<0.14	0	0
D-14	3/26/92	E 20120 N 9880	<0.29	<0.13	<0.32	<0.20	<0.14	0	0
D-15	3/26/92	E 20160 N 9840	<0.29	<0.13	<0.32	<0.20	0.20	0.20	0
A-266	3/27/92	E 20040 N 9920	<0.10	<0.04	<0.10	<0.06	<0.06	0	1
A-267	3/27/92	E 20080 N 10000	<0.10	<0.04	<0.10	<0.06	<0.06	0	1

See last page for footnotes.

Table 2. Summary of Analytical Results for the Soil-Gas Survey at the PRIDCO Industrial Park, February Through April 1992, OU II Remedial Investigation, Vega Alta, Puerto Rico.

Sample I.D.	Date	Coordinates	1,1-DCE (ppmv)	trans-1,2-DCE (ppmv)	cis-1,2-DCE (ppmv)	TCE (ppmv)	PCE (ppmv)	Total Target VOCs (ppmv)	Unknowns
A-267*	3/27/92	E 20080 N 10000	<0.10	<0.04	<0.10	<0.06	<0.06	0	1
A-268	3/27/92	E 20200 N 10000	<0.10	<0.04	<0.10	<0.06	<0.06	0	0
A-269	3/27/92	E 20240 N 10000	<0.10	<0.04	<0.10	<0.06	<0.06	0	0
D-16	3/27/92	E 20040 N 9960	<0.28	<0.15	<0.31	<0.17	<0.15	0	0
D-17	3/27/92	E 20040 N 9880	<0.28	<0.15	<0.31	<0.17	<0.15	0	0
D-18	3/27/92	E 20120 N 10000	<0.28	<0.15	<0.31	<0.17	<0.15	0	0
D-19	3/27/92	E 20160 N 10000	<0.28	<0.15	<0.31	<0.17	<0.15	0	0
D-19*	3/27/92	E 20160 N 10000	<0.28	<0.15	<0.31	<0.17	<0.15	0	0
GE Control Plant									
A-304	4/1/92	E 24340 N 9230	0.64	<0.04	<0.10	0.57	0.21	1.42	0
A-305	4/1/92	E 24380 N 9230	<0.12	<0.04	<0.10	<0.05	<0.05	0	0
A-306	4/1/92	E 24420 N 9230	<0.12	<0.04	<0.10	<0.05	<0.05	0	0
A-307	4/1/92	E 24460 N 9230	<0.12	<0.04	<0.10	<0.05	<0.05	0	0
A-307*	4/1/92	E 24460 N 9230	<0.12	<0.04	<0.10	<0.05	<0.05	0	0
A-308	4/1/92	E 24500 N 9230	<0.12	<0.04	<0.10	<0.05	<0.05	0	0
C-135	4/1/92	E 24300 N 9230	<0.15	<0.06	<0.15	<0.08	<0.07	0	1
A-309	4/2/92	E 24580 N 9230	<0.13	<0.04	<0.09	<0.06	<0.06	0	0
A-310	4/2/92	E 24620 N 9230	<0.13	<0.04	<0.09	<0.06	<0.06	0	0
A-311	4/2/92	E 24580 N 9360	<0.13	<0.04	<0.09	<0.06	<0.06	0	0
A-312	4/2/92	E 24580 N 9400	<0.13	<0.04	<0.09	<0.06	<0.06	0	0
A-313	4/2/92	E 24580 N 9440	<0.13	<0.04	<0.09	<0.06	<0.06	0	0
A-314	4/2/92	E 24620 N 9400	<0.13	<0.04	<0.09	<0.06	<0.06	0	0
A-315	4/2/92	E 24620 N 9430	<0.13	<0.04	<0.09	<0.06	<0.06	0	0
A-316	4/2/92	E 24620 N 9430	<0.13	<0.04	<0.09	<0.06	<0.06	0	0
A-317	4/2/92	E 24580 N 9640	<0.13	<0.04	<0.09	<0.06	<0.06	0	0

See last page for footnotes.

Table 2. Summary of Analytical Results for the Soil-Gas Survey at the PRIDCO Industrial Park, February Through April 1992, OU II Remedial Investigation, Vega Alta, Puerto Rico.

Sample I.D.	Date	Coordinates	1,1-DCE (ppmv)	trans-1,2-DCE (ppmv)	cis-1,2-DCE (ppmv)	TCE (ppmv)	PCE (ppmv)	Total Target VOCs (ppmv)	Unknowns
A-318	4/2/92	E 24580 N 9600	<0.13	<0.04	<0.09	<0.06	<0.06	0	0
A-318*	4/2/92	E 24580 N 9600	<0.13	<0.04	<0.09	<0.06	<0.06	0	0
A-319	4/2/92	E 24540 N 9560	42.30	<0.04	5.90	36.40	6.70	91.30	2
A-320	4/2/92	E 24500 N 9600	2.75	<0.04	3.81	3.95	<0.07	10.51	2
C-136	4/2/92	E 24540 N 9280	<0.17	<0.06	<0.14	<0.09	<0.07	0	0
C-137	4/2/92	E 24340 N 9260	<0.17	<0.06	<0.14	<0.09	<0.07	0	0
C-138	4/2/92	E 24620 N 9360	<0.17	<0.06	<0.14	<0.09	<0.07	0	0
C-139	4/2/92	E 24620 N 9440	<0.17	<0.06	<0.14	<0.09	<0.07	0	1
C-140	4/2/92	E 24620 N 9520	<0.17	<0.06	<0.14	<0.09	<0.07	0	1
C-140*	4/2/92	E 24620 N 9520	<0.17	<0.06	<0.14	<0.09	<0.07	0	0
C-141	4/2/92	E 24605 N 9600	<0.17	<0.06	<0.14	<0.09	<0.07	0	0
C-142	4/2/92	E 24580 N 9560	0.16	<0.06	<0.14	0.81	0.56	1.53	1
A-321	4/3/92	E 24540 N 9640	0.46	0.11	0.57	0.43	<0.07	1.57	2
A-322	4/3/92	E 24540 N 9680	<0.13	<0.04	<0.09	<0.09	<0.07	0	0
A-323	4/3/92	E 24460 N 9640	1.25	0.04	20.43	3.37	<0.07	25.09	4
A-324	4/3/92	E 24420 N 9640	1.92	<0.04	0.55	15.08	0.11	17.96	1
A-325	4/3/92	E 24380 N 9600	<0.13	<0.04	<0.09	<0.09	<0.07	0	0
A-326	4/3/92	E 24380 N 9640	4.37	<0.04	<0.09	8.48	<0.07	12.85	1
A-327	4/3/92	E 24300 N 9600	3.75	<0.04	0.81	104.66	0.66	109.88	1
C-143	4/3/92	E 24500 N 9560	3.22	<0.07	<0.13	3.81	<0.07	7.03	0
C-144	4/3/92	E 24540 N 9600	4.07	<0.07	5.04	1.43	0.11	10.65	4
C-145	4/3/92	E 24500 N 9640	1.15	<0.07	7.13	0.15	<0.07	8.43	1
C-146	4/3/92	E 24460 N 9600	0.39	<0.07	0.47	<0.12	<0.07	0.86	0
C-147	4/3/92	E 24420 N 9600	8.64	<0.07	0.96	43.57	0.36	53.53	4
C-148	4/3/92	E 24340 N 9600	<0.17	<0.07	<0.13	<0.12	<0.07	0	1
C-149	4/3/92	E 24340 N 9640	<0.17	<0.07	<0.13	<0.12	<0.07	0	1

See last page for footnotes.

Table 2. Summary of Analytical Results for the Soil-Gas Survey at the PRIDCO Industrial Park, February Through April 1992, OU II Remedial Investigation, Vega Alta, Puerto Rico.

Sample I.D.	Date	Coordinates	1,1-DCE (ppmv)	trans-1,2-DCE (ppmv)	cis-1,2-DCE (ppmv)	TCE (ppmv)	PCE (ppmv)	Total Target VOCs (ppmv)	Unknowns
A-328	4/6/92	E 24260 N 9320	0.80	<0.03	<0.08	0.61	0.17	1.58	0
A-328*	4/6/92	E 24260 N 9320	0.68	<0.03	<0.08	0.56	0.15	1.39	0
A-329	4/6/92	E 24260 N 9440	<0.14	<0.03	<0.08	<0.06	<0.04	0	0
A-330	4/6/92	E 24260 N 9480	<0.14	<0.03	<0.08	<0.06	<0.04	0	1
A-331	4/6/92	E 24260 N 9520	<0.14	<0.03	<0.08	<0.06	<0.04	0	0
A-332	4/6/92	E 24260 N 9560	<0.14	<0.03	<0.08	<0.06	<0.04	0	0
A-333	4/6/92	E 24300 N 9640	0.42	<0.03	<0.08	1.37	<0.04	1.79	0
A-334	4/6/92	E 24300 N 9720	<0.14	<0.03	<0.08	<0.06	<0.04	0	0
A-335	4/6/92	E 24260 N 9694	<0.14	<0.03	<0.08	<0.06	<0.04	0	1
A-336	4/6/92	E 24260 N 9720	<0.14	<0.03	<0.08	<0.06	<0.04	0	2
C-150	4/6/92	E 24260 N 9280	<0.20	<0.06	<0.14	<0.10	<0.06	0	1
C-150*	4/6/92	E 24260 N 9280	<0.20	<0.06	<0.14	<0.10	<0.06	0	1
C-151	4/6/92	E 24260 N 9360	<0.20	<0.06	<0.14	<0.10	<0.06	0	3
C-152	4/6/92	E 24260 N 9400	34.70	<0.06	2.61	17.02	7.77	62.10	3
C-153	4/6/92	E 24260 N 9600	0.98	<0.06	<0.14	21.35	0.22	22.55	1
C-154	4/6/92	E 24300 N 9680	<0.20	<0.06	<0.14	<0.10	<0.06	0	0
C-155	4/6/92	E 24250 N 9680	<0.20	<0.06	<0.14	<0.10	<0.06	0	0
C-156	4/6/92	E 24260 N 9760	<0.20	<0.06	<0.14	<0.10	<0.06	0	0
C-157	4/6/92	E 24250 N 9640	<0.20	<0.06	<0.14	<0.10	<0.06	0	0
A-364	4/9/92	E 24240 N 9360	<0.12	<0.04	<0.09	<0.05	<0.06	0	1
A-365	4/9/92	E 24240 N 9400	<0.12	<0.04	<0.09	<0.05	<0.06	0	0
A-366	4/9/92	E 24240 N 9440	7.20	<0.04	<0.09	3.10	1.80	12.10	1
A-367	4/9/92	E 24500 N 9760	<0.12	<0.04	<0.09	<0.05	<0.06	0	0
A-368	4/9/92	E 24460 N 9720	<0.12	<0.04	<0.09	0.31	<0.06	0.31	0
A-368*	4/9/92	E 24460 N 9720	<0.12	<0.04	<0.09	1.10	<0.06	1.10	0
A-369	4/9/92	E 24500 N 9840	<0.12	<0.04	<0.09	<0.05	<0.06	0	0

See last page for footnotes.

Table 2. Summary of Analytical Results for the Soil-Gas Survey at the PRIDCO Industrial Park, February Through April 1992, OU II Remedial Investigation, Vega Alta, Puerto Rico.

Sample I.D.	Date	Coordinates	1,1-DCE (ppmv)	trans-1,2-DCE (ppmv)	cis-1,2-DCE (ppmv)	TCE (ppmv)	PCE (ppmv)	Total Target VOCs (ppmv)	Unknowns
A-370	4/9/92	E 24495 N 9895	<0.12	<0.04	<0.09	<0.05	<0.06	0	0
A-371	4/9/92	E 24420 N 9840	<0.12	<0.04	<0.09	<0.05	<0.06	0	0
C-177	4/9/92	E 24240 N 9280	0.41	<0.05	<0.11	<0.06	0.16	0.57	0
C-178	4/9/92	E 24500 N 9720	<0.13	<0.05	<0.11	<0.06	<0.05	0	0
C-179	4/9/92	E 24460 N 9760	<0.13	<0.05	<0.11	<0.06	<0.05	0	0
C-180	4/9/92	E 24540 N 9720	<0.13	<0.05	<0.11	<0.06	<0.05	0	0
C-180*	4/9/92	E 24540 N 9720	<0.13	<0.05	<0.11	<0.06	<0.05	0	0
C-181	4/9/92	E 24540 N 9760	<0.13	<0.05	<0.11	<0.06	<0.05	0	0
C-182	4/9/92	E 24440 N 9840	<0.13	<0.05	<0.11	<0.06	<0.05	0	0
C-183	4/9/92	E 24420 N 9840	<0.13	<0.05	<0.11	<0.06	<0.05	0	0
C-184	4/9/92	E 24460 N 9880	<0.13	<0.05	<0.11	<0.06	<0.05	0	0
A-372	4/10/92	E 24340 N 9720	<0.14	<0.05	<0.07	0.08	<0.05	0.08	0
A-373	4/10/92	E 24300 N 9760	<0.14	<0.05	<0.07	0.13	0.12	0.25	0
A-374	4/10/92	E 24380 N 9760	<0.14	<0.05	<0.07	<0.06	<0.05	0	0
A-375	4/10/92	E 24420 N 9800	<0.14	<0.05	<0.07	<0.06	<0.05	0	0
A-376	4/10/92	E 24420 N 9720	<0.14	<0.05	<0.07	<0.06	<0.05	0	0
A-377	4/10/92	E 24500 N 9800	<0.14	<0.05	<0.07	<0.06	<0.05	0	0
A-378	4/10/92	E 24460 N 9800	<0.14	<0.05	<0.07	<0.06	<0.05	0	0
A-378*	10/92	E 24460 N 9800	<0.14	<0.05	<0.07	<0.06	<0.05	0	0
A-379	4/10/92	E 24460 N 9840	<0.14	<0.05	<0.07	<0.06	<0.05	0	0
A-380	4/10/92	E 24380 N 9800	<0.14	<0.05	<0.07	<0.06	<0.05	0	0
A-381	4/10/92	E 24340 N 9820	<0.14	<0.05	<0.07	<0.06	<0.05	0	0
C-135	4/10/92	E 24340 N 9680	3.33	<0.06	<0.09	0.35	<0.05	3.68	1
C-186	4/10/92	E 24340 N 9760	<0.15	<0.06	<0.09	<0.07	<0.05	0	0
C-187	4/10/92	E 24420 N 9760	<0.15	<0.06	<0.09	<0.07	<0.05	0	0
C-188	4/10/92	E 24380 N 9720	<0.15	<0.06	<0.09	<0.07	<0.05	0	0

See last page for footnotes.

Table 2. Summary of Analytical Results for the Soil-Gas Survey at the PRIDCO Industrial Park, February Through April 1992, OU II Remedial Investigation, Vega Alta, Puerto Rico.

Sample I.D.	Date	Coordinates	1,1-DCE (ppmv)	trans-1,2-DCE (ppmv)	cis-1,2-DCE (ppmv)	TCE (ppmv)	PCE (ppmv)	Total Target VOCs (ppmv)	Unknowns
C-189	4/10/92	E 24340 N 9800	0.43	<0.06	<0.09	0.34	0.21	0.98	0
A-383	4/13/92	E 24340 N 9780	1.37	<0.03	<0.07	1.68	0.62	3.67	0
A-384	4/13/92	E 24360 N 9800	<0.11	<0.03	<0.07	<0.04	<0.03	0	0
C-190	4/13/92	E 24320 N 9800	<0.13	<0.05	<0.11	<0.06	<0.05	0	1
C-190*	4/13/92	E 24320 N 9800	<0.13	<0.05	<0.11	<0.06	<0.05	0	1
Teledyne Packaging									
A-337	4/7/92	E 24060 N 9720	<0.14	<0.04	<0.12	<0.06	<0.05	0	0
A-338	4/7/92	E 24140 N 9720	<0.14	<0.04	<0.12	<0.06	<0.05	0	0
A-338*	4/7/92	E 24140 N 9720	<0.14	<0.04	<0.12	<0.06	<0.05	0	0
A-339	4/7/92	E 24220 N 9680	<0.14	<0.04	<0.12	<0.06	<0.05	0	0
A-340	4/7/92	E 24180 N 9680	<0.14	<0.04	<0.12	<0.06	<0.05	0	0
A-341	4/7/92	E 24100 N 9680	<0.14	<0.04	<0.12	<0.06	<0.05	0	0
A-342	4/7/92	E 24220 N 9640	2.00	<0.04	0.44	<0.06	<0.05	2.44	1
A-343	4/7/92	E 24180 N 9640	<0.14	<0.04	<0.12	<0.06	<0.05	0	0
A-344	4/7/92	E 24100 N 9640	<0.14	<0.04	<0.12	<0.06	<0.05	0	0
A-345	4/7/92	E 24140 N 9640	<0.14	<0.04	<0.12	<0.06	<0.05	0	0
A-346	4/7/92	E 24220 N 9560	<0.14	<0.04	<0.12	<0.06	<0.05	0	0
A-347	4/7/92	E 24220 N 9520	<0.14	<0.04	<0.12	<0.06	<0.05	0	0
A-348	4/7/92	E 24220 N 9600	<0.14	<0.04	<0.12	<0.06	<0.05	0	0
A-348*	4/7/92	E 24220 N 9600	<0.14	<0.04	<0.12	<0.06	<0.05	0	0
C-158	4/7/92	E 24100 N 9720	<0.16	<0.05	<0.15	<0.07	<0.05	0	0
C-159	4/7/92	E 24180 N 9720	<0.16	<0.05	<0.15	<0.07	<0.05	0	0
C-160	4/7/92	E 24220 N 9720	<0.16	<0.05	<0.15	<0.07	<0.05	0	0
C-160*	4/7/92	E 24220 N 9720	<0.16	<0.05	<0.15	<0.07	<0.05	0	0
C-161	4/7/92	E 24140 N 9680	<0.16	<0.05	<0.15	<0.07	<0.05	0	0

See last page for footnotes.

Table 2. Summary of Analytical Results for the Soil-Gas Survey at the PRIDCO Industrial Park, February Through April 1992, OU II Remedial Investigation, Vega Alta, Puerto Rico.

Sample I.D.	Date	Coordinates	1,1-DCE (ppmv)	trans-1,2-DCE (ppmv)	cis-1,2-DCE (ppmv)	TCE (ppmv)	PCE (ppmv)	Total Target VOCs (ppmv)	Unknowns
C-162	4/7/92	E 24060 N 9680	<0.16	<0.05	<0.15	<0.07	<0.05	0	0
C-163	4/7/92	E 24060 N 9640	<0.16	<0.05	<0.15	<0.07	<0.05	0	0
A-349	4/8/92	E 24235 N 9640	<0.16	<0.05	<0.13	<0.08	<0.06	0	0
A-350	4/8/92	E 24200 N 9640	<0.16	<0.05	<0.13	<0.08	<0.06	0	0
A-351	4/8/92	E 24140 N 9600	<0.16	<0.05	<0.13	<0.08	<0.06	0	0
A-352	4/8/92	E 24100 N 9600	<0.16	<0.05	<0.13	<0.08	<0.06	0	0
A-353	4/8/92	E 24100 N 9520	<0.16	<0.05	<0.13	<0.08	<0.06	0	0
A-354	4/8/92	E 24060 N 9520	<0.16	<0.05	<0.13	<0.08	<0.06	0	0
A-355	4/8/92	E 24060 N 9480	<0.16	<0.05	<0.13	<0.08	<0.06	0	0
A-356	4/8/92	E 24060 N 9400	<0.16	<0.05	<0.13	<0.08	<0.06	0	0
A-357	4/8/92	E 24100 N 9400	<0.16	<0.05	<0.13	<0.08	0.41	0.41	0
A-358	4/8/92	E 24140 N 9240	<0.16	<0.05	<0.13	<0.08	<0.06	0	0
A-358*	4/8/92	E 24140 N 9240	<0.16	<0.05	<0.13	<0.08	<0.06	0	0
A-359	4/8/92	E 24180 N 9240	<0.16	<0.05	<0.13	<0.08	<0.06	0	0
A-360	4/8/92	E 24220 N 9320	5.31	<0.05	<0.13	0.87	1.60	7.78	1
A-361	4/8/92	E 24220 N 9400	<0.16	<0.05	<0.13	<0.08	<0.06	0	0
C-164	4/8/92	E 24180 N 9600	<0.19	<0.06	<0.17	<0.09	<0.06	0	0
C-165	4/8/92	E 24180 N 9560	<0.19	<0.06	<0.17	<0.09	<0.06	0	0
C-166	4/8/92	E 24140 N 9560	<0.19	<0.06	<0.17	<0.09	<0.06	0	0
C-167	4/8/92	E 24100 N 9560	<0.19	<0.06	<0.17	<0.09	<0.06	0	1
C-168	4/8/92	E 24060 N 9560	<0.19	<0.06	<0.17	<0.09	<0.06	0	1
C-169	4/8/92	E 24060 N 9600	<0.19	<0.06	<0.17	<0.09	<0.06	0	1
C-169*	4/8/92	E 24060 N 9600	<0.19	<0.06	<0.17	<0.09	<0.06	0	1
C-170	4/8/92	E 24060 N 9440	<0.19	<0.06	<0.17	<0.09	<0.06	0	0
C-171	4/8/92	E 24100 N 9360	<0.19	<0.06	<0.17	<0.09	<0.06	0	0
C-172	4/8/92	E 24100 N 9320	<0.19	<0.06	<0.17	<0.09	<0.06	0	0

See last page for footnotes.

Table 2. Summary of Analytical Results for the Soil-Gas Survey at the PRIDCO Industrial Park, February Through April 1992, OU II Remedial Investigation, Vega Alta, Puerto Rico.

Sample I.D.	Date	Coordinates	1,1-DCE (ppmv)	trans-1,2-DCE (ppmv)	cis-1,2-DCE (ppmv)	TCE (ppmv)	PCE (ppmv)	Total Target VOCs (ppmv)	Unknowns
C-173	4/8/92	E 24100 N 9240	<0.19	<0.06	<0.17	<0.09	<0.06	0	0
C-174	4/8/92	E 24220 N 9240	4.63	<0.06	<0.17	<0.09	0.73	5.36	2
C-175	4/8/92	E 24220 N 9360	<0.19	<0.06	<0.17	<0.09	<0.06	0	0
A-362	4/9/92	E 24220 N 9650	<0.12	<0.04	<0.09	<0.05	<0.06	0	0
A-363	4/9/92	E 24120 N 9400	<0.12	<0.04	<0.09	<0.05	<0.06	0	0
C-176	4/9/92	E 24220 N 9630	<0.13	<0.05	<0.11	<0.06	<0.05	0	2
Sam Food									
A-385	4/13/92	# 229	<0.11	<0.03	<0.07	<0.04	<0.05	0	0
A-386	4/13/92	# 231	<0.11	<0.03	<0.07	<0.04	<0.05	0	0
C-191	4/13/92	# 228	<0.13	<0.05	<0.11	<0.06	<0.05	0	0
C-192	4/13/92	# 230	<0.13	<0.05	<0.11	<0.06	<0.05	0	0

ppmv	Parts per million by volume.
*	Duplicate sample.
VOCs	Volatile organic compounds.
DCE	Dichloroethene.
TCE	Trichloroethene.
PCE	Tetrachloroethene
PRIDCO	Puerto Rico Industrial Development Company.
E20160, N10800	Arbitrary grid point.

The varying detection limits for each compound are due to the natural differences in sensitivity between the gas chromatograph (GC) instruments used during the soil-gas study.

Suffixes A, B, C, and D in the sample identification indicates the specific GC instrument used to analyze that particular sample.

Table 3. Summary of Detection Frequencies and Concentration Ranges for the Soil-Gas Survey at the PRIDCO Industrial Park, February Through April 1992, Vega Alta, Puerto Rico.

		Total Target VOC		1, 1-DCE		Trans-1, 2-DCE	
No. of Sampling Points Analyzed	Area	Detection Frequency	Concentration Range (ppmv)	Detection Frequency	Concentration Range (ppmv)	Detection Frequency	Concentration Range (ppmv)
76	Concrete Pad	4%	0.15 - 6.88	0%	<0.03 - <0.10	0%	<0.02 - <0.05
61	Honda Creek	0%	0	0%	<0.08 - <0.21	0%	<0.03 - <0.07
61	Caribe GE Parking Lot	26%	0.04 - 2.99	10%	0.15 - 1.10	0%	<0.03 - <0.08
25	Caribe GE Pilot Bldg. No. 1	36%	0.09 - 91.0	12%	0.24 - 12.60	4%	<0.04 - 1.08
21	Caribe GE Pilot Bldg. No. 2	38%	0.05 - 6.60	33%	0.21 - 3.68	0%	<0.02 - <0.08
19	Rovipak	32%	0.05 - 0.91	11%	0.15 - 0.60	0%	<0.03 - <0.06
17	Drainage Ditch	0%	0	0%	<0.09 - <0.16	0%	<0.02 - <0.05
27	Former Drainage Ditch	0%	0	0%	<0.10 - <0.28	0%	<0.03 - <0.15
48	Formerly West Co.	23%	0.38 - 20.10	15%	0.14 - 5.50	0%	<0.02 - <0.05
61	West Co. No. 1	20%	0.12 - 4.72	8%	0.14 - 2.91	0%	<0.02 - <0.07
59	West Co. No. 2	12%	0.08 - 0.78	5%	0.14 - 0.78	0%	<0.02 - <0.07
32	Elba Ceramics	0%	0	0%	<0.12 - <0.15	0%	<0.04 - <0.06
69	Harman Auto	33%	0.05 - 2.08	0%	<0.10 - <0.29	0%	<0.03 - <0.15
90	Caribe GE Control Plant	29%	0.08 - 109.88	26%	0.16 - 42.30	2%	0.04 - 0.11
46	Teledyne Packaging	9%	0.41 - 7.78	7%	2.00 - 5.31	0%	<0.04 - <0.06
4	Sam Food	0%	0	0%	<0.11 - <0.13	0%	<0.03 - <0.05

See Page 2 for footnotes.

Table 3. Summary of Detection Frequencies and Concentration Ranges for the Soil-Gas Survey at the PRIDCO Industrial Park, February Through April 1992, Vega Alta, Puerto Rico.

		cis-1,2-DCE		TCE		PCE	
No. of Sampling Points Analyzed	Area	Detection Frequency	Concentration Range (ppmv)	Detection Frequency	Concentration Range (ppmv)	Detection Frequency	Concentration Range (ppmv)
76	Concrete Pad	1%	<0.06 - 0.53	4%	0.10 - 1.81	4%	<0.04 - 4.54
61	Honda Creek	0%	<0.06 - <0.22	0%	<0.06 - <0.10	0%	<0.04 - <0.08
61	Caribe GE Parking Lot	0%	<0.07 - <0.22	11%	0.15 - 1.05	26%	0.04 - 1.09
25	Caribe GE Pilot Bldg. No. 1	16%	0.32 - 55.74	20%	0.11 - 2.88	20%	0.09 - 18.70
21	Caribe GE Pilot Bldg. No. 2	5%	<0.07 - 0.11	24%	0.09 - 1.23	33%	0.05 - 2.33
19	Rovipak	0%	<0.08 - <0.14	5%	<0.04 - 0.04	32%	0.05 - 0.27
17	Drainage Ditch	0%	<0.07 - <0.13	0%	<0.0[illegible] - <0.08	0%	<0.04 - <0.06
27	Former Drainage Ditch	0%	<0.08 - <0.31	0%	<0.04 - <0.17	0%	<0.03 - <0.15
48	Formerly West Co.	2%	<0.08 - 12.0	21%	0.09 - 3.80	19%	0.29 - 2.80
61	West Co. No. 1	2%	<0.08 - 1.81	7%	0.07 - 2.25	11%	0.05 - 0.21
59	West Co. No. 2	0%	<0.08 - <0.15	2%	0.08 - 0.10	5%	0.15 - 0.34
12	Elba Ceramics	0%	<0.10 - <0.15	0%	<0.05 - <0.08	0%	<0.05 - <0.07
69	Herman Auto	0%	<0.08 - <0.32	13%	0.08 - 0.67	33%	0.08 - 1.41
90	Caribe GE Control Plant	12%	0.47 - 20.43	27%	0.08 - 104.66	17%	0.11 - 7.77
46	Teledyne Packaging	2%	<0.09 - 0.44	2%	<0.05 - 0.87	7%	0.41 - 1.60
4	Sam Food	0%	<0.07 - <0.11	0%	<0.04 - <0.06	0%	<0.05

Detection frequencies do not include field quality assurance/quality control (QA/QC) replicates.

ppmv	Parts per million by volume.
VOC	Volatile organic compound.
1,1-DCE	1,1-Dichloroethene.
trans-1,2-DCE	trans-1,2-Dichloroethene.
cis-1,2-DCE	cis-1,2-Dichloroethene.
TCE	Trichloroethene.
PCE	Tetrachloroethene

PR044-**-K1/VEGAASAMP.XLS

Table 4. Summary of Analytical Results for the Soil-Gas Survey at the Vega Alta Municipal Landfill, April 1992, OU II Remedial Investigation, Vega Alta, Puerto Rico.

Sample I.D.	Date	Coordinates	1,1-DCE (ppmv)	trans-1,2-DCE (ppmv)	cis-1,2-DCE (ppmv)	TCE (ppmv)	PCE (ppmv)	Total Target VOCs (ppmv)	Unknowns
Landfill									
A-387	4/13/92	NE100 NW400	<0.11	<0.03	<0.07	<0.04	<0.03	0	0
A-388	4/13/92	NE100 NW100	<0.11	<0.03	<0.07	<0.04	<0.03	0	3
A-388*	4/13/92	NE100 NW100	<0.11	<0.03	<0.07	0.04	<0.03	0.04	0
C-193	4/13/92	NE100 NW300	<0.13	<0.05	<0.11	<0.06	<0.05	0	0
C-194	4/13/92	NE100 NW200	<0.13	0.57	3.96	<0.06	<0.05	4.53	14
C-195	4/13/92	NE200 NW100	<0.13	<0.05	<0.11	<0.06	<0.05	0	1
C-196	4/13/92	NE200 NW200	1.02	<0.05	<0.11	<0.06	<0.05	1.02	2
A-389	4/14/92	NE60 NW200	<0.11	<0.03	<0.06	<0.06	<0.04	0	4
A-390	4/14/92	NE100 NW450	<0.11	<0.03	<0.06	<0.06	<0.04	0	0
A-391	4/14/92	NE100 NW500	<0.11	<0.03	<0.06	<0.06	<0.04	0	0
A-392	4/14/92	NE155 NW500	<0.11	<0.03	<0.06	<0.06	<0.04	0	3
A-393	4/14/92	NE200 NW600	<0.11	<0.03	<0.06	<0.06	<0.04	0	1
A-394	4/14/92	NE100 NW800	<0.11	<0.03	<0.06	0.47	<0.04	0.47	9
A-394*	4/14/92	NE100 NW800	<0.11	<0.03	<0.06	0.60	0.07	0.67	13
A-395	4/14/92	NE200 NW700	<0.11	<0.03	<0.06	<0.06	<0.04	0	2
C-197	4/14/92	NE150 NW200	<0.15	<0.05	<0.09	<0.07	<0.04	0	0
C-198	4/14/92	NE150 NW400	<0.15	<0.05	<0.09	<0.07	<0.04	0	0
C-199	4/14/92	NE100 NW350	<0.15	<0.05	<0.09	<0.07	<0.04	0	2
C-200	4/14/92	NE100 NW600	<0.15	<0.05	<0.09	<0.07	<0.04	0	2
C-200*	4/14/92	NE100 NW6[illegible]	<0.15	<0.05	<0.09	<0.07	<0.04	0	2
C-201	4/14/92	NE100 NW700	<0.15	<0.05	<0.09	<0.07	<0.04	0	6
C-202	4/14/92	NE200 NW800	<0.15	0.05	0.36	0.20	0.09	0.70	14
C-203	4/14/92	NE100 NW900	<0.15	<0.05	<0.09	<0.07	<0.04	0	6
A-396	4/15/92	NE300 NW800	<0.09	<0.04	<0.08	0.37	0.14	0.51	13
A-397	4/15/92	NE300 NW700	1.62	0.07	<0.08	<0.05	<0.05	1.69	14
A-398	4/15/92	NE400 NW700	<0.09	<0.04	<0.08	<0.05	<0.05	0	0

See page 2 for footnotes.

Table 4. Summary of Analytical Results for the Soil-Gas Survey at the Vega Alta Municipal Landfill, April 1992, OU II Remedial Investigation, Vega Alta, Puerto Rico.

Sample I.D.	Date	Coordinates	1,1-DCE (ppmv)	trans-1,2-DCE (ppmv)	cis-1,2-DCE (ppmv)	TCE (ppmv)	PCE (ppmv)	Total Target VOCs (ppmv)	Unknowns
A-399	4/15/92	NE575 NW700	<0.09	<0.04	0.15	<0.05	<0.05	0.15	18
A-400	4/15/92	NE575 NW800	<0.09	0.07	0.11	0.11	0.13	0.42	12
C-204	4/15/92	NE200 NW900	<0.11	6.07	22.56	<0.07	<0.05	28.63	13
C-205	4/15/92	NE400 NW800	<0.11	<0.05	<0.11	0.88	0.05	0.93	7
C-206	4/15/92	NE500 NW700	0.67	<0.05	<0.11	0.07	0.07	0.81	6
C-207	4/15/92	NE575 NW650	<0.11	<0.05	<0.11	<0.07	<0.05	0	2
C-208	4/15/92	NE500 NW800	<0.11	<0.05	<0.11	<0.07	<0.05	0	15
A-401	4/16/92	NE100 NW425	<0.11	<0.04	<0.07	<0.07	<0.06	0	2
A-402	4/16/92	NE250 NW650	<0.11	<0.04	<0.07	<0.07	<0.06	0	0
A-403	4/16/92	NE350 NW650	<0.11	<0.04	0.16	0.62	<0.06	0.78	8
A-404	4/16/92	NE400 NW1000	<0.11	<0.04	0.42	<0.07	0.18	0.60	16
A-404*	4/16/92	NE400 NW1000	<0.11	<0.04	0.63	<0.07	0.27	0.90	17
C-209	4/16/92	NE100 NW375	<0.13	<0.05	<0.09	<0.08	<0.05	0	0
C-210	4/16/92	NE25 NW700	<0.13	<0.05	<0.09	<0.08	<0.05	0	3
C-210*	4/16/92	NE25 NW700	<0.13	<0.05	<0.09	<0.08	<0.05	0	0
C-211	4/16/92	NE400 NW900	<0.13	<0.05	<0.09	<0.08	<0.05	0	2
C-212	4/16/92	NE575 NW900	<0.13	<0.05	<0.09	<0.08	<0.05	0	4

ppmv Parts per million by volume.
* Duplicate sample.
DCE Dichloroethene.
TCE Trichloroethene.
PCE Tetrachloroethene.
VOC Volatile organic compound.

NE100, NW600 Arbitrary grid point.

The varying detection limits for each compound are due to the natural differences in sensitivity between the gas chromatograph (GC) instruments used during the soil-gas study.
Prefixes A and C in the sample identification indicate the specific GC instrument used to analyze that particular sample.

Table 5. Summary of Septic Tank Liquid Analytical Results, Teledyne Packaging, Inc., Vega Alta, Puerto Rico.

Parameter	Septic Tank 1 (ug/L)	Duplicate Septic Tank 1 (ug/L)	Septic Tank 2 (ug/L)	Duplicate Septic Tank 2 (ug/L)	MCL (ug/L)
Phenol	24				- -
1,4-Dichlorobenzene	26				- -
2-Methylnaphthalene	7	J			- -
Isophorone			78	180 J	- -
Di-n-buty phthalate			8,400	9,000 E	- -
Butyl benzyl phthalate			2,300	630	- -
bis(2-Ethylhexyl)phthalate			1,400	440	- -
Acetone	380	390	3,800	3,300	- -
Benzene	2	J			5
Toluene	170	170	5,300	3,700	1,000
Ethylbenzene	3	J	66	J	700
Xylenes (total)	59	23 J	120	J	10,000
4,4-DDE			0.241		- -
Cyanide, Total			4	B	200 **
Aluminum	207	224	31,700		50 *
Arsenic			114		50
Barium	36.3	35.5 B	562		2,000
Beryllium	0.759	0.786 B	1.3	B	4 **
Cadmium			155		5
Calcium	109,000	94,700	301,000		- -
Chromium	7	7.06 B	2,300		100
Cobalt			75.4		- -
Copper	130	113	1,540		1,000 *
Iron	719	683	248,000		300 *
Lead	10.1	8.68	2,150		50
Magnesium	6,940	6,780	14,000		- -
Manganese	18.8	19.1	1,030		50 *
Mercury	3.52	4.22	3.5	N	2.0
Nickel	26.7		1,210		100 *
Potassium	15,500	15,200 B	29,400		- -
Silver			30.9		100 *
Sodium	30,900	30,000	77,400		- -
Vandium			141		- -
Zinc	224	198	26,300		5,000 *

MCL Maximum contaminant level for drinking water (primary level unless otherwise indicated).
- - No MCL exists.
* Secondary MCL.
** Proposed MCL.
ug/L Micrograms per liter.
J Estimated value below detection limit.
B Reported value was obtained from a reading that was less than the contract required detection limit, but greater than or equal to the instrument detection limit.
E The reported value is estimated because of the presence of interference.
N Spike recovery not within control limits.

Source: Harding Lawson Associates, Inc. (1991).

Table 6. Summary of Septic Tank Sludge Analytical Results, Teledyne Packaging, Inc., Vega Alta, Puerto Rico.

Parameter	Septic Tank 1 (ug/L)	Septic Tank 2 (ug/L)	TCLP Limit (ug/L)
Benzene	1,030		500
Chlorobenzene	1,290	108	100,000
Barium	840	500	100,000
Cadmium	5.8		1,000
Chromium	23	56	5,000
Mercury	6.1		200
Silver	20		5,000
Reactive sulfide	5,600	630	
2,4,5-TP (Silvex)	2.67		1,000

ug/L Micrograms per liter.
TCLP Toxicity Characteristic Leachate Procedure.

Source: Harding Lawson Associates, Inc. (1991).

'able 7. Volatile Organic Compounds Concentrations Detected by CLP Laboratory Analysis of Soil Samples, PRIDCO Industrial Park, October 1992 to March 1993, OU II Remedial Investigation, Vega Alta, Puerto Rico.

Analyte	Sample ID: BH-03A Depth: Date:	BH-05 (29.5'-31.5') 30-Oct-92	BH-09 (9.5'-11.5') 16-Dec-92	BH-18 (77.5'-79.0') 3-Dec-92	BH-21A (9.5'-13.5') 17-Mar-93	BH-24 (49.5'-50.3') 10-Feb-93	BH-25A (29.5'-31.5') 27-Jan-93	BH-25A (64.5'-66.5') 27-Jan-93	BH-26A (4.5'-6.5') 4-Feb-93	BH-26A (9.5'-11.5') 4-Feb-93	BH-26A (64.5'-68.5') 5-Feb-93	BH-31 (34.5'-36.5') 20-Jan-93	BH-32 (14.5'-16.5') 28-Jan-93
hloromethane	12 U	13 U	11 U	12 U	13 U	12 UJ	14 U	14 UJ	13 UJ	13 UJ	13 U	14 U	14 U
romomethane	12 U	13 U	11 U	12 U	13 U	12 U	14 U	14 UJ	13 UJ	13 UJ	13 U	14 U	14 U
inyl chloride	12 U	13 U	11 U	12 U	13 U	12 U	14 U	14 UJ	13 UJ	13 UJ	13 U	14 U	14 U
hloroethane	12 U	13 U	11 U	12 U	13 U	12 U	14 U	14 UJ	13 UJ	13 UJ	13 U	14 U	14 U
lethylene chloride	12 U	13 U	11 U	12 U	13 U	12 U	14 U	14 UJ	13 UJ	13 UJ	13 U	14 UJ	5 J
cetone	12 UJ	13 UJ	11 U	5 J	13 UJ	12 UJ	14 UJ	14 UJ	4 J	9 J	13 UJ	14 UJ	33 UJ
arbon disulfide	12 U	13 U	11 U	12 U	11 J	12 U	14 U	14 UJ	13 UJ	13 UJ	13 U	14 U	14 U
1-Dichloroethene	12 U	13 U	11 U	12 U	13 U	12 U	4 J	14 J	13 UJ	13 UJ	13 U	7 J	14 U
1-Dichloroethane	12 U	13 U	11 U	12 U	13 U	12 U	120	48 J	13 UJ	13 UJ	13 U	3 J	14 U
2-Dichloroethene (cis/trans)	5 J	13 U	11 U	12 U	13 U	12 U	240 BDJ	79 J	13 UJ	13 UJ	13 U	28	11 J
hloroform	12 U	13 U	1 J	12 U	13 U	12 U	7 J	3 J	13 UJ	13 UJ	13 U	14 U	14 U
2-Dichloroethane	12 U	13 U	11 U	12 U	13 U	12 U	14 U	14 UJ	13 UJ	13 UJ	13 U	14 UJ	14 U
Butanone	12 U	13 U	11 U	12 U	13 U	12 UJ	14 U	14 UJ	13 UJ	13 UJ	13 UJ	14 U	14 U
1,1-Trichloroethane	12 U	13 U	11 U	12 U	13 U	12 U	14 U	14 UJ	13 UJ	13 UJ	13 U	14 U	14 U
arbon tetrachloride	12 U	13 U	11 U	12 U	13 U	12 U	14 U	14 UJ	13 UJ	13 UJ	13 U	14 U	14 U
romodichloromethane	12 U	13 U	11 U	12 U	13 U	12 U	14 U	14 UJ	13 UJ	13 UJ	13 U	14 U	14 U
2-Dichloropropane	12 U	13 U	11 U	12 U	13 U	12 U	14 U	14 UJ	13 UJ	13 UJ	13 U	14 U	14 U
s-1,3-Dichloropropene	12 U	13 U	11 U	12 U	13 U	12 U	14 U	14 UJ	13 UJ	13 UJ	13 U	14 U	14 U
richloroethene	12 U	13 U	11 U	12 U	13 U	12 U	2200 D	1000 DJ	13 UJ	13 UJ	13 U	61	16
bromochloromethane	12 U	13 U	11 U	12 U	13 U	12 U	14 U	14 UJ	13 UJ	13 UJ	13 U	14 U	14 U
1,2-Trichloroethane	12 U	13 U	11 U	12 U	13 U	12 U	44	17 J	13 UJ	13 UJ	13 U	14 U	14 U
nzene	12 U	13 U	11 U	12 U	13 U	12 U	14 U	14 UJ	13 UJ	13 UJ	13 U	14 U	14 U
is-1,3-Dichloropropene	12 U	13 U	11 U	12 U	13 U	12 U	14 U	14 UJ	13 UJ	13 UJ	13 U	14 U	14 U
omoform	12 U	13 U	11 U	12 U	13 U	12 U	14 U	14 UJ	13 UJ	13 UJ	13 U	14 U	14 U
Methyl-2-pentanone	12 U	13 U	11 U	12 U	13 U	12 UJ	14 U	14 UJ	13 UJ	13 UJ	13 UJ	14 UJ	14 U
Hexanone	12 U	13 U	11 U	12 UJ	13 U	12 UJ	14 U	14 UJ	13 UJ	13 UJ	13 UJ	14 UJ	14 U
1,2,2-Tetrachloroethane	12 U	13 U	11 U	12 U	13 U	12 U	14 U	14 UJ	13 UJ	13 UJ	13 U	14 U	14 U
trachloroethene	12 U	13 U	11 U	12 U	13 U	12 U	1400 DJ	250 DJ	13 UJ	13 UJ	13 U	5 J	14 U
luene	12 U	13 U	11 U	12 U	13 U	12 U	14 U	14 UJ	13 UJ	13 UJ	13 U	14 U	14 U
lorobenzene	12 U	13 U	11 U	12 U	13 U	12 U	14 U	14 UJ	13 UJ	13 UJ	13 U	14 U	14 U
hylbenzene	12 U	13 U	11 U	12 U	13 U	12 U	14 U	14 UJ	13 UJ	13 UJ	13 U	14 U	14 U
yrene	12 U	13 U	11 U	12 U	13 U	12 U	14 U	14 UJ	13 UJ	13 UJ	13 U	14 U	14 U
lenes (total)	12 U	13 U	11 U	12 U	13 U	12 U	14 U	14 UJ	13 UJ	13 UJ	13 U	14 U	14 U

alyte concentrations in micrograms per kilogram (parts per billion [ppb]).
alyses were performed by various analytical subcontractors, using standard U.S. Environmental Protection Agency (USEPA) methodology.

The compound was also detected in the associated method blank.
Compound concentration was determined at a secondary dilution factor.
Estimated result.
The compound was analyzed for, but not detected at the corresponding reporting limits.

Table 7. Volatile Organic Compounds Concentrations Detected by CLP Laboratory Analysis of Soil Samples, PRIDCO Industrial Park, October 1992 to March 1993, OU II Remedial Investigation, Vega Alta, Puerto Rico.

Analyte	Sample ID: / Depth: / Date:	BII-33 (4.5'-6.5') 21-Jan-93	BII-33 (9.5-11.5') 22-Jan-93	BII-33 (19.5'-21.5') 22-Jan-93	BII-33 (29.5'-31.5') 22-Jan-93	BII-33 (39.5'-41.5') 22-Jan-93	BII-33 (49.5'-51.5') 22-Jan-93	BII-33 (69.5'-71.5') 25-Jan-93	BII-33 (89.5'-91.5') 25-Jan-93	BII-34 (49.5'-51.5') 1-Feb-93	BII-34 (59.5'-61.5') 1-Feb-93	BII-38A (14.5'-16.5') 17-Dec-92
Chloromethane		12 U	13 U	13 U	13 U	12 J	13 U	13 U	14 U	15 U	16 U	11 UJ
Bromomethane		12 U	13 U	13 U	13 U	13 U	13 U	13 U	14 U	15 U	16 U	11 UJ
Vinyl chloride		12 UJ	13 UJ	13 UJ	13 UJ	13 UJ	13 UJ	13 U	14 U	15 U	16 U	11 UJ
Chloroethane		12 U	13 U	13 U	13 U	13 U	13 U	13 U	14 U	15 U	16 U	11 UJ
Methylene chloride		12 U	13 U	13 U	13 U	13 U	13 U	13 U	14 U	15 U	16 U	11 UJ
Acetone		12 UJ	17 UJ	19 UJ	13 UJ	13 UJ	13 UJ	13 UJ	14 UJ	15 UJ	16 UJ	11 UJ
Carbon disulfide		12 U	13 U	13 U	13 U	13 U	13 U	13 U	14 U	15 U	16 U	11 UJ
1,1-Dichloroethene		12 U	13 U	2 J	5 J	1 J	13 U	13 U	14 U	24	16 U	11 UJ
1,1-Dichloroethane		12 U	13 U	13 U	13 U	13 U	13 U	13 U	14 U	2 J	16 U	11 UJ
1,2-Dichloroethene (cis/trans)		12 U	13 U	13 U	13 U	13 U	13 U	13 U	14 U	6 J	16 U	11 UJ
Chloroform		12 U	13 U	13 U	13 U	13 U	13 U	13 U	14 U	15 U	16 U	11 UJ
1,2-Dichloroethane		12 U	13 U	13 U	13 U	13 U	13 U	13 UJ	14 U	15 U	16 U	11 UJ
2-Butanone		12 U	13 U	13 U	13 U	13 U	13 U	13 U	14 U	15 UJ	16 UJ	11 UJ
1,1,1-Trichloroethane		12 U	13 U	13 U	13 U	13 U	13 U	13 U	14 U	15 U	16 U	11 UJ
Carbon tetrachloride		12 U	13 U	13 U	13 U	13 U	13 U	13 U	14 U	15 U	16 U	11 UJ
Bromodichloromethane		12 U	13 U	13 U	13 U	13 U	13 U	13 U	14 U	15 U	16 U	11 UJ
1,2-Dichloropropane		12 U	13 U	13 U	13 U	13 U	13 U	13 U	14 U	15 U	16 U	11 UJ
cis-1,3-Dichloropropene		12 U	13 U	13 U	13 U	13 U	13 U	13 U	14 U	15 U	16 U	11 UJ
Trichloroethene		12 U	13 U	40	85	57	5 J	13 U	42	75	16 U	11 UJ
Dibromochloromethane		12 U	13 U	13 U	13 U	13 U	13 U	13 U	14 U	15 U	16 U	11 UJ
1,1,2-Trichloroethane		12 U	13 U	13 U	2 J	1 J	13 U	13 U	14 U	15 U	16 U	11 UJ
Benzene		12 U	13 U	13 U	13 U	13 U	13 U	13 U	14 U	15 U	16 U	11 UJ
trans-1,3-Dichloropropene		12 U	13 U	13 U	13 U	13 U	13 U	13 U	14 U	15 U	16 U	11 UJ
Bromoform		12 UJ	13 UJ	13 UJ	13 UJ	13 UJ	13 UJ	13 U	14 U	15 U	16 U	11 UJ
4-Methyl-2-pentanone		12 U	13 U	13 U	13 U	13 U	13 U	13 UJ	14 U	15 UJ	16 UJ	11 UJ
2-Hexanone		12 U	13 U	13 U	13 U	13 U	13 U	13 UJ	14 U	15 UJ	16 UJ	11 UJ
1,1,2,2-Tetrachloroethane		12 U	13 U	13 U	13 U	13 U	13 U	13 U	14 U	15 U	16 U	11 UJ
Tetrachloroethene		12 U	13 U	13 U	13 U	13 U	13 U	13 U	2 J	12 J	2 J	11 UJ
Toluene		1 J	13 U	13 U	13 U	13 U	13 U	13 U	14 U	15 U	16 U	11 UJ
Chlorobenzene		12 U	13 U	13 U	13 U	13 U	13 U	13 U	14 U	15 U	16 U	11 UJ
Ethylbenzene		12 U	13 U	13 U	13 U	13 U	13 U	13 U	14 U	15 U	16 U	11 UJ
Styrene		12 U	13 U	13 U	13 U	13 U	13 U	13 U	14 U	15 U	16 U	11 UJ
Xylenes (total)		12 U	13 U	13 U	13 U	13 U	13 U	13 U	14 U	15 U	16 U	11 UJ

Analyte concentrations in micrograms per kilogram (parts per billion [ppb]).
Analyses were performed by various analytical subcontractors, using standard U.S. Environmental Protection Agency (USEPA) methodology.

The compound was also detected in the associated method blank.
Compound concentration was determined at a secondary dilution factor.
Estimated result.
The compound was analyzed for, but not detected at the corresponding reporting limits.

Table 8. Analysis of Volatile Organic Compound Concentrations Detected by Field Gas Chromatograph of Soil Samples from Boreholes, PRIDCO Industrial Park, October 1992 to March 1993, OU II Remedial Investigation, Vega Alta, Puerto Rico.

Sample I.D. (Depth in ft bls)	Date Sampled	Location	1,1-DCE (ug/kg)	trans-1,2-DCE (ug/kg)	TCE (ug/kg)	PCE (ug/kg)
BH-06 4.5-6.5	10/28/92	FDD	ND	ND	ND	ND
BH-06 9.5-11.5 •	10/28/92	FDD	ND	ND	ND	ND
BH-06 14.5-16.5 •	10/28/92	FDD	ND	20	ND	ND
BH-06 19.5-21.5	10/28/92	FDD	ND	16	49	ND
BH-06 24.5-26.5 •	10/28/92	FDD	ND	19	120	ND
BH-06 29.5-31.5 •	10/28/92	FDD	ND	7	36	ND
BH-06 34.5-36.5 •	10/28/92	FDD	ND	11	50	ND
BH-06 39.5-41.5 •	10/28/92	FDD	ND	16	81	ND
BH-06 44.5-46.5 •	10/28/92	FDD	ND	20	450	ND
BH-06 49.5-51.5 •	10/28/92	FDD	ND	ND	11	ND
BH-06 54.5-56.3	10/29/92	FDD	ND	ND	10	ND
BH-05 4.5-6.5	10/30/92	FDD	ND	ND	ND	ND
BH-05 9.5-11.5	10/30/92	FDD	ND	ND	ND	ND
BH-05 14.5-16.5	10/30/92	FDD	ND	ND	ND	ND
BH-05 19.5-21.5	10/30/92	FDD	ND	ND	ND	ND
BH-05 24.5-26.5	10/30/92	FDD	ND	ND	ND	ND
BH-05 29.5-31.5 #	10/30/92	FDD	ND	ND	ND	ND
BH-05 34.5-36.5	10/30/92	FDD	ND	ND	ND	ND
BH-05 39.5-41.5	10/30/92	FDD	ND	ND	ND	ND
BH-05 44.5-46.5	10/30/92	FDD	ND	ND	ND	ND
BH-05 49.5-51.5	10/30/92	FDD	ND	ND	ND	ND
BH-05 54.5-55.2	10/30/92	FDD	ND	ND	ND	ND
BH-05 59.5-59.9	10/30/92	FDD	ND	ND	ND	ND
BH-04 4.5-6.5	2/1/93	FDD	ND	ND	ND	ND
BH-04 9.5-11.5	2/1/93	FDD	ND	ND	ND	ND
BH-04 14.5-16.5	2/1/93	FDD	ND	ND	ND	ND
BH-04 19.5-21.5	2/1/93	FDD	ND	ND	ND	ND
BH-04 24.5-26.5	2/1/93	FDD	ND	ND	ND	ND
BH-04 29.5-31.5	2/1/93	FDD	ND	ND	ND	ND
BH-04 34.5-36.5	2/2/93	FDD	ND	ND	ND	ND
BH-04 39.5-41.5	2/2/93	FDD	ND	ND	ND	4
BH-04 44.5-46.5	2/2/93	FDD	ND	ND	ND	ND
BH-04 49.5-51.5	2/2/93	FDD	ND	ND	ND	ND
BH-04 54.5-56.5	2/2/93	FDD	ND	ND	ND	ND
BH-04 59.5-61.5	2/2/93	FDD	ND	ND	ND	ND
BH-04 64.5-65.1	2/2/93	FDD	ND	ND	ND	2
BH-04 69.5-70.3	2/2/93	FDD	ND	ND	ND	3
BH-36 4.5-6.5	2/3/93	FDD	ND	ND	ND	ND
BH-36 9.5-11.5	2/3/93	FDD	ND	ND	ND	ND
BH-36 14.5-16.5 •	2/3/93	FDD	ND	42	ND	ND
BH-36 19.5-21.5 •	2/3/93	FDD	ND	4	ND	ND
BH-36 24.5-26.5 •	2/3/93	FDD	ND	2	ND	ND

See last page for footnotes.

Table 8. Analysis of Volatile Organic Compound Concentrations Detected by Field Gas Chromatograph of Soil Samples from Boreholes, PRIDCO Industrial Park, October 1992 to March 1993, OU II Remedial Investigation, Vega Alta, Puerto Rico.

Sample I.D. (Depth in ft bls)	Date Sampled	Location	1,1-DCE (ug/kg)	trans-1,2-DCE (ug/kg)	TCE (ug/kg)	PCE (ug/kg)
BH-36 29.5-31.5 *	2/3/93	FDD	ND	ND	ND	ND
BH-36 34.5-36.5	2/3/93	FDD	ND	ND	ND	ND
BH-36 39.5-41.5 *	2/3/93	FDD	ND	ND	ND	ND
BH-36 44.5-46.5 *	2/3/93	FDD	ND	ND	ND	ND
BH-36 49.5-51.5 *	2/3/93	FDD	ND	ND	ND	ND
BH-36 54.5-56.5 *	2/3/93	FDD	ND	ND	40	ND
BH-36 59.5-61.5 *	2/3/93	FDD	ND	ND	53	ND
BH-36 70.0-70.1 *	2/3/93	FDD	ND	ND	118	ND
BH-10 4.5-6.5	11/2/92	FWC	ND	ND	67	10
BH-10 9.5-11.5	11/2/92	FWC	ND	ND	ND	ND
BH-10 14.5-16.5	11/2/92	FWC	ND	ND	ND	ND
BH-10 19.5-21.5	11/2/92	FWC	ND	ND	ND	ND
BH-10 24.5-26.5	11/2/92	FWC	ND	ND	ND	ND
BH-10 29.5-31.5	11/2/92	FWC	ND	ND	4	ND
BH-10 34.5-36.5	11/2/92	FWC	ND	ND	5	ND
BH-10 39.5-41.5	11/2/92	FWC	ND	ND	ND	ND
BH-10 44.5-46.5	11/2/92	FWC	ND	ND	ND	ND
BH-10 49.5-51.5	11/2/92	FWC	ND	ND	ND	ND
BH-10 54.5-55.4	11/2/92	FWC	ND	ND	ND	ND
BH-11 4.5-6.5	11/4/92	FWC	ND	ND	ND	ND
BH-11 9.5-11.5	11/4/92	FWC	5	ND	ND	ND
BH-11 14.5-16.5	11/4/92	FWC	18	ND	ND	ND
BH-11 19.5-21.5	11/4/92	FWC	28	ND	ND	ND
BH-11 24.5-26.5	11/4/92	FWC	7	ND	ND	ND
BH-11 29.5-29.8	11/4/92	FWC	ND	ND	ND	ND
BH-11 34.5-36.5	11/4/92	FWC	ND	ND	ND	ND
BH-11 39.5-41.5	11/4/92	FWC	ND	ND	ND	ND
BH-11 44.5-46.5	11/4/92	FWC	ND	ND	ND	ND
BH-11 49.5-51.5	11/5/92	FWC	ND	ND	ND	ND
BH-11 54.5-54.8	11/5/92	FWC	ND	ND	ND	ND
BH-11 59.5-60.0	11/5/92	FWC	ND	ND	ND	ND
BH-35 0.5-2.5	11/5/92	FWC	ND	ND	ND	ND
BH-35 4.5-6.5	11/5/92	FWC	ND	ND	ND	ND
BH-35 9.5-11.5	11/5/92	FWC	ND	ND	ND	ND
BH-35 14.5-16.5	11/5/92	FWC	ND	ND	ND	ND
BH-35 19.5-21.5	11/5/92	FWC	ND	ND	ND	ND
BH-35 29.5-31.5	11/5/92	FWC	ND	ND	ND	ND
BH-35 34.5-34.9	11/5/92	FWC	ND	ND	ND	ND
BH-35 39.5-41.5	11/5/92	FWC	ND	ND	ND	ND
BH-35 44.5-46.5	11/6/92	FWC	ND	ND	ND	ND
BH-35 49.5-49.9	11/6/92	FWC	ND	ND	ND	ND
BH-35 54.5-56.5	11/6/92	FWC	ND	ND	ND	ND
BH-35 59.5-60.0	11/6/92	FWC	ND	ND	ND	ND

See last page for footnotes.

Table 8. Analysis of Volatile Organic Compound Concentrations Detected by Field Gas Chromatograph of Soil Samples from Boreholes, PRIDCO Industrial Park, October 1992 to March 1993, OU II Remedial Investigation, Vega Alta, Puerto Rico.

Sample I.D. (Depth in ft bls)	Date Sampled	Location	1,1-DCE (ug/kg)	trans-1,2-DCE (ug/kg)	TCE (ug/kg)	PCE (ug/kg)
BH-02 4.5-6.5	11/6/92	R/M	ND	ND	ND	ND
BH-02 9.5-11.5	11/6/92	R/M	ND	ND	ND	ND
BH-02 14.5-15.8	11/6/92	R/M	ND	ND	ND	ND
BH-02 19.5-21.5	11/9/92	R/M	ND	ND	ND	ND
BH-02 24.5-25.0	11/9/92	R/M	ND	ND	ND	ND
BH-02 29.5-30.6	11/9/92	R/M	ND	ND	ND	ND
BH-02 34.5-34.8	11/9/92	R/M	ND	ND	ND	ND
BH-01 4.5-6.5	11/9/92	R/M	ND	ND	ND	ND
BH-01 9.5-11.5	11/9/92	R/M	ND	ND	ND	ND
BH-01 14.5-16.5	11/9/92	R/M	ND	ND	ND	ND
BH-01 19.5-21.5	11/9/92	R/M	ND	ND	ND	ND
BH-01 24.5-26.5	11/9/92	R/M	ND	ND	ND	ND
BH-01 29.5-31.5	11/9/92	R/M	ND	ND	ND	ND
BH-01 34.5-36.5	11/9/92	R/M	ND	ND	ND	ND
BH-01 39.5-41.5	11/9/92	R/M	ND	ND	ND	ND
BH-01 49.5-50.8	11/9/92	R/M	ND	ND	ND	ND
BH-01 54.5-56.5	11/10/92	R/M	ND	ND	ND	ND
BH-01 59.5-61.5	11/10/92	R/M	ND	ND	ND	ND
BH-01 64.5-66.5	11/10/92	R/M	ND	ND	ND	ND
BH-01 69.5-71.4	11/10/92	R/M	ND	ND	ND	ND
BH-12 4.5-6.5	11/11/92	HA	ND	ND	ND	ND
BH-12 9.5-11.5	11/11/92	HA	ND	ND	ND	ND
BH-12 14.5-16.5	11/11/92	HA	ND	ND	ND	ND
BH-12 19.5-21.5	11/11/92	HA	ND	ND	ND	ND
BH-12 24.5-26.5	11/11/92	HA	ND	ND	ND	ND
BH-12 29.5-31.5	11/11/92	HA	ND	ND	ND	ND
BH-12 34.5-36.5	11/11/92	HA	ND	ND	ND	ND
BH-12 39.5-41.5	11/11/92	HA	ND	ND	ND	ND
BH-12 44.5-46.5	11/11/92	HA	ND	ND	ND	ND
BH-12 49.5-51.5	11/11/92	HA	ND	ND	ND	ND
BH-12 56.5-58.5	11/11/92	HA	ND	ND	ND	ND
BH-12 59.5-61.5	11/11/92	HA	ND	ND	ND	ND
BH-12 64.5-66.5	11/11/92	HA	ND	ND	ND	ND
BH-12 69.5-71.5	11/11/92	HA	ND	ND	ND	ND
BH-12 74.5-77.0	11/11/92	HA	ND	ND	ND	ND
BH-14 4.0-6.0	11/16/92	HA	ND	ND	ND	10
BH-14 9.0-11.0	11/16/92	HA	ND	ND	ND	ND
BH-14 14.0-16.0	11/16/92	HA	ND	ND	ND	ND
BH-14 19.0-21.0	11/16/92	HA	ND	ND	ND	ND
BH-14 24.0-26.0	11/16/92	HA	ND	ND	ND	ND
BH-14 29.0-31.0	11/16/92	HA	ND	ND	ND	ND
BH-14 34.0-36.0	11/16/92	HA	ND	ND	ND	ND
BH-14 39.0-41.0	11/17/92	HA	ND	ND	ND	ND

See last page for footnotes.

Table 8. Analysis of Volatile Organic Compound Concentrations Detected by Field Gas Chromatograph of Soil Samples from Boreholes, PRIDCO Industrial Park, October 1992 to March 1993, OU II Remedial Investigation, Vega Alta, Puerto Rico.

Sample I.D. (Depth in ft bls)	Date Sampled	Location	1,1-DCE (ug/kg)	trans-1,2-DCE (ug/kg)	TCE (ug/kg)	PCE (ug/kg)
BH-14 44.0-46.0	11/17/92	HA	ND	ND	ND	ND
BH-14 49.0-51.0	11/17/92	HA	ND	ND	ND	ND
BH-14 55.0-56.8	11/17/92	HA	ND	ND	ND	ND
BH-14 59.0-59.1	11/17/92	HA	ND	ND	ND	ND
BH-14 64.0-64.1	11/17/92	HA	ND	ND	ND	ND
BH-15 4.5-6.5	11/18/92	HA	ND	ND	ND	ND
BH-15 9.5-11.5	11/18/92	HA	ND	ND	ND	ND
BH-15 14.5-16.5	11/18/92	HA	ND	ND	ND	ND
BH-15 19.5-21.5	11/18/92	HA	ND	ND	ND	ND
BH-15 24.5-26.5	11/18/92	HA	ND	ND	ND	ND
BH-15 29.5-31.5	11/18/92	HA	ND	ND	ND	ND
BH-15 34.5-36.5	11/18/92	HA	ND	ND	ND	ND
BH-15 39.5-41.5	11/18/92	HA	ND	ND	ND	ND
BH-15 44.5-46.5	11/18/92	HA	ND	ND	ND	ND
BH-15 49.5-51.5	11/18/92	HA	ND	ND	ND	ND
BH-15 54.5-56.5	11/18/92	HA	ND	ND	ND	ND
BH-15 59.5-61.5	11/18/92	HA	ND	ND	ND	ND
BH-15 65.5-67.5	11/19/92	HA	ND	ND	ND	ND
BH-15 69.5-70.7	11/19/92	HA	ND	ND	ND	ND
BH-16 0.0-4.5	11/20/92	HA	ND	ND	ND	ND
BH-16 9.5-11.5	11/20/92	HA	ND	ND	ND	ND
BH-16 14.5-16.5	11/20/92	HA	ND	ND	ND	ND
BH-16 19.5-21.5	11/20/92	HA	ND	ND	ND	ND
BH-16 24.5-26.5	11/20/92	HA	ND	ND	ND	ND
BH-16 29.5-31.5	11/20/92	HA	ND	ND	ND	ND
BH-16 34.5-36.5	11/20/92	HA	ND	ND	ND	ND
BH-16 39.5-41.5	11/20/92	HA	ND	ND	ND	ND
BH-16 44.5-46.5	11/20/92	HA	ND	ND	ND	ND
BH-16 49.5-51.5	11/20/92	HA	ND	ND	ND	ND
BH-16 54.5-55.1	11/20/92	HA	ND	ND	ND	ND
BH-16 64.5-66.5	11/23/92	HA	ND	ND	ND	ND
BH-16 70.5-70.7	11/23/92	HA	ND	ND	ND	ND
BH-16 74.5-75.2	11/23/92	HA	ND	ND	ND	ND
BH-17 4.5-6.5	11/30/92	WC	ND	ND	ND	ND
BH-17 9.5-11.5	11/30/92	WC	ND	ND	ND	ND
BH-17 14.5-16.5	11/30/92	WC	ND	ND	ND	ND
BH-17 19.5-21.5	11/30/92	WC	ND	ND	ND	ND
BH-17 24.5-26.5	11/30/92	WC	ND	ND	ND	ND
BH-17 29.5-31.5	11/30/92	WC	ND	ND	ND	ND
BH-17 34.5-36.5	11/30/92	WC	ND	ND	ND	ND
BH-17 39.5-41.5	11/30/92	WC	ND	ND	ND	ND
BH-17 44.5-46.5	11/30/92	WC	ND	ND	ND	ND

See last page for footnotes.

Table 8. Analysis of Volatile Organic Compound Concentrations Detected by Field Gas Chromatograph of Soil Samples from Boreholes, PRIDCO Industrial Park, October 1992 to March 1993, OU II Remedial Investigation, Vega Alta, Puerto Rico.

Sample I.D. (Depth in ft bls)	Date Sampled	Location	1,1-DCE (ug/kg)	trans-1,2-DCE (ug/kg)	TCE (ug/kg)	PCE (ug/kg)
BH-17 49.5-51.5	11/30/92	WC	ND	ND	ND	ND
BH-17 54.5-56.4	11/30/92	WC	ND	ND	ND	ND
BH-17 64.5-66.5	11/30/92	WC	ND	ND	ND	ND
BH-17 69.5-71.5	12/1/92	WC	ND	ND	ND	ND
BH-18 4.5-6.5	12/2/92	WC	ND	ND	ND	ND
BH-18 9.5-11.5	12/2/92	WC	ND	ND	ND	ND
BH-18 14.5-16.5	12/2/92	WC	ND	ND	ND	ND
BH-18 19.5-21.5	12/2/92	WC	ND	ND	ND	ND
BH-18 24.5-26.5	12/2/92	WC	ND	ND	ND	ND
BH-18 29.5-31.5	12/2/92	WC	ND	ND	ND	ND
BH-18 34.5-36.5	12/2/92	WC	ND	ND	ND	ND
BH-18 39.5-41.5	12/2/92	WC	ND	ND	ND	ND
BH-18 44.5-46.5	12/2/92	WC	ND	ND	ND	ND
BH-18 49.5-51.5	12/2/92	WC	ND	ND	ND	ND
BH-18 54.5-56.5	12/2/92	WC	ND	ND	ND	ND
BH-18 59.5-61.5	12/2/92	WC	ND	ND	ND	ND
BH-18 64.5-66.5	12/2/92	WC	ND	ND	ND	ND
BH-18 69.5-71.5	12/3/92	WC	ND	ND	ND	ND
BH-18 77.5-79.0 #	12/3/92	WC	ND	ND	ND	ND
BH-19 4.5-6.5	12/4/92	WC	ND	ND	ND	ND
BH-19 9.5-11.5	12/4/92	WC	ND	ND	ND	ND
BH-19 14.5-16.5	12/4/92	WC	ND	ND	ND	ND
BH-19 19.5-21.5 •	12/4/92	WC	ND	4	9	ND
BH-19 24.5-26.5 •	12/4/92	WC	ND	7	29	ND
BH-19 29.5-31.5	12/4/92	WC	ND	ND	ND	ND
BH-19 34.5-36.5	12/4/92	WC	ND	ND	ND	ND
BH-19 39.5-41.5	12/4/92	WC	ND	ND	ND	ND
BH-19 44.5-46.5	12/4/92	WC	ND	ND	ND	ND
BH-19 49.5-51.5	12/4/92	WC	ND	ND	ND	ND
BH-19 54.5-56.5	12/4/92	WC	ND	ND	ND	ND
BH-19 59.5-59.8	12/7/92	WC	ND	ND	ND	ND
BH-19 64.5-66.5	12/7/92	WC	ND	ND	ND	ND
BH-19 74.5-76.5	12/7/92	WC	ND	ND	ND	ND
BH-13 4.5-6.5	12/8/92	WC	ND	ND	ND	ND
BH-13 9.5-11.5	12/8/92	WC	ND	ND	ND	ND
BH-13 14.5-16.5	12/8/92	WC	ND	ND	ND	ND
BH-13 19.5-21.5	12/8/92	WC	ND	ND	ND	ND
BH-13 24.5-26.5	12/8/92	WC	ND	ND	ND	ND
BH-13 29.5-31.5	12/8/92	WC	ND	ND	ND	ND
BH-13 34.5-36.5	12/8/92	WC	ND	ND	ND	ND
BH-13 39.5-41.5 •	12/8/92	WC	ND	ND	ND	ND
BH-13 44.5-46.5 •	12/8/92	WC	ND	ND	ND	ND

See last page for footnotes.

Table 8. Analysis of Volatile Organic Compound Concentrations Detected by Field Gas Chromatograph of Soil Samples from Boreholes, PRIDCO Industrial Park, October 1992 to March 1993, OU II Remedial Investigation, Vega Alta, Puerto Rico.

Sample I.D. (Depth in ft bls)	Date Sampled	Location	1,1-DCE (ug/kg)	trans-1,2-DCE (ug/kg)	TCE (ug/kg)	PCE (ug/kg)
BH-13 49.5-51.5 *	12/8/92	WC	ND	ND	ND	ND
BH-13 54.5-54.8 *	12/8/92	WC	ND	ND	ND	ND
BH-13 59.5-60.0	12/8/92	WC	ND	ND	ND	ND
BH-13 64.5-65.8	12/8/92	WC	ND	ND	ND	ND
BH-13 69.5-71.5	12/9/92	WC	ND	ND	ND	ND
BH-13 74.5-74.6	12/9/92	WC	ND	ND	ND	ND
BH-13 79.5-79.7	12/9/92	WC	ND	ND	ND	ND
BH-13 84.5-84.9	12/9/92	WC	ND	ND	ND	ND
BH-13 89.5-9?.5	12/9/92	WC	ND	ND	10	ND
BH-03A 4.5-6.5 *	12/11/92	GEPP	ND	ND	ND	ND
BH-03A 9.5-11.5 *	12/11/92	GEPP	ND	ND	27	6
BH-03A 14.5-16.5 *	12/11/92	GEPP	ND	ND	20	8
BH-03A 19.5-21.5 * #	12/11/92	GEPP	ND	ND	4	2
BH-03A 24.5-26.5	12/11/92	GEPP	ND	ND	ND	2
BH-03A 29.5-30.8	12/11/92	GEPP	ND	ND	ND	ND
BH-03A 39.5-41.5	12/14/92	GEPP	ND	ND	ND	ND
BH-03A 44.5-45.0	12/14/92	GEPP	ND	ND	ND	ND
BH-03A 49.5-50.3	12/14/92	GEPP	ND	ND	ND	ND
BH-03A 54.5-56.5	12/14/92	GEPP	ND	ND	ND	ND
BH-03A 59.5-61.5	12/14/92	GEPP	ND	ND	ND	ND
BH-03A 64.5-66.1	12/14/92	GEPP	ND	ND	ND	ND
BH-03A 69.5-71.5	12/14/92	GEPP	ND	ND	ND	ND
BH-39 3.5-5.5	12/15/92	GEPP	ND	ND	ND	ND
BH-39 8.5-10.5	12/15/92	GEPP	ND	ND	ND	ND
BH-39 13.5-14.3	12/16/92	GEPP	ND	ND	ND	ND
BH-39 18.5-20.5	12/16/92	GEPP	ND	ND	10	4
BH-39 23.5-25.5	12/16/92	GEPP	ND	ND	ND	ND
BH-39 28.5-29.5	12/16/92	GEPP	ND	ND	ND	ND
BH-09 4.5-6.0	12/16/92	GEPP	ND	ND	ND	ND
BH-09 9.5-11.5 #	12/16/92	GEPP	ND	ND	ND	ND
BH-09 14.5-16.4	12/16/92	GEPP	ND	ND	ND	ND
BH-09 19.5-21.5	12/16/92	GEPP	ND	ND	ND	ND
BH-09 24.5-26.5	12/16/92	GEPP	ND	ND	ND	ND
BH-09 29.5-30.2	12/16/92	GEPP	ND	ND	ND	ND
BH-38A 4.5-6.5	12/17/92	GEPP	ND	ND	ND	ND
BH-38A 9.5-11.5	12/17/92	GEPP	ND	ND	ND	ND
BH-38A 14.5-16.5 #	12/17/92	GEPP	ND	ND	ND	ND
BH-38A 19.5-21.5	12/17/92	GEPP	ND	ND	ND	ND
BH-38A 24.5-26.3	12/17/92	GEPP	ND	ND	ND	ND
BH-38A 29.5-31.5	12/17/92	GEPP	ND	ND	ND	ND
BH-38A 34.5-34.6	12/17/92	GEPP	ND	ND	ND	ND

See last page for footnotes.

Table 8. Analysis of Volatile Organic Compound Concentrations Detected by Field Gas Chromatograph of Soil Samples from Boreholes, PRIDCO Industrial Park, October 1992 to March 1993, OU II Remedial Investigation, Vega Alta, Puerto Rico.

Sample I.D. (Depth in ft bls)	Date Sampled	Location	1,1-DCE (ug/kg)	trans-1,2-DCE (ug/kg)	TCE (ug/kg)	PCE (ug/kg)
BH-40 4.5-6.4	12/18/92	GEPP	ND	ND	ND	ND
BH-40 9.5-11.5	12/18/92	GEPP	ND	ND	ND	ND
BH-40 14.5-15.3	12/18/92	GEPP	ND	ND	ND	ND
BH-40 19.5-21.5	12/18/92	GEPP	ND	ND	ND	ND
BH-40 24.5-25.2	12/18/92	GEPP	ND	ND	ND	ND
BH-40 29.5-30.4	12/18/92	GEPP	ND	ND	ND	ND
BH-08 4.0-4.4	12/18/92	GEPP	ND	ND	ND	ND
H-08 9.0-11.0	12/18/92	GEPP	ND	ND	ND	ND
BH-08 14.0-14.8	12/18/92	GEPP	ND	ND	ND	ND
BH-08 19.0-21.0	12/18/92	GEPP	ND	ND	ND	ND
BH-08 24.0-25.6	12/18/92	GEPP	ND	ND	ND	ND
BH-08 29.0-29.3	12/18/92	GEPP	ND	ND	ND	ND
BH-37 4.5-6.5	1/7/93	GEPP	ND	ND	ND	ND
BH-37 9.5-11.5	1/7/93	GEPP	ND	ND	ND	ND
BH-37 14.5-16.5	1/7/93	GEPP	ND	ND	ND	ND
BH-37 19.5-21.5	1/7/93	GEPP	ND	ND	ND	ND
BH-37 24.5-26.5	1/7/93	GEPP	ND	ND	ND	ND
BH-37 29.5-31.5	1/7/93	GEPP	ND	ND	ND	ND
BH-37 34.5-35.3	1/7/93	GEPP	ND	ND	ND	ND
BH-37 39.5-39.6	1/7/93	GEPP	ND	ND	ND	ND
BH-37 49.5-50.9	1/11/93	GEPP	ND	ND	ND	ND
BH-37 54.5-55.9	1/11/93	GEPP	ND	ND	ND	ND
BH-37 59.5-60.4	1/11/93	GEPP	ND	ND	ND	ND
BH-37 64.5-66.5	1/11/93	GEPP	ND	ND	ND	ND
BH-37 69.5-70.0	1/11/93	GEPP	ND	ND	ND	6
BH-07 4.5-6.5	1/12/93	GEPP	ND	ND	ND	ND
BH-07 9.5-11.5	1/12/93	GEPP	ND	ND	ND	ND
BH-07 14.5-16.5	1/12/93	GEPP	ND	ND	ND	ND
BH-07 19.5-21.5	1/12/93	GEPP	ND	ND	ND	ND
BH-07 24.5-26.5	1/12/93	GEPP	ND	ND	ND	ND
BH-07 29.5-31.5	1/12/93	GEPP	ND	ND	ND	ND
BH-07 34.5-36.5	1/12/93	GEPP	ND	ND	ND	ND
BH-07 39.5-41.5	1/12/93	GEPP	ND	ND	ND	ND
BH-07 44.5-46.5	1/12/93	GEPP	ND	ND	ND	ND
BH-07 49.5-51.5	1/12/93	GEPP	ND	ND	ND	ND
BH-07 54.5-56.5	1/12/93	GEPP	ND	ND	ND	ND
BH-07 59.5-61.5	1/12/93	GEPP	ND	ND	ND	ND
BH-07 64.5-64.7	1/13/93	GEPP	ND	ND	ND	ND
BH-07 69.5-71.5	1/13/93	GEPP	ND	ND	ND	ND
BH-23 4.5-6.5	1/14/93	GECP	ND	ND	ND	ND
BH-23 9.5-11.5	1/14/93	GECP	ND	ND	ND	ND
BH-23 14.5-16.5	1/14/93	GECP	ND	ND	ND	ND

See last page for footnotes.

Table 8. Analysis of Volatile Organic Compound Concentrations Detected by Field Gas Chromatograph of Soil Samples from Boreholes, PRIDCO Industrial Park, October 1992 to March 1993, OU II Remedial Investigation, Vega Alta, Puerto Rico.

Sample I.D. (Depth in ft bls)	Date Sampled	Location	1,1-DCE (ug/kg)	trans-1,2-DCE (ug/kg)	TCE (ug/kg)	PCE (ug/kg)
BH-28 19.5-21.5	1/14/93	GECP	ND	ND	ND	ND
BH-28 24.5-26.5	1/14/93	GECP	ND	ND	ND	ND
BH-28 29.5-31.5 •	1/14/93	GECP	ND	ND	ND	ND
BH-28 34.5-36.5	1/14/93	GECP	ND	ND	ND	ND
BH-28 39.5-41.5	1/14/93	GECP	ND	ND	ND	ND
BH-28 44.5-46.5	1/14/93	GECP	ND	ND	ND	ND
BH-28 54.5-56.5	1/14/93	GECP	ND	ND	ND	ND
BH-28 59.5-61.5	1/14/93	GECP	ND	ND	ND	ND
BH-28 64.5-66.5	1/14/93	GECP	ND	ND	ND	ND
BH-28 69.5-70.2	1/15/93	GECP	3	ND	93	ND
BH-28 74.5-75.2	1/15/93	GECP	ND	ND	21	ND
BH-27 4.5-6.5	1/18/93	GECP	ND	ND	60	ND
BH-27 9.5-11.5	1/18/93	GECP	ND	ND	71	ND
BH-27 14.5-16.5	1/18/93	GECP	ND	ND	37	ND
BH-27 19.5-21.5	1/18/93	GECP	56	ND	124	ND
BH-27 24.5-26.5	1/18/93	GECP	13	ND	93	ND
BH-27 29.5-31.5	1/19/93	GECP	ND	ND	93	ND
BH-27 39.5-41.5	1/19/93	GECP	ND	ND	73	ND
BH-27 44.5-46.5	1/19/93	GECP	ND	ND	62	ND
BH-27 49.5-49.6	1/19/93	GECP	ND	ND	ND	ND
BH-27 54.5-54.6	1/19/93	GECP	ND	ND	ND	ND
BH-27 59.5-59.7	1/19/93	GECP	ND	ND	8	ND
BH-27 64.5-66.5	1/19/93	GECP	ND	ND	212	ND
BH-27 69.5-69.6	1/19/93	GECP	ND	ND	33	ND
BH-27 74.5-75.4	1/19/93	GECP	ND	ND	42	ND
BH-27 79.5-81.5	1/19/93	GECP	ND	ND	296	ND
BH-27 84.5-86.2	1/19/93	GECP	ND	ND	139	ND
BH-27 89.5-89.7 •	1/19/93	GECP	ND	ND	211	ND
BH-27 94.5-96.5	1/19/93	GECP	ND	ND	ND	ND
BH-31 4.5-6.5 •	1/19/93	GECP	24	ND	43	ND
BH-31 9.5-11.5 •	1/19/93	GECP	29	ND	91	ND
BH-31 14.5-16.5 •	1/19/93	GECP	70	ND	132	7
BH-31 19.5-21.5 •	1/19/93	GECP	127	ND	260	15
BH-31 24.5-26.5 •	1/20/93	GECP	163	ND	313	21
BH-31 29.5-31.5 •	1/20/93	GECP	224	ND	502	39
BH-31 34.5-36.5 • #	1/20/93	GECP	625	ND	910	68
BH-31 39.5-41.5 •	1/20/93	GECP	328	ND	700	35
BH-31 44.5-46.5 •	1/20/93	GECP	340	ND	761	49
BH-31 49.5-51.5 •	1/20/93	GECP	301	ND	646	75
BH-31 54.5-56.0	1/20/93	GECP	ND	ND	11	ND
BH-31 59.5-60.2 •	1/20/93	GECP	203	ND	392	91
BH-31 64.5-64.6 •	1/20/93	GECP	10	ND	28	7
BH-31 69.5-69.6 •	1/20/93	GECP	95	ND	141	32

See last page for footnotes.

Table 8. Analysis of Volatile Organic Compound Concentrations Detected by Field Gas Chromatograph of Soil Samples from Boreholes, PRIDCO Industrial Park, October 1992 to March 1993, OU II Remedial Investigation, Vega Alta, Puerto Rico.

Sample I.D. (Depth in ft bls)	Date Sampled	Location	1,1-DCE (ug/kg)	trans-1,2-DCE (ug/kg)	TCE (ug/kg)	PCE (ug/kg)
BH-31 79.5-79.7	1/21/93	GECP	ND	ND	ND	ND
BH-31 84.5-85.4 •	1/21/93	GECP	308	ND	513	65
BH-31 89.5-89.9 •	1/21/93	GECP	292	ND	488	61
BH-31 94.5-95.2 •	1/21/93	GECP	201	ND	486	31
BH-33 4.5-6.5 #	1/21/93	GECP	ND	ND	25	ND
BH-33 9.5-11.5 #	1/22/93	GECP	ND	ND	12	ND
BH-33 14.5-16.5	1/22/93	GECP	ND	ND	32	ND
BH-33 19.5-21.5 #	1/22/93	GECP	13	ND	80	ND
BH-33 24.5-26.5	1/22/93	GECP	20	ND	119	ND
BH-33 29.5-31.5 #	1/22/93	GECP	23	ND	142	ND
BH-33 34.5-36.5	1/22/93	GECP	17	ND	142	ND
BH-33 39.5-41.5 #	1/22/93	GECP	48	ND	208	ND
BH-33 44.5-46.5	1/22/93	GECP	ND	ND	38	ND
BH-33 49.5-51.5 #	1/22/93	GECP	ND	ND	25	7
BH-33 54.5-56.0	1/25/93	GECP	ND	ND	ND	ND
BH-33 59.5-61.5	1/25/93	GECP	ND	ND	ND	ND
BH-33 64.5-66.5	1/25/93	GECP	ND	ND	ND	ND
BH-33 69.5-71.5 #	1/25/93	GECP	ND	ND	ND	ND
BH-33 74.5-76.5	1/25/93	GECP	ND	ND	ND	ND
BH-33 79.5-81.5	1/25/93	GECP	ND	ND	ND	ND
BH-33 84.5-86.5	1/25/93	GECP	ND	ND	ND	ND
BH-33 89.5-91.3 #	1/25/93	GECP	51	ND	290	11
BH-33 94.5-96.5	1/26/93	GECP	150	ND	936	38
BH-30 4.5-6.5	1/22/93	GECP	ND	ND	ND	ND
BH-30 9.5-11.5	1/22/93	GECP	ND	ND	ND	ND
BH-30 14.5-16.5	1/22/93	GECP	16	ND	ND	ND
BH-30 19.5-21.5	1/22/93	GECP	57	ND	ND	ND
BH-30 24.5-26.5	1/22/93	GECP	121	ND	ND	ND
BH-30 29.5-31.5 •	1/25/93	GECP	379	ND	62	8
BH-30 34.5-36.5 •	1/25/93	GECP	307	ND	86	ND
BH-30 39.5-41.5 •	1/25/93	GECP	167	ND	63	ND
BH-30 44.5-46.5	1/25/93	GECP	67	ND	34	ND
BH-30 49.5-51.5	1/25/93	GECP	72	ND	34	ND
BH-30 54.5-56.5	1/25/93	GECP	11	ND	9	ND
BH-30 59.5-61.5	1/25/93	GECP	13	ND	10	ND
BH-30 64.5-64.6	1/25/93	GECP	23	ND	5	ND
BH-30 69.5-69.7	1/25/93	GECP	47	ND	12	ND
BH-30 79.5-80.2	1/25/93	GECP	45	ND	155	ND
BH-30 84.5-86.5	1/25/93	GECP	59	ND	137	ND
BH-30 89.5-89.7	1/25/93	GECP	ND	ND	6	ND
BH-25A 4.5-6.5 •	1/27/93	GECP	14	ND	100	15
BH-25A 9.5-11.5 •	1/27/93	GECP	ND	ND	56	ND
BH-25A 14.5-16.5 •	1/27/93	GECP	25	ND	227	32

See last page for footnotes.

Table 8. Analysis of Volatile Organic Compound Concentrations Detected by Field Gas Chromatograph of Soil Samples from Boreholes, PRIDCO Industrial Park, October 1992 to March 1993, OU II Remedial Investigation, Vega Alta, Puerto Rico.

Sample I.D. (Depth in ft bls)	Date Sampled	Location	1,1-DCE (ug/kg)	trans-1,2-DCE (ug/kg)	TCE (ug/kg)	PCE (ug/kg)
BH-25A 19.5-21.5 *	1/27/93	GECP	41	ND	466	70
BH-25A 24.5-26.5 *	1/27/93	GECP	66	ND	1659	277
BH-25A 29.5-31.5 * #	1/27/93	GECP	308	ND	16909	8374
BH-25A 34.5-36.5 *	1/27/93	GECP	146	ND	4034	246
BH-25A 39.5-41.5 *	1/27/93	GECP	25	ND	331	32
BH-25A 44.5-45.3 *	1/27/93	GECP	ND	ND	71	10
BH-25A 54.5-56.5 *	1/27/93	GECP	4	ND	150	17
BH-25A 59.5-61.5 *	1/27/93	GECP	99	ND	2448	393
BH-25A 64.5-66.5 * #	1/27/93	GECP	25	ND	1044	290
BH-25A 69.5-71.5	1/28/93	GECP	31	ND	732	80
BH-25A 74.5-76.5	1/28/93	GECP	18	ND	418	15
BH-25A 84.5-86.5	1/28/93	GECP	ND	ND	ND	ND
BH-25A 89.5-89.7	1/28/93	GECP	ND	ND	14	ND
BH-32 4.5-6.5 *	1/28/93	GECP	ND	ND	711	61
BH-32 9.5-11.5 *	1/28/93	GECP	21	ND	412	16
BH-32 14.5-16.5 * #	1/28/93	GECP	21	ND	742	21
BH-32 19.5-21.5 *	1/28/93	GECP	70	ND	1016	50
BH-32 24.5-26.5 *	1/28/93	GECP	68	ND	561	24
BH-32 29.5-31.5 *	1/28/93	GECP	39	ND	236	18
BH-32 34.5-36.5 *	1/28/93	GECP	920	ND	37	ND
BH-32 39.5-41.5 *	1/28/93	GECP	244	ND	44	ND
BH-32 44.5-44.6 *	1/28/93	GECP	188	ND	62	ND
BH-32 49.5-51.5 *	1/28/93	GECP	142	ND	214	ND
BH-32 54.5-56.5 *	1/28/93	GECP	24	ND	163	ND
BH-32 59.5-61.5 *	1/28/93	GECP	ND	ND	227	ND
BH-32 64.5-66.5 *	1/28/93	GECP	ND	ND	63	ND
BH-32 69.5-71.5 *	1/28/93	GECP	ND	ND	64	ND
BH-32 74.5-74.7	1/28/93	GECP	ND	ND	ND	ND
BH-32 77.5-79.5	1/29/93	GECP	ND	ND	ND	ND
BH-32 84.5-84.6	1/29/93	GECP	ND	ND	ND	ND
BH-32 89.5-90.2	1/29/93	GECP	ND	ND	ND	ND
BH-32 94.5-94.6 *	1/29/93	GECP	117	ND	389	20
BH-34 4.5-6.5	2/1/93	GECP	18	ND	14	3
BH-34 9.5-11.5	2/1/93	GECP	34	ND	24	12
BH-34 14.5-16.5	2/1/93	GECP	ND	ND	ND	ND
BH-34 19.5-21.5 *	2/1/93	GECP	23	ND	31	7
BH-34 24.5-26.5 *	2/1/93	GECP	67	ND	69	17
BH-34 29.5-31.5 *	2/1/93	GECP	67	ND	54	3
BH-34 34.5-36.5 *	2/1/93	GECP	70	ND	101	5
BH-34 39.5-41.5 *	2/1/93	GECP	12	ND	101	ND
BH-34 44.5-46.5	2/1/93	GECP	21	ND	54	ND
BH-34 49.5-51.5 #	2/1/93	GECP	54	ND	66	7
BH-34 54.5-56.5	2/1/93	GECP	ND	ND	5	ND
BH-34 59.5-61.5 #	2/1/93	GECP	ND	ND	ND	ND

See last page for footnotes.

Table 8. Analysis of Volatile Organic Compound Concentrations Detected by Field Gas Chromatograph of Soil Samples from Boreholes, PRIDCO Industrial Park, October 1992 to March 1993, OU II Remedial Investigation, Vega Alta, Puerto Rico.

Sample I.D. (Depth in ft bls)	Date Sampled	Location	1,1-DCE (ug/kg)	trans-1,2-DCE (ug/kg)	TCE (ug/kg)	PCE (ug/kg)
BH-34 64.5-66.5	2/2/93	GECP	ND	ND	ND	ND
BH-34 69.5-70.3	2/2/93	GECP	ND	ND	ND	ND
BH-34 74.5-76.5 *	2/2/93	GECP	24	ND	39	3
BH-34 79.5-81.5 *	2/2/93	GECP	16	ND	53	2
BH-34 84.5-86.5 *	2/2/93	GECP	33	ND	105	9
BH-34 89.5-91.5 *	2/2/93	GECP	18	ND	88	6
BH-34 94.5-96.5	2/2/93	GECP	19	ND	12	ND
BH-34 99.5-101.5	2/2/93	GECP	ND	ND	ND	ND
BH-29 2.0-4.0	2/2/93	GECP	ND	ND	22	ND
BH-29 7.0-9.0	2/2/93	GECP	ND	ND	60	7
BH-29 12.0-14.0	2/2/93	GECP	ND	ND	40	ND
BH-29 19.5-21.5	2/5/93	GECP	ND	ND	17	ND
BH-29 26.5-28.5	2/5/93	GECP	ND	ND	ND	ND
BH-29 29.5-31.5	2/5/93	GECP	ND	ND	9	ND
BH-29 34.5-36.5	2/5/93	GECP	ND	ND	ND	ND
BH-29 39.5-41.5	2/5/93	GECP	ND	ND	47	ND
BH-29 44.5-46.5	2/5/93	GECP	ND	ND	25	ND
BH-29 49.5-51.5	2/5/93	GECP	ND	ND	57	4
BH-29 59.5-61.5	2/5/93	GECP	ND	ND	24	ND
BH-29 64.5-65.5	2/5/93	GECP	ND	ND	ND	ND
BH-29 69.5-69.7	2/5/93	GECP	ND	ND	ND	ND
BH-29 74.5-75.5	2/8/93	GECP	ND	ND	12	ND
BH-29 79.5-80.0	2/8/93	GECP	ND	ND	49	ND
BH-29 84.5-84.6	2/8/93	GECP	ND	ND	ND	ND
BH-29 89.5-90.4	2/8/93	GECP	9	ND	122	ND
BH-26A 4.5-6.5 #	2/4/93	TDYN	ND	ND	ND	ND
BH-26A 9.5-11.5 #	2/4/93	TDYN	ND	ND	ND	ND
BH-26A 14.5-16.5	2/4/93	TDYN	ND	ND	ND	ND
BH-26A 19.5-21.5	2/4/93	TDYN	ND	ND	ND	ND
BH-26A 24.5-26.5	2/4/93	TDYN	ND	ND	ND	ND
BH-26A 29.5-31.5	2/4/93	TDYN	ND	ND	ND	ND
BH-26A 34.5-36.5	2/4/93	TDYN	ND	ND	ND	ND
BH-26A 39.5-41.5	2/5/93	TDYN	ND	ND	ND	ND
BH-26A 44.5-46.5	2/5/93	TDYN	ND	ND	ND	ND
BH-26A 54.5-56.5	2/5/93	TDYN	ND	ND	7	ND
BH-26A 59.5-61.5	2/5/93	TDYN	ND	ND	ND	ND
BH-26A 64.5-66.5 #	2/5/93	TDYN	ND	ND	24	ND
BH-26A 66.5-68.5	2/5/93	TYDN	ND	ND	10	ND
BH-26A 69.5-70.7	2/5/93	TDYN	ND	ND	ND	ND
BH-26A 74.5-75.3	2/5/93	TDYN	ND	ND	ND	ND
BH-26A 79.5-79.6	2/8/93	TDYN	ND	ND	ND	ND
BH-26A 84.5-86.5	2/8/93	TDYN	ND	ND	ND	ND
BH-26A 89.5-91.2	2/8/93	TDYN	ND	ND	8	ND
BH-26A 99.5-101.5	2/8/93	TDYN	54	ND	28	2
					117	14

See last page for footnotes.

Table 8. Analysis of Volatile Organic Compound Concentrations Detected by Field Gas Chromatograph of Soil Samples from Boreholes, PRIDCO Industrial Park, October 1992 to March 1993, OU II Remedial Investigation, Vega Alta, Puerto Rico.

Sample I.D. (Depth in ft bls)	Date Sampled	Location	1,1-DCE (ug/kg)	trans-1,2-DCE (ug/kg)	TCE (ug/kg)	PCE (ug/kg)
BH-24 4.5-6.5	2/9/93	TDYN	ND	ND	ND	ND
BH-24 9.5-11.5	2/9/93	TDYN	ND	ND	ND	ND
BH-24 14.5-16.5	2/9/93	TDYN	ND	ND	ND	ND
BH-24 20.9-22.9	2/9/93	TDYN	ND	ND	ND	ND
BH-24 24.5-26.5	2/9/93	TDYN	ND	ND	ND	ND
BH-24 29.5-31.5	2/9/93	TDYN	ND	ND	ND	ND
BH-24 34.5-36.5	2/9/93	TDYN	ND	ND	ND	ND
BH-24 39.5-41.5	2/9/93	TDYN	ND	ND	ND	ND
BH-24 44.5-46.5	2/9/93	TDYN	ND	ND	ND	ND
BH-24 49.5-50.3 #	2/10/93	TDYN	ND	ND	ND	ND
BH-24 54.5-56.2	2/10/93	TDYN	ND	ND	ND	ND
BH-24 59.5-60.3	2/10/93	TDYN	ND	ND	ND	ND
BH-24 64.5-64.6	2/10/93	TDYN	ND	ND	ND	ND
BH-24 74.5-76.5	2/10/93	TDYN	ND	ND	ND	ND
BH-24 80.5-81.8	2/10/93	TDYN	ND	ND	ND	ND
BH-24 84.5-84.9	2/10/93	TDYN	ND	ND	ND	ND
BH-24 89.5-91.5 *	2/10/93	TDYN	ND	ND	9	ND
BH-24 94.5-96.5	2/10/93	TDYN	128	ND	1179	181
			189	ND	631	101
BH-20 4.5-6.5	2/24/93	CP	ND	ND	ND	ND
BH-20 9.5-11.5	2/24/93	CP	144	ND	ND	ND
BH-20 14.5-16.5	2/24/93	CP	14	ND	ND	ND
BH-20 19.5-21.5	2/24/93	CP	13	ND	ND	ND
BH-20 24.5-26.5	2/24/93	CP	ND	ND	ND	ND
BH-20 29.5-31.5	2/24/93	CP	ND	ND	ND	ND
BH-20 34.5-36.5	2/25/93	CP	ND	ND	ND	ND
BH-20 39.5-41.5	2/25/93	CP	ND	ND	ND	ND
BH-20 44.5-46.5	2/25/93	CP	ND	ND	ND	ND
BH-20 49.5-51.5	2/26/93	CP	ND	ND	ND	ND
BH-20 54.5-56.5	2/26/93	CP	ND	ND	ND	ND
BH-20 59.5-61.5	2/26. 3	CP	ND	ND	ND	ND
BH-20 64.5-66.5	2/26/93	CP	ND	ND	ND	ND
BH-20 69.5-71.5	2/26/93	CP	ND	ND	ND	ND
BH-20 74.5-76.5	2/26/93	CP	ND	ND	ND	ND
BH-20 79.5-81.5	2/26/93	CP	12	ND	ND	ND
BH-20 84.5-86.5	3/1/93	CP	ND	ND	ND	ND
BH-20 89.5-91.5	3/1/93	CP	ND	ND	ND	ND
BH-20 99.5-101.5	3/1/93	CP	ND	ND	ND	ND
BH-20 106.5-108.5	3/2/93	CP	ND	ND	ND	ND
BH-20 109.5-111.5	3/2/93	CP	ND	ND	ND	ND
BH-23 4.5-6.5	3/4/93	CP	ND	ND	ND	ND
BH-23 9.5-11.5	3/4/93	CP	ND	ND	ND	ND
BH-23 14.5-16.5	3/4/93	CP	ND	ND	ND	ND
BH-23 19.5-21.5	3/4/93	CP	ND	ND	ND	ND
BH-23 24.5-26.5	3/4/93	CP	ND	ND	ND	ND

See last page for footnotes.

Table 8. Analysis of Volatile Organic Compound Concentrations Detected by Field Gas Chromatograph of Soil Samples from Boreholes, PRIDCO Industrial Park, October 1992 to March 1993, OU II Remedial Investigation, Vega Alta, Puerto Rico.

Sample I.D. (Depth in ft bls)	Date Sampled	Location	1,1-DCE (ug/kg)	trans-1,2-DCE (ug/kg)	TCE (ug/kg)	PCE (ug/kg)
BH-23 29.5-31.5	3/4/93	CP	ND	ND	ND	ND
BH-23 34.5-36.5	3/4/93	CP	ND	ND	ND	ND
BH-23 39.5-41.5	3/4/93	CP	ND	ND	ND	ND
BH-23 44.5-46.5	3/5/93	CP	ND	ND	ND	ND
BH-23 49.5-51.5	3/5/93	CP	ND	ND	ND	ND
BH-23 54.5-56.5	3/5/93	CP	ND	ND	ND	ND
BH-23 59.5-61.5	3/5/93	CP	ND	ND	ND	ND
BH-23 64.5-66.5	3/5/93	CP	ND	ND	ND	ND
BH-23 69.5-69.6	3/5/93	CP	ND	ND	ND	ND
BH-23 74.5-76.5	3/5/93	CP	ND	ND	ND	ND
BH-23 84.5-84.7	3/5/93	CP	ND	ND	ND	ND
BH-23 89.5-90.3	3/5/93	CP	ND	ND	ND	ND
BH-22 4.5-6.5	3/10/93	CP	ND	ND	ND	ND
BH-22 9.5-11.5	3/10/93	CP	ND	ND	ND	ND
BH-22 14.5-16.5	3/10/93	CP	ND	ND	ND	ND
BH-22 19.5-21.5	3/10/93	CP	ND	ND	ND	ND
BH-22 24.5-26.5 *	3/10/93	CP	ND	ND	6	ND
BH-22 29.5-29.6	3/10/93	CP	ND	ND	ND	ND
BH-22 34.5-36.5	3/10/93	CP	ND	ND	ND	ND
BH-21 4.5-6.5	3/12/93	CP	ND	ND	ND	ND
BH-21 9.5-11.5 *	3/12/93	CP	25	ND	ND	ND
BH-21 14.5-16.5	3/12/93	CP	ND	ND	ND	ND
BH-21 19.5-21.5	3/12/93	CP	ND	ND	ND	ND
BH-21 29.5-31.5 *	3/12/93	CP	ND	ND	ND	ND
BH-21 34.5-36.5	3/12/93	CP	ND	ND	ND	ND
BH-21 39.5-41.5 *	3/12/93	CP	ND	ND	ND	ND
BH-21 49.5-49.7	3/12/93	CP	ND	ND	ND	ND
BH-21 54.5-56.5 *	3/12/93	CP	25	ND	ND	ND
BH-21 64.5-66.5 *	3/12/93	CP	ND	ND	ND	7
BH-21 69.5-69.7	3/12/93	CP	14	ND	ND	ND
BH-21 74.5-75.0	3/12/93	CP	ND	ND	ND	ND
BH-21 79.5-81.5	3/15/93	CP	ND	ND	ND	ND

See last page for footnotes.

Table 8. Analysis of Volatile Organic Compound Concentrations Detected by Field Gas Chromatograph of Soil Samples from Boreholes, PRIDCO Industrial Park, October 1992 to March 1993, OU II Remedial Investigation, Vega Alta, Puerto Rico.

Sample I.D. (Depth in ft bls)	Date Sampled	Location	1,1-DCE (ug/kg)	trans-1,2-DCE (ug/kg)	TCE (ug/kg)	PCE (ug/kg)
BH-21 84.5-86.5	3/15/93	CP	ND	ND	ND	ND
BH-21 89.5-91.5	3/15/93	CP	ND	ND	ND	ND
BH-21 94.5-96.5	3/15/93	CP	ND	ND	ND	ND
BH-21 99.5-101.5	3/15/93	CP	ND	ND	ND	ND

All analyses were performed on a Photovac 10S50 portable gas chromatograph.

*	Unknown detected with a peak similar to cis-1,2-dichloroethene.
#	Sample split for analysis by contract laboratory program (CLP) laboratory.
ft bls	Feet below land surface.
ug/kg	Micrograms per kilogram.
ND	Not detected.
1,1-DCE	1,1-Dichloroethene.
trans-1,2-DCE	trans-1,2-Dichloroethene.
TCE	Trichloroethene.
PCE	Tetrachloroethene.
FDD	Former Drainage Ditch.
FWC	Former West Company.
R/M	Rovipak/Motorola.
HA	Harman Automotive.
GEPP	General Electric Pilot Plant.
GECP	General Electric Control Plant.
TDYN	Teledyne.
CP	Concrete Pad.
WC	West Company.

Table 9 Concentrations of Volatile Organic Compounds in Groundwater Samples Collected from January to March 1992, OU II Remedial Investigation, Vega Alta, Puerto Rico.

Analyte	Sample ID: / Date:	Alta Nursery (100) 20-Jan-92	Arenas Procesadas (83) 20-Jan-92	Arenas Procesadas (83) FR 20-Jan-92	Bajura 5 (7) 28-Jan-92	BVAW 0102 (MI) 14-Feb-92	BVAW 0103 (MI) 14-Feb-92	BVAW 0104 (MI) 14-Feb-92	BVAW 0105 (MI) 14-Feb-92	BVAW 0106 (MI) 14-Feb-92	BVAW 0107 (MI) 18-Feb-92	BVAW 0108 (MI) 18-Feb-92	BVAW 0109 (MI) 18-Feb-92	BVA (MI) 13-F
Chloromethane		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5
Bromomethane		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5
Vinyl chloride		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5
Chloroethane		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5
Methylene chloride		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5
Acetone		2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Carbon disulfide		0.5 U	0.5 U	0.5 U	0.5 U	1.5	0.5 U	1 U	1 U	1.1 U	0.71 UJ	0.5 UJ	2.4 UJ	0.8
1,1-Dichloroethene		18	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5
1,1-Dichloroethane		1.8	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5
1,2-Dichloroethene (cis/trans)		3.7	0.5 U	0.5 U	0.13 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5
Chloroform		0.5 U	0.5 U	0.5 U	0.15 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5
1,2-Dichloroethane		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5
2-Butanone		2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
1,1,1-Trichloroethane		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5
Carbon tetrachloride		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5
Bromodichloromethane		0.5 U	0.5 U	0.5 U	0.26 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5
1,2-Dichloropropane		0.19 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5
trans-1,3-Dichloropropene		0.5 UJ	0.5 UJ	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5
Trichloroethene		170 D	0.5 U	0.5 U	0.8	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.44
Dibromochloromethane		0.5 UJ	0.5 UJ	0.5 UJ	0.75	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5
1,1,2-Trichloroethane		0.16 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5
Benzene		0.05 J	0.5 U	0.5 U	0.06 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5
cis-1,3-Dichloropropene		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5
Bromoform		0.5 UJ	0.5 UJ	0.5 UJ	2.2 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5
4-Methyl-2-pentanone		2 UJ	2 UJ	UJ	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
2-Hexanone		2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	1 J	2 U	2 U
1,1,2,2-Tetrachloroethane		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5
Tetrachloroethene		8.9	0.5 U	0.5 U	0.72	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.12
Toluene		0.5 U	0.5 U	0.5 U	1.7	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.06 J	0.27 J	0.5 U	0.5
Chlorobenzene		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Ethylbenzene		0.5 U	0.5 U	0.5 U	0.18 J	0.5 U	0.5 U	0.5 U	0.5 U	0.33 J	0.13 J	0.85	1	1.2
Styrene		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.33 J	0.5 U	0.37 J	0.86	0.74
Xylenes (total)		0.5 U	0.5 U	0.5 U	1.8	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.17 J	0.05 J	0.5 U

Analyte concentrations in micrograms per liter (parts per billion [ppb]).
Analyses were performed by various analytical subcontractors using standard U.S. Environmental Protection Agency methodology.

D Compound concentration was determined at a secondary dilution factor.
J Estimated result.
U The compound was analyzed for, but not detected at the corresponding reporting limits.
d All reporting limits raised due to matrix interferences.
j All reporting limits raised due to high levels of other analytes.
R Result rejected.
FR Field replicate of previous sample.

Table 9 Concentrations of Volatile Organic Compounds in Groundwater Samples Collected from January to March 1992, OU II Remedial Investigation, Vega Alta, Puerto Rico.

Analyte	Sample ID: / Date:	BVAW 0111 (M1) 18-Feb-92	BVAW 0111 (M1) FR 18-Feb-92	BVAW 0112 (M1) 13-Feb-92	BVAW 0113 (M1) 14-Feb-92	BVAW 0201 (M2) 6-Mar-92	BVAW 0202 (M2) 6-Mar-92	BVAW 0203 (M2) 9-Mar-92	BVAW 0204 (M2) 9-Mar-92	BVAW 0204 (M2) FR 9-Mar-92	BVAW 0205 (M2) 9-Mar-92	BVAW 0206 (M2) 10-Mar-92	BVAW 0207 (M2) 10-Mar-92	BVAW (M2) 10-Ma
Chloromethane		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.2 UDj	1.2 UDj	1 UDj
Bromomethane		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.2 U	1.2 U	1 U
Vinyl chloride		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.2 U	1.2 U	1 U
Chloroethane		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.2 U	1.2 U	1 U
Methylene chloride		0.5 U	0.5 U	0.5 U	0.53 U	0.82 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.2 U	1.2 U	1 U
Acetone		2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	5 U	5 U	4 U
Carbon disulfide		2.4 UJ	2.2 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.2 UJ	1.2 UJ	1 UJ
1,1-Dichloroethene		1.8	1.9	0.5 U	0.69	0.5 U	0.5 U	0.5 U	4.7	4.8	29	32	28	27
1,1-Dichloroethane		1.3	1.2	0.14 J	0.48 J	0.5 U	0.5 U	0.5 U	0.1 J	0.06 J	0.79	0.82 J	0.7 J	0.88
1,2-Dichloroethene (cis/trans)		1.8	1.8	2.3	1.2	0.5 U	0.5 U	0.5 U	0.12 J	0.12 J	0.82	1.1 J	1.1 J	1
Chloroform		0.56	0.51	0.5 U	0.1 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.18 J	1.2 U	1.2 U	1 U
1,2 Dichloroethane		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.16 J	1.2 U	1.2 U	1 U
2-Butanone		2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	5 U	5 U	4 U
1,1,1-Trichloroethane		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.2 U	1.2 U	1 U
Carbon tetrachloride		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.2 U	1.2 U	1 U
Bromodichloromethane		0.5 U	0.1 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.2 U	1.2 U	1 U
1,2-Dichloropropane		0.14 J	0.12 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.47 J	1.2 U	1.2 U	0.52 J
trans-1,3-Dichloropropene		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.2 U	1.2 U	1 U
Trichloroethene		15	16	0.1 J	4.6	0.5 U	0.5 U	0.13 J	9.6	9.9	56 D	70	58	65
Dibromochloromethane		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.2 U	1.2 U	1 U
1,1,2-Trichloroethane		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.22 J	1.2 U	1.2 U	1 U
Benzene		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.2 U	1.2 U	1 U
cis-1,3-Dichloropropene		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.2 U	1.2 U	1 U
Bromoform		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.2 U	1.2 U	1 U
4-Methyl-2-pentanone		2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	5 U	5 U	4 U
2-Hexanone		2 U	2 U	2 U	2 U	2 U	0.65 J	2 U	2 U	2 U	2 U	5 U	5 U	4 U
1,1,2,2-Tetrachloroethane		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.2 U	1.2 U	1 U
Tetrachloroethene		7.7	7.8	0.09 J	11	0.5 U	0.5 U	0.5 U	0.08 J	0.08 J	0.5	0.6 J	0.45 J	0.58 J
Toluene		0.13 J	0.11 J	0.61 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.2 U	1.2 U	1 U
Chlorobenzene		0.5 U	0.5 U	0.24 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.2 U	1.2 U	1 U
Ethylbenzene		0.17 J	0.16 J	2.3	0.34 J	0.5 U	0.09 J	0.5 U	0.5 U	0.5 U	0.21 J	1.2 U	1.2 U	1 U
Styrene		0.08 J	0.06 J	2.1	0.23 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.2 U	1.2 U	1 U
Xylenes (total)		0.19 J	0.21 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.26 J	1.2 U	1.2 U	1 U

Analyte concentrations in micrograms per liter (parts per billion [ppb]).
Analyses were performed by various analytical subcontractors using standard U.S. Environmental Protection Agency methodology.

D Compound concentration was determined at a secondary dilution factor.
J Estimated result.
U The compound was analyzed for, but not detected at the corresponding reporting limits.
j All reporting limits raised due to matrix interferences.
| All reporting limits raised due to high levels of other analytes.
R Result rejected.
FR Field replicate of previous sample.

Table 9 Concentrations of Volatile Organic Compounds in Groundwater Samples Collected from January to March 1992, OU II Remedial Investigation, Vega Alta, Puerto Rico.

Pa

Analyte	Sample ID: / Date:	BVAW 0301 (M3) 17-Mar-92	BVAW 0302 (M3) 17-Mar-92	BVAW 0303 (M3) 17-Mar-92	BVAW 0304 (M3) 17-Mar-92	BVAW 0305 (M3) 17-Mar-92	BVAW 0306 (M3) 17-Mar-92	BVAW 0307 (M3) 17-Mar-92	BVAW 0308 (M3) 18-Mar-92	BVAW 0308 (M3) FR 18-Mar-92	BVAW 0403 (M4) 11-Mar-92	BVAW 0403 (M4) FR 11-Mar-92	BVAW 0404 (M4) 12-Mar-92	BV (M4 11-M
Chloromethane		0.5 U	0.5 U	5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.1	0.5 U	0.5 UJ	0.5
Bromomethane		0.5 U	0.5 U	5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5
Vinyl chloride		0.5 U	0.5 U	5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5
Chloroethane		0.5 U	0.5 U	5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5
Methylene chloride		0.24 J	0.5 U	5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5
Acetone		2 U	4.1	20 U	2 U	2 U	2 U	2 U	2 U	2 U	2 UJ	2 UJ	2 U	2
Carbon disulfide		0.5 U	0.5 U	3.1 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 UJ	0.5 UJ	0.5
1,1-Dichloroethene		0.5 U	1.8	7.8	3.2	3	0.89	5.3	1.3 J	2 J	1.2	1.2	1.8	0.4
1,1-Dichloroethane		0.5 U	1.3	2.4 J	0.73	0.93	0.23 J	0.54	0.28 J	0.44 J	0.53	0.58	0.61	0.0
1,2-Dichloroethene (cis/trans)		0.5 U	4.2	17	14	12	2.8	1.8	1.2	1.8	4.4	4.6	5.6	1.3
Chloroform		0.5 U	0.16 J	5 U	0.31 J	0.3 J	0.12 J	0.18 J	0.13 J	0.19 J	0.18 J	0.18 J	0.5 U	0.1
1,2-Dichloroethane		0.5 U	0.5 U	5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5
2-Butanone		2 U	2 U	20 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2
1,1,1-Trichloroethane		0.5 U	0.5 U	5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.05 J	0.5
Carbon tetrachloride		0.5 U	0.5 U	5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5
Bromodichloromethane		0.5 U	0.5 U	5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5
1,2-Dichloropropane		0.5 U	2	4.8 J	5.2	4.5	1.5	3.9	3.5 J	4.7 J	1.5 J	1.6	1.9	0.9
trans-1,3-Dichloropropene		0.5 U	0.5 U	5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5
Trichloroethene		0.18 J	50 D	350 D	290 D	240 D	51 D	25	11	17	58 D	54 D	55 D	18
Dibromochloromethane		0.5 U	0.5 U	5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5
1,1,2-Trichloroethane		0.5 U	0.5 U	5 U	0.5 U	0.19 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5
Benzene		0.5 U	0.5 U	5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.06 J	0.06 J	0.5
cis-1,3-Dichloropropene		0.5 U	0.5 U	5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5
Bromoform		0.5 U	0.5 U	5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5
4-Methyl-2-pentanone		2 U	2 U	20 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
2-Hexanone		2.9	2.2	20 U	1.3 J	5	2 U	1.2 J	1.6 J	2 U	2 U	2 U	2 U	2 U
1,1,2,2-Tetrachloroethane		0.5 U	0.5 U	5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5
Tetrachloroethene		0.5 U	2.8	9.8	4.4	4.2	1.2	3.6	1.2	1.7	1.8	2	3.2	1.1
Toluene		0.5 U	0.5 U	5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5
Chlorobenzene		0.5 U	0.5 U	5 U	0.5 U	0.5 U	0.07 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5
Ethylbenzene		1	0.5 U	5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.12 J	0.12 J	0.5 U	0.5 U	0.5 U	0.5
Styrene		1.5	0.5 U	5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5
Xylenes (total)		0.07 J	0.31 J	5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.67	0.66	0.5 U	0.5 U	0.5 U	0.5 U

Analyte concentrations in micrograms per liter (parts per billion [ppb]).
Analyses were performed by various analytical subcontractors using standard U.S. Environmental Protection Agency methodology.

D Compound concentration was determined at a secondary dilution factor.
J Estimated result.
U The compound was analyzed for, but not detected at the corresponding reporting limits.
d All reporting limits raised due to matrix interferences.
l All reporting limits raised due to high levels of other analytes.
R Result rejected.
FR Field replicate of previous sample.

Table 9 Concentrations of Volatile Organic Compounds in Groundwater Samples Collected from January to March 1992, OU II Remedial Investigation, Vega Alta, Puerto Rico.

Analyte	Sample ID: / Date:	BVAW 0406 (M4) 11-Mar-92	BVAW 0407 (M4) 11-Mar-92	BVAW 0408 (M4) 12-Mar-92	BVAW 0409 (M4) 11-Mar-92	BVAW 0410 (M4) 11-Mar-92	BVAW 0411 (M4) 12-Mar-92	BVAW 0501 (M5) 2-Mar-92	BVAW 0501 (M5) FR 2-Mar-92	BVAW 0502 (M5) 28-Feb-92	BVAW 0503 (M5) 2-Mar-92	BVAW 0504 (M5) 2-Mar-92	BVAW 0505 (M5) 2-Mar-92	BV (M5 28-I
Chloromethane		0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5
Bromomethane		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5
Vinyl chloride		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5
Chloroethane		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5
Methylene chloride		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5
Acetone		2 UJ	2 UJ	2 U	2 UJ	2 UJ	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2
Carbon disulfide		0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5
1,1-Dichloroethene		0.5 U	0.5 U	0.21 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.67	0.3
1,1-Dichloroethane		0.5 U	0.09 J	0.5 U	0.5 U	0.5 U	0.08 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5
1,2-Dichloroethene (cis/trans)		0.15 J	0.46 J	0.74	0.29 J	0.4 J	0.26 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.8	0.4
Chloroform		0.1 J	0.14 J	0.5 U	0.15 J	0.13 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.09 J	0.0
1,2-Dichloroethane		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5
2-Butanone		2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 I
1,1,1-Trichloroethane		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5
Carbon tetrachloride		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5
Bromodichloromethane		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5
1,2-Dichloropropane		0.09 J	0.37 J	0.43 J	0.33 J	0.35 J	0.15 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.86	0.6
trans-1,3-Dichloropropene		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5
Trichloroethene		2.8	5.6	8.4	3.6	5.1	2.7	0.5 U	0.5 U	0.1 J	0.22 J	0.64	15	9.7
Dibromochloromethane		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5
1,1,2-Trichloroethane		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5
Benzene		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5
cis-1,3-Dichloropropene		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5
Bromoform		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5
4-Methyl-2-pentanone		2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
2-Hexanone		2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
1,1,2,2-Tetrachloroethane		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 I
Tetrachloroethene		0.21 J	0.28 J	0.53	0.19 J	0.25 J	0.11 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.08 J	0.5 I
Toluene		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 I
Chlorobenzene		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 I
Ethylbenzene		0.5 U	0.5 U	0.5 U	0.5 U	0.11 J	0.5 U	0.26 J	0.23 J	1.2	1.9	0.41 J	0.5 U	0.5 I
Styrene		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.8	3.6	0.69	0.5 U	0.5 I
Xylenes (total)		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.88	0.85	0.05 J	0.17 J	0.06 J	0.5 U	0.5 I

Analyte concentrations in micrograms per liter (parts per billion [ppb]).
Analyses were performed by various analytical subcontractors using standard U.S. Environmental Protection Agency methodology.

D Compound concentration was determined at a secondary dilution factor.
J Estimated result.
U The compound was analyzed for, but not detected at the corresponding reporting limits.
a All reporting limits raised due to matrix interferences.
b All reporting limits raised due to high levels of other analytes.
R Result rejected.
FR Field replicate of previous sample.

Table 9 Concentrations of Volatile Organic Compounds in Groundwater Samples Collected from January to March 1992, OU II Remedial Investigation, Vega Alta, Puerto Rico.

Analyte	Sample ID:	BVAW 0507 (M5)	BVAW 0508 (M5)	BVAW 0509 (M5)	BVAW 0510 (M5)	BVAW 0601 (M6)	BVAW 0602 (M6)	BVAW 0603 (M6)	BVAW 0604 (M6)	BVAW 0605 (M6)	BVAW 0606 (M6)	BVAW 0607 (M6)	BVAW 0607 (M6) FR	BV (M6
	Date:	2-Mar-92	2-Mar-92	2-Mar-92	2-Mar-92	20-Mar-92	20-Mar-92	20-Mar-92	20-Mar-92	20-Mar-92	20-Mar-92	20-Mar-92	20-Mar-92	20-M
Chloromethane		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.89	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5
Bromomethane		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5
Vinyl chloride		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5
Chloroethane		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5
Methylene chloride		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5
Acetone		2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2
Carbon disulfide		0.5 U	0.5 U	0.5 U	0.5 UJ	0.97 U	3	0.97 U	1.1 U	0.5 U	0.5 U	1.7 UJ	7.6 J	1.
1,1-Dichloroethene		0.29 J	0.19 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.5	2	1.4 J	0.78 J	0.
1,1-Dichloroethane		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.92	2.2	2.1	1.8	1.
1,2-Dichloroethene (cis/trans)		0.47 J	0.23 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	3.5	4.9	2.9	2.6	1.
Chloroform		0.07 J	0.07 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.32 J	0.36 J	0.28 J	0.33 J	0.2
1,2-Dichloroethane		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5
2-Butanone		2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2
1,1,1-Trichloroethane		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5
Carbon tetrachloride		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5
Bromodichloromethane		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.08 J	0.5 U	0.07 J	0.5 U	0.5
1,2-Dichloropropane		0.48 J	0.28 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.27 J	0.48 J	0.48 J	0.46 J	0.5
trans-1,3-Dichloropropene		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5
Trichloroethene		9.8	5.4	0.7	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	39 D	40	22	16	11
Dibromochloromethane		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5
1,1,2-Trichloroethane		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5
Benzene		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5
cis-1,3-Dichloropropene		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5
Bromoform		0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5
4-Methyl-2-pentanone		2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
2-Hexanone		2 U	2 U	2 U	R	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	0.8
1,1,2,2-Tetrachloroethane		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5
Tetrachloroethene		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.8	6.5	6.4 J	3.8 J	4.7
Toluene		0.5 U	0.5 U	0.5 U	0.5 U	2.2	0.78 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5
Chlorobenzene		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.12 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5
Ethylbenzene		0.5 U	0.5 U	0.5 U	0.5 U	8.9	2.3	1.2	1	0.5 U	0.5 U	0.5 U	0.5 U	0.5
Styrene		0.5 U	0.5 U	0.5 U	0.5 U	14	3.1	2.1	1.8	0.5 U	0.5 U	0.5 U	0.5 U	0.5
Xylenes (total)		0.5 U	0.5 U	0.5 U	0.5 U	1.2	0.24 J	0.06 J	0.07 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5

Analyte concentrations in micrograms per liter (parts per billion [ppb]).
Analyses were performed by various analytical subcontractors using standard U.S. Environmental Protection Agency methodology.

D Compound concentration was determined at a secondary dilution factor.
J Estimated result.
U The compound was analyzed for, but not detected at the corresponding reporting limits.
d All reporting limits raised due to matrix interferences.
h All reporting limits raised due to high levels of other analytes.
R Result rejected.
FR Field replicate of previous sample.

Table 9 Concentrations of Volatile Organic Compounds in Groundwater Samples Collected from January to March 1992, OU II Remedial Investigation, Vega Alta, Puerto Rico.

Analyte	Sample ID: / Date:	BVAW 0609 (M6) 20-Mar-92	BVAW 0610 (M6) 20-Mar-92	BVAW 0801 (M8) 3-Mar-92	BVAW 0802 (M8) 3-Mar-92	BVAW 0803 (M8) 3-Mar-92	BVAW 0804 (M8) 3-Mar-92	BVAW 0805 (M8) 3-Mar-92	BVAW 0806 (M8) 3-Mar-92	BVAW 0807 (M8) 3-Mar-92	BVAW 0808 (M8) 3-Mar-92	BVAW 0809 (M8) 4-Mar-92	BVAW 0809 (M8) FR 4-Mar-92	BV/ (M8 4-M
Chloromethane		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.39 J	0.5 U	0.5
Bromomethane		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5
Vinyl chloride		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5
Chloroethane		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5
Methylene chloride		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5
Acetone		2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 I
Carbon disulfide		2.9	1.3 U	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 U	0.5 U	0.5
1,1-Dichloroethene		0.78	0.5 U	2.2	1.5	3.1	3.6	3.5	2	0.95	0.64	0.84	0.72	0.2
1,1-Dichloroethane		1.5	0.86	0.43 J	0.34 J	0.61	0.7	0.67	0.43 J	0.22 J	0.18 J	0.19 J	0.19 J	0.0
1,2-Dichloroethene (cis/trans)		2.1	1.2	1.6	1.3	2	2.2	2.3	1.4	0.9	0.88	1	0.96	0.6
Chloroform		0.26 J	0.27 J	0.1 J	0.09 J	0.13 J	0.15 J	0.15 J	0.13 J	0.14 J	0.5 U	0.15 J	0.14 J	0.0
1,2-Dichloroethane		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5
2-Butanone		2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 I
1,1,1-Trichloroethane		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5
Carbon tetrachloride		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5
Bromodichloromethane		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5
1,2-Dichloropropane		0.16 J	0.11 J	0.5 U	0.5 U	0.2 J	0.17 J	0.5 U	0.18 J	0.32 J	0.33 J	0.29 J	0.27 J	0.2
trans-1,3-Dichloropropene		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5
Trichloroethene		12	6.7	79 D	48 D	59 D	74 D	92 D	47 D	23	19	19	17	9.8
Dibromochloromethane		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5
1,1,2-Trichloroethane		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 I
Benzene		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 I
cis-1,3-Dichloropropene		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 I
Bromoform		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 I
4-Methyl-2-pentanone		2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
2-Hexanone		1.4 J	2 U	2 U	2	2 U	2 U	2 U	2.2	2 U	2 U	2 U	2 U	R
1,1,2,2-Tetrachloroethane		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 I
Tetrachloroethene		4.7	2.1	2.8	2.1	4.2	5	4.4	2.6	1.7	1.3	1.4	1.2	0.58
Toluene		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 I
Chlorobenzene		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 I
Ethylbenzene		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 I
Styrene		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 I
Xylenes (total)		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U

Analyte concentrations in micrograms per liter (parts per billion [ppb]).
Analyses were performed by various analytical subcontractors using standard U.S. Environmental Protection Agency methodology.

D Compound concentration was determined at a secondary dilution factor.
J Estimated result.
U The compound was analyzed for, but not detected at the corresponding reporting limits.
J All reporting limits raised due to matrix interferences.
J All reporting limits raised due to high levels of other analytes.
R Result rejected.
FR Field replicate of previous sample.

Table 9 Concentrations of Volatile Organic Compounds in Groundwater Samples Collected from January to March 1992, OU II Remedial Investigation, Vega Alta, Puerto Rico.

Analyte	Sample ID: / Date:	BVAW 0901 (M9) 5-Mar-92	BVAW 0901 (M9) FR 5-Mar-92	BVAW 0902 (M9) 5-Mar-92	BVAW 0903 (M9) 5-Mar-92	BVAW 0904 (M9) 5-Mar-92	BVAW 0905 (M9) 5-Mar-92	BVAW 0906 (M9) 5-Mar-92	BVAW 0907 (M9) 5-Mar-92	BVAW 0908 (M9) 5-Mar-92	BVAW 0909 (M9) 6-Mar-92	BVAW 0910 (M9) 6-Mar-92	BVAW 1001 (M10) 13-Mar-92	BVA (M1 16-M
Chloromethane		0.5 U	0.5 U	5 Uj	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5
Bromomethane		0.5 U	0.5 U	5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5
Vinyl chloride		0.5 U	0.5 U	5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5
Chloroethane		0.5 U	0.5 U	5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5
Methylene chloride		0.5 U	0.5 U	5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.7 U	0.5 U	0.5
Acetone		2 U	2 U	20 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	1.2 J	2 UJ	2 U
Carbon disulfide		2.2	1.7 U	5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 U	0.5 UJ	0.5
1,1-Dichloroethene		0.5 U	0.5 U	5.2	4.9	5.4	5.8	4.2	5.3	6.4	1.3	17	0.5 U	1
1,1 Dichloroethane		0.5 U	0.5 U	2.4 J	1.8	1.5	1.7	1.5	1.6	2	0.18 J	0.18 J	0.25 J	1.
1,2-Dichloroethene (cis/trans)		0.5 U	0.5 U	11	9.1	8.9	9.5	8.8	8.6	10	4	0.11 J	0.5 U	0.5
Chloroform		0.5 U	0.5 U	5 U	0.5 U	0.5 U	0.28 J	0.5 U	0.5 U	0.3 J	0.2 J	0.5 U	0.5 U	0.1
1,2-Dichloroethane		0.5 U	0.5 U	5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5
2-Butanone		2 U	2 U	20 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
1,1,1-Trichloroethane		0.5 U	0.5 U	5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5
Carbon tetrachloride		0.5 U	0.5 U	5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5
Bromodichloromethane		0.5 U	0.5 U	5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5
1,2-Dichloropropane		0.5 U	0.5 U	4.1 J	3	2.6	2.9	2.7	2.7	3.3	3.8	0.3 J	0.5 U	0.5
trans-1,3-Dichloropropene		0.5 U	0.5 U	5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5
Trichloroethene		0.14 J	0.13 J	250 D	260 D	280 D	300 D	220 D	320 D	280 D	93 DJ	2.2	0.74	27
Dibromochloromethane		0.5 U	0.5 U	5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5
1,1,2-Trichloroethane		0.5 U	0.5 U	5 U	0.24 J	0.5 U	0.5 U	0.19 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5
Benzene		0.5 U	0.5 U	5 U	0.5 U	0.5 U	0.06 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5
cis-1,3-Dichloropropene		0.5 U	0.5 U	5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5
Bromoform		0.5 U	0.5 U	5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 U	0.5 UJ	0.5
4-Methyl-2-pentanone		2 U	2 U	20 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
2-Hexanone		2 U	2 U	R	R	R	R	R	R	3.6 J	R	2.4	1.9 J	0.9
1,1,2,2-Tetrachloroethane		0.5 U	0.5 U	5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5
Tetrachloroethene		0.5 U	0.5 U	7.2	5.9	6.4	6.8	5.2	6.1	7.8	1.1	0.07 J	0.5 U	0.2
Toluene		0.5 U	0.5 U	5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5
Chlorobenzene		0.5 U	0.5 U	5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5
Ethylbenzene		1.2 J	0.75 J	5 U	0.5 U	0.5 U	0.5 U	0.06 J	0.5 U	0.5 U	0.5 U	0.5 U	0.3 J	0.5
Styrene		2.5 J	1.5 J	5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.42 J	0.5
Xylenes (total)		0.05 J	0.5 U	5 U	0.5 U	0.5 U	0.5 U	0.31 J	0.5 U	0.5 U	0.5 U	0.5 U	0.47 J	0.5

Analyte concentrations in micrograms per liter (parts per billion [ppb]).
Analyses were performed by various analytical subcontractors using standard U.S. Environmental Protection Agency methodology.

D Compound concentration was determined at a secondary dilution factor.
J Estimated result.
U The compound was analyzed for, but not detected at the corresponding reporting limits.
d All reporting limits raised due to matrix interferences.
j All reporting limits raised due to high levels of other analytes.
R Result rejected.
FR Field replicate of previous sample.

Table 9 Concentrations of Volatile Organic Compounds in Groundwater Samples Collected from January to March 1992, OU II Remedial Investigation, Vega Alta, Puerto Rico.

Analyte	Sample ID: / Date:	BVAW 1003 (M10) 16-Mar-92	BVAW 1004 (M10) 16-Mar-92	BVAW 1005 (M10) 13-Mar-92	BVAW 1006 (M10) 16-Mar-92	BVAW 1007 (M10) 16-Mar-92	BVAW 1008 (M10) 16-Mar-92	BVAW 1008 (M10) FR 16-Mar-92	BVAW 1009 (M10) 16-Mar-92	BVAW 1101 (M11) 24-Mar-92	BVAW 1102 (M11) 24-Mar-92	BVAW 1103 (M11) 24-Mar-92	BVAW 1104 (M11) 24-Mar-92	BVA (M1 24-M
Chloromethane		0.45 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	R	0.5 U	R	R	0.5
Bromomethane		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	R	0.5 U	R	R	0.5
Vinyl chloride		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	R	0.5 U	R	R	0.5
Chloroethane		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	R	0.5 U	R	R	0.5
Methylene chloride		0.79 U	0.64 U	0.5 U	1.2 U	1 U	1 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 UJ	0.5 UJ	0.5
Acetone		2 U	2 U	2 UJ	2 U	2 U	2 U	2 U	2 U	R	2 U	R	R	2
Carbon disulfide		0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 UJ	1.2 U	2.9 J	0.5 UJ	0.5
1,1-Dichloroethene		0.83	0.45 J	0.25 J	0.44 J	0.22 J	0.2 J	0.26 J	0.5 U	5.7 J	2	0.97 J	4.5 J	2.4
1,1-Dichloroethane		2	3.3	1.2	3.6	0.83	0.71	0.88	0.67	2.7 J	1.9	1.6 J	8.6 J	6
1,2-Dichloroethene (cis/trans)		0.72	0.92	0.28 J	0.93	0.15 J	0.15 J	0.16 J	0.19 J	11 J	4.7	4.5 J	17 J	13
Chloroform		0.2 J	0.16 J	0.11 J	0.17 J	0.09 J	0.09 J	0.5 U	0.09 J	0.32 J	0.3 J	0.5 UJ	0.41 J	0.3
1,2-Dichloroethane		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	R	0.5 U	R	R	0.5
2-Butanone		2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	R	2 U	R	R	2
1,1,1-Trichloroethane		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	R	0.5 U	R	R	0.5
Carbon tetrachloride		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	R	0.5 U	R	R	0.5
Bromodichloromethane		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.05 J	0.07 J	R	R	0.5
1,2-Dichloropropane		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.7 J	0.5 U	0.63 J	1.5 J	0.9
trans-1,3-Dichloropropene		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	R	0.5 U	R	R	0.5
Trichloroethene		21	11	8.1	9.3	8.2	7.5 J	9.7 J	10	190 DJ	33 DJ	31 J	93 DJ	57 J
Dibromochloromethane		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	R	0.5 U	R	R	0.5
1,1,2-Trichloroethane		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	R	0.5 U	R	R	0.5
Benzene		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	R	R	0.5
cis-1,3-Dichloropropene		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	R	0.5 U	R	R	0.5
Bromoform		0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	R	0.5 U	R	R	0.5
4-Methyl-2-pentanone		2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	R	2 U	R	R	2 U
2-Hexanone		2 U	2 U	4.2	2 U	5.5	7.3 J	1.6 J	2 U	0.64 J	2 U	R	R	2 U
1,1,2,2-Tetrachloroethane		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	R	0.5 U	R	R	0.5
Tetrachloroethene		0.25 J	0.19 J	0.1 J	0.15 J	0.09 J	0.09 J	0.11 J	0.15 J	6.4 J	6.6	3.4 J	18 J	13
Toluene		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	R	R	0.5
Chlorobenzene		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	R	0.5 U	12 J	R	0.5
Ethylbenzene		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	R	0.5 U	R	R	0.21
Styrene		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	R	0.5 U	R	R	0.5
Xylenes (total)		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	R	R	0.86

Analyte concentrations in micrograms per liter (parts per billion [ppb]).
Analyses were performed by various analytical subcontractors using standard U.S. Environmental Protection Agency methodology.

D Compound concentration was determined at a secondary dilution factor.
J Estimated result.
U The compound was analyzed for, but not detected at the corresponding reporting limits.
d All reporting limits raised due to matrix interferences.
j All reporting limits raised due to high levels of other analytes.
R Result rejected.
FR Field replicate of previous sample.

Table 9 Concentrations of Volatile Organic Compounds in Groundwater Samples Collected from January to March 1992, OU II Remedial Investigation, Vega Alta, Puerto Rico.

Analyte	Sample ID: / Date:	BVAW 1105 (M11) FR 24-Mar-92	BVAW 1106 (M11) 24-Mar-92	BVAW 1107 (M11) 24-Mar-92	BVAW 1108 (M11) 24-Mar-92	BVAW 1109 (M11) 24-Mar-92	BVAW 1201 (M12) 19-Mar-92	BVAW 1202 (M12) 19-Mar-92	BVAW 1203 (M12) 19-Mar-92	BVAW 1204 (M12) 19-Mar-92	BVAW 1205 (M12) 19-Mar-92	BVAW 1206 (M12) 19-Mar-92	BVAW 1207 (M12) 19-Mar-92	BVAW (M12) 18-Ma
Chloromethane		0.5 U	R	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromomethane		0.5 U	R	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Vinyl chloride		0.5 U	R	0.5 U	2.7	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chloroethane		0.5 U	R	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Methylene chloride		0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Acetone		2 U	R	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Carbon disulfide		0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.4 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1-Dichloroethene		3.5 J	2.5 J	2.4	1.3	1.3	0.5 U	0.5 U	0.5 U	7.9	3.4	2.2	1.5	0.62
1,1-Dichloroethane		6.1	5 J	3.5	2	1.3	0.5 U	0.5 U	0.5 U	2.6	1.3	1.1	0.82	0.5
1,2-Dichloroethene (cis/trans)		13	11 J	5.6	3.8	2.2	0.5 U	0.5 U	0.4 J	12	5.2	4.1	3.3	2 J
Chloroform		0.38 J	0.3 J	0.32 J	0.5 U	0.26 J	0.5 U	0.5 U	0.5 U	0.28 J	0.21 J	0.19 J	0.18 J	0.1 J
1,2-Dichloroethane		0.5 U	R	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
2-Butanone		2 U	R	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	0.77 J	2 U	2 U
1,1,1-Trichloroethane		0.5 U	R	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Carbon tetrachloride		0.5 U	R	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromodichloromethane		0.5 U	R	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichloropropane		0.88	0.78 J	0.55	1.1	0.37 J	0.5 U	0.5 U	0.5 U	1.1	2.3	2.1	2	1.6 J
trans-1,3-Dichloropropene		0.5 U	R	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Trichloroethene		43 DJ	78 DJ	33	26	13	0.21 J	0.39 J	3.1	190 D	110 D	93 D	39 D	32
Dibromochloromethane		0.5 U	R	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2-Trichloroethane		0.5 U	R	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Benzene		0.5 U	R	0.5 U	0.28 J	0.5 U	0.5 U	0.05 J	0.12 J	0.06 J	0.5 U	0.5 U	0.5 U	0.5 U
cis-1,3-Dichloropropene		0.5 U	R	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromoform		0.5 U	R	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
4-Methyl-2-pentanone		2 U	R	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
2-Hexanone		2 U	R	2 U	2 U	2 U	1 J	1.5 J	4.4	2 U	0.44 J	2.8	1.1 J	1.1 J
1,1,2,2-Tetrachloroethane		0.5 U	R	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Tetrachloroethene		17	13 J	6.6	1.2	1.7	0.5 U	0.5 U	0.16 J	9.4	4.6	3.1	2.3	1.2
Toluene		0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chlorobenzene		0.5 U	R	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Ethylbenzene		0.05 J	R	0.05 J	0.1 J	0.5 U	1	1.4	2.3	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Styrene		0.5 U	R	0.5 U	0.5 U	0.5 U	1.7	2.5	2.4	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Xylenes (total)		0.5 UJ	R	0.5 U	0.5 U	0.5 U	0.07 J	0.1 J	0.33 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U

Analyte concentrations in micrograms per liter (parts per billion [ppb]).
Analyses were performed by various analytical subcontractors using standard U.S. Environmental Protection Agency methodology.

D Compound concentration was determined at a secondary dilution factor.
J Estimated result.
U The compound was analyzed for, but not detected at the corresponding reporting limits.
d All reporting limits raised due to matrix interferences.
l All reporting limits raised due to high levels of other analytes.
R Result rejected.
FR Field replicate of previous sample.

Table 9 Concentrations of Volatile Organic Compounds in Groundwater Samples Collected from January to March 1992, OU II Remedial Investigation, Vega Alta, Puerto Rico.

Analyte	Sample ID: / Date:	BVAW 1208 (MI2) FR / 18-Mar-92	BVAW 1301 (MI3) / 18-Feb-92	BVAW 1301 (MI3) FR / 18-Feb-92	BVAW 1302 (MI3) / 24-Feb-92	BVAW 1303 (MI3) / 18-Feb-92	BVAW 1304 (MI3) / 18-Feb-92	BVAW 1305 (MI3) / 18-Feb-92	BVAW 1306 (MI3) / 18-Feb-92	BVAW 1307 (MI3) / 24-Feb-92	BVAW 1308 (MI3) / 18-Feb-92	BVAW 1309 (MI3) / 18-Feb-92	BVAW 1310 (MI3) / 24-Feb-92	BVA (MI4 / 29-Ja
Chloromethane		0.5 U	2.2	1.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5
Bromomethane		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5
Vinyl chloride		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5
Chloroethane		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5
Methylene chloride		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5
Acetone		2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Carbon disulfide		2.8 J	1.6 U	0.92 UJ	0.78 UJ	0.5 UJ	0.75 UJ	0.58 UJ	1.2 UJ	0.5 UJ	1.4 UJ	0.67 UJ	0.5 UJ	0.5
1,1-Dichloroethene		0.89	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.08 J	0.5 U	0.5 U	0.5
1,1-Dichloroethane		0.66	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.1 J	0.5 U	0.06 J	0.15 J	0.12 J	0.11 J	0.5
1,2-Dichloroethene (cis/trans)		2.7 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.68	0.59	0.54	1.1	0.95	1	0.5
Chloroform		0.16 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5
1,2-Dichloroethane		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5
2-Butanone		2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
1,1,1-Trichloroethane		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5
Carbon tetrachloride		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5
Bromodichloromethane		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5
1,2-Dichloropropane		2 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.2 J	0.22 J	0.24 J	0.2 J	0.16 J	0.19 J	0.5
trans-1,3-Dichloropropene		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5
Trichloroethene		39 D	0.5 U	0.5 U	0.77	0.82	0.75	3.8	3.6	3.2	5.6	4.6	4.8	0.5
Dibromochloromethane		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5
1,1,2-Trichloroethane		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5
Benzene		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5
cis-1,3-Dichloropropene		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5
Bromoform		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5
4-Methyl-2-pentanone		2 U	2 UJ	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
2-Hexanone		2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
1,1,2,2-Tetrachloroethane		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5
Tetrachloroethene		1.6	0.5 U	0.5 U	0.24 J	0.22 J	0.43 J	3.8	3.7	2.8	4.8	4.1	3.6	0.5
Toluene		0.5 U	0.11 J	0.14 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.08 J	0.5 U	0.5
Chlorobenzene		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5
Ethylbenzene		0.5 U	1.2	1.4	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.49 J
Styrene		0.5 U	1.9	2.4	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.78
Xylenes (total)		0.5 U	0.07 J	0.07 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5

Analyte concentrations in micrograms per liter (parts per billion [ppb]).
Analyses were performed by various analytical subcontractors using standard U.S. Environmental Protection Agency methodology.

D Compound concentration was determined at a secondary dilution factor.
J Estimated result.
U The compound was analyzed for, but not detected at the corresponding reporting limits.
d All reporting limits raised due to matrix interferences.
l All reporting limits raised due to high levels of other analytes.
R Result rejected.
FR Field replicate of previous sample.

Table 9 Concentrations of Volatile Organic Compounds in Groundwater Samples Collected from January to March 1992, OU II Remedial Investigation, Vega Alta, Puerto Rico.

Analyte	Sample ID:	BVAW 1402 (M14)	BVAW 1403 (M14)	BVAW 1404 (M14)	BVAW 1405 (M14)	BVAW 1406 (M14)	BVAW 1406 (M14) FR	BVAW 1407 (M14)	BVAW 1408 (M14)	BVAW 1409 (M14)	BVAW 1410 (M14)	BVAW 1501 (M15)	BVAW 1502 (M15)	BVAW (M15)
	Date:	29-Jan-92	29-Jan-92	29-Jan-92	29-Jan-92	30-Jan-92	30-Jan-92	30-Jan-92	30-Jan-92	30-Jan-92	31-Jan-92	6-Feb-92	6-Feb-92	12-Feb
Chloromethane		0.5 U	0.5 U	R	0.5 U	1 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	5.7	0.5 U	0.5 U
Bromomethane		0.5 U	0.5 U	R	0.5 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Vinyl chloride		0.5 U	0.5 U	0.94 J	0.5 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chloroethane		0.5 U	0.5 U	R	0.5 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Methylene chloride		0.5 U	0.5 U	R	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Acetone		2 U	2 UJ	R	2 U	4 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Carbon disulfide		0.5 U	0.5 U	R	0.5 U	1 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1-Dichloroethene		0.5 U	0.5 U	R	0.5 U	1.4 J	1.2 J	0.72	0.58	0.6	0.5 U	0.5 U	0.5 U	0.5 U
1,1-Dichloroethane		0.5 U	0.5 U	0.42 J	0.5 U	2.1 J	1.9 J	1.2	1	0.92	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichloroethene (cis/trans)		0.5 U	0.5 U	0.54 J	0.5 U	5.4 J	5 J	1.8	1.8	1.7	0.5 U	0.5 U	0.5 U	0.5 U
Chloroform		0.5 U	0.5 U	0.07 J	0.5 U	0.26 J	0.25 J	0.23 J	0.24 J	0.14 J	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichloroethane		0.5 U	0.5 U	R	0.5 U	1 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
2-Butanone		2 U	2 U	R	2 U	4 U	0.5 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
1,1,1-Trichloroethane		0.5 U	0.5 U	R	0.5 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Carbon tetrachloride		0.5 U	0.5 U	R	0.5 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromodichloromethane		0.5 U	0.5 U	R	0.5 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichloropropane		0.5 U	0.5 U	0.54 J	0.5 U	0.9 J	0.81 J	0.55	0.82	0.55	0.5 U	0.5 U	0.5 U	0.5 U
trans-1,3-Dichloropropene		0.5 U	0.5 U	R	0.5 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Trichloroethene		0.5 U	0.5 U	4 J	0.07 J	52 J	51 DJ	17	16	14	0.16 J	0.5 U	0.5 U	0.5 U
Dibromochloromethane		0.5 U	0.5 U	R	0.5 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2-Trichloroethane		0.5 U	0.5 U	R	0.5 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Benzene		0.05 J	0.5 U	0.13 J	0.5 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
cis-1,3-Dichloropropene		0.5 U	0.5 U	R	0.5 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromoform		0.5 UJ	0.5 U	R	0.5 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
4-Methyl-2-pentanone		2 U	2 U	R	2 U	4 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
2-Hexanone		0.75 J	2 U	R	2 U	4 U	2 U	2 U	2 U	0.5 J	2 U	2 U	2 U	2 U
1,1,2,2-Tetrachloroethane		0.5 U	0.5 U	R	0.5 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Tetrachloroethene		0.5 U	0.5 U	0.15 J	0.5 U	3.2 J	2.8 J	1.6	1.2	1.1	0.5 U	0.5 U	0.5 U	0.5 U
Toluene		0.5 U	0.5 U	R	0.5 U	1 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chlorobenzene		0.5 U	0.5 U	R	0.5 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Ethylbenzene		0.18 J	0.67	0.9 J	0.78	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.09 J	1.8	0.53
Styrene		0.24 J	0.99	1.1 J	1.4	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.07 J	3.5	0.57
Xylenes (total)		0.5 U	0.5 U	0.08 J	0.06 J	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.34 J

Analyte concentrations in micrograms per liter (parts per billion [ppb]).
Analyses were performed by various analytical subcontractors using standard U.S. Environmental Protection Agency methodology.

D Compound concentration was determined at a secondary dilution factor.
J Estimated result.
U The compound was analyzed for, but not detected at the corresponding reporting limits.
UJ All reporting limits raised due to matrix interferences.
R All reporting limits raised due to high levels of other analytes.
R Result rejected.
FR Field replicate of previous sample.

Table 9 Concentrations of Volatile Organic Compounds in Groundwater Samples Collected from January to March 1992, OU II Remedial Investigation, Vega Alta, Puerto Rico.

Analyte	Sample ID: / Date:	BVAW 1504 (M15) 11-Feb-92	BVAW 1505 (M15) 11-Feb-92	BVAW 1506 (M15) 11-Feb-92	BVAW 1507 (M15) 11-Feb-92	BVAW 1508 (M15) 12-Feb-92	BVAW 1509 (M15) 12-Feb-92	BVAW 1510 (M15) 12-Feb-92	BVAW 1510 (M15) FR 12-Feb-92	BVAW 1511 (M15) 10-Feb-92	BVAW 1601 (M16) 26-Feb-92	BVAW 1602 (M16) 26-Feb-92	BVAW 1603 (M16) 26-Feb-92	BVAW (M16) 26-Feb
Chloromethane		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromomethane		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Vinyl chloride		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chloroethane		0.5 UJ	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U
Methylene chloride		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Acetone		2 U	5.5	2 U	1.2 J	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Carbon disulfide		0.62 U	0.5 U	0.5 U	1 U	0.94 U	0.59 U	1.2 U	0.6 U	0.5 U	0.5 U	0.5 UJ	0.5 UJ	0.5 U
1,1-Dichloroethene		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1-Dichloroethane		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichloroethene (cis/trans)		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chloroform		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.11 J	0.5 U	0.05
1,2-Dichloroethane		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
2-Butanone		2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
1,1,1-Trichloroethane		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Carbon tetrachloride		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromodichloromethane		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichloropropane		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
trans-1,3-Dichloropropene		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Trichloroethene		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.08 J	0.14 J	0.13 J
Dibromochloromethane		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2-Trichloroethane		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Benzene		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
cis-1,3-Dichloropropene		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromoform		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U
4-Methyl-2-pentanone		2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
2-Hexanone		2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	3.1	2 U	2 U	2 U
1,1,2,2-Tetrachloroethane		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Tetrachloroethene		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.13 J	0.1 J
Toluene		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.12 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chlorobenzene		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Ethylbenzene		1.6	2.2	0.39 J	0.67	0.48 J	0.54	0.24 J	0.29 J	3.3	0.5 U	0.5 U	0.5 U	0.5 U
Styrene		2.3	3.3	0.64	1	0.76	0.7	0.2 J	0.25 J	2.1	0.5 U	0.5 U	0.5 U	0.5 U
Xylenes (total)		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U

Analyte concentrations in micrograms per liter (parts per billion [ppb]).
Analyses were performed by various analytical subcontractors using standard U.S. Environmental Protection Agency methodology.

D Compound concentration was determined at a secondary dilution factor.
J Estimated result.
U The compound was analyzed for, but not detected at the corresponding reporting limits.
d All reporting limits raised due to matrix interferences.
j All reporting limits raised due to high levels of other analytes.
R Result rejected.
FR Field replicate of previous sample.

Table 9 Concentrations of Volatile Organic Compounds in Groundwater Samples Collected from January to March 1992, OU II Remedial Investigation, Vega Alta, Puerto Rico.

Analyte	Sample ID: / Date:	BVAW 1604 (M16) 27-Feb-92	BVAW 1605 (M16) 27-Feb-92	BVAW 1606 (M16) 27-Feb-92	BVAW 1607 (M16) 27-Feb-92	BVAW 1608 (M16) 27-Feb-92	BVAW 1609 (M16) 27-Feb-92	BVAW 1701 (M17) 25-Feb-92	BVAW 1702 (M17) 25-Feb-92	BVAW 1703 (M17) 25-Feb-92	BVAW 1704 (M17) 25-Feb-92	BVAW 1705 (M17) 25-Feb-92	BVAW 1706 (M17) 25-Feb-92	BVAW (M17) 25-Feb
Chloromethane		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromomethane		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Vinyl chloride		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chloroethane		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Methylene chloride		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Acetone		9.8 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Carbon disulfide		0.5 U	0.5 U	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.85
1,1-Dichloroethene		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.1	1.2	2	1.7	0.1 J	0.31 J	0.13
1,1-Dichloroethane		0.12 J	0.08 J	0.1 J	0.15 J	0.15 J	0.06 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5
1,2-Dichloroethene (cis/trans)		0.09 J	0.07 J	0.09 J	0.13 J	0.12 J	0.5 U	1	0.73	0.76	0.66	0.16 J	0.2 J	0.17
Chloroform		0.14 J	0.13 J	0.14 J	0.17 J	0.19 J	0.12 J	0.08 J	0.06 J	0.06 J	0.08 J	0.5 U	0.5 U	0.5
1,2-Dichloroethane		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5
2-Butanone		2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
1,1,1-Trichloroethane		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Carbon tetrachloride		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromodichloromethane		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichloropropane		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.61	0.45 J	0.47 J	0.47 J	0.5 U	0.5 U	0.5 U
trans-1,3-Dichloropropene		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Trichloroethene		0.46 J	0.35 J	0.44 J	0.49 J	0.62	0.27 J	23	15	18	16	3	4.6	3.6 J
Dibromochloromethane		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2-Trichloroethane		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Benzene		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
cis-1,3-Dichloropropene		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromoform		0.5 UJ	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
4-Methyl-2-pentanone		2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 UJ	2 UJ	2 UJ	2 UJ	2 UJ
2-Hexanone		1.6 J	2 U	2 U	2 U	2 U	1 J	2 U	2 U	2 U	2 U	2 U	2 U	2 U
1,1,2,2-Tetrachloroethane		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Tetrachloroethene		0.28 J	0.19 J	0.29 J	0.32 J	0.36 J	0.15 J	0.18 J	0.09 J	0.14 J	0.12 J	0.5 U	0.5 U	0.5 U
Toluene		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chlorobenzene		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Ethylbenzene		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Styrene		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Xylenes (total)		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U

Analyte concentrations in micrograms per liter (parts per billion [ppb]).
Analyses were performed by various analytical subcontractors using standard U.S. Environmental Protection Agency methodology.

D Compound concentration was determined at a secondary dilution factor.
J Estimated result.
U The compound was analyzed for, but not detected at the corresponding reporting limits.
[illegible] All reporting limits raised due to matrix interferences.
[illegible] All reporting limits raised due to high levels of other analytes.
R Result rejected.
FD Field replicate of previous sample.

Table 9 Concentrations of Volatile Organic Compounds in Groundwater Samples Collected from January to March 1992, OU II Remedial Investigation, Vega Alta, Puerto Rico.

Analyte	Sample ID: / Date:	BVAW 1707 (M17) FR 25-Feb-92	BVAW 1708 (M17) 26-Feb-92	BVAW 1801 (M18) 4-Feb-92	BVAW 1802 (M18) 4-Feb-92	BVAW 1803 (M18) 4-Feb-92	BVAW 1804 (M18) 4-Feb-92	BVAW 1805 (M18) 5-Feb-92	BVAW 1806 (M18) 5-Feb-92	BVAW 1807 (M18) 5-Feb-92	BVAW 1807 (M18) FR 5-Feb-92	BVAW 1808 (M18) 5-Feb-92	BVAW 1901 (M19) 23-Mar-92	BVAW (M19) 23-Mar
Chloromethane		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromomethane		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Vinyl chloride		0.5 U	0.5 U	0.5 U	0.5 U	1.6	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chloroethane		0.5 U	0.5 U	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Methylene chloride		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Acetone		2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Carbon disulfide		0.5 UJ	0.5 UJ	0.5 U	0.5 U	0.5 U	0.55 U	0.76 U	1.3 U	0.69 U	0.5 U	0.5 U	1.5 U	2.4 U
1,1-Dichloroethene		0.07 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1-Dichloroethane		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichloroethene (cis/trans)		0.11 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chloroform		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichloroethane		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
2-Butanone		2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
1,1,1-Trichloroethane		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Carbon tetrachloride		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromodichloromethane		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichloropropane		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
trans-1,3-Dichloropropene		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Trichloroethene		2.2 J	0.96	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Dibromochloromethane		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2-Trichloroethane		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Benzene		0.5 U	0.5 U	0.5 U	0.5 U	0.18 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
cis-1,3-Dichloropropene		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromoform		0.5 U	0.5 U	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
4-Methyl-2-pentanone		2 UJ	2 UJ	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
2-Hexanone		2 U	2 U	2 U	3	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
1,1,2,2-Tetrachloroethane		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Tetrachloroethene		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Toluene		0.5 U	0.5 U	0.5 U	0.5 U	2	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chlorobenzene		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.14 J	0.5 U
Ethylbenzene		0.5 U	0.5 U	0.13 J	0.16 J	12	0.34 J	0.49 J	0.46 J	0.66 J	1.4 J	0.2 J	1.2	1.4
Styrene		0.5 U	0.5 U	0.5 U	0.5 U	0.37 J	0.42 J	1	0.5 U	0.42 J	1.2 J	0.06 J	1.2	2
Xylenes (total)		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U

Analyte concentrations in micrograms per liter (parts per billion [ppb]).
Analyses were performed by various analytical subcontractors using standard U.S. Environmental Protection Agency methodology.

D Compound concentration was determined at a secondary dilution factor.
J Estimated result.
U The compound was analyzed for, but not detected at the corresponding reporting limits.
d All reporting limits raised due to matrix interferences.
e All reporting limits raised due to high levels of other analytes.
R Result rejected.
FR Field replicate of previous sample.

Table 9 Concentrations of Volatile Organic Compounds in Groundwater Samples Collected from January to March 1992, OU II Remedial Investigation, Vega Alta, Puerto Rico.

Analyte	Sample ID: / Date:	BVAW 1903 (M19) 23-Mar-92	BVAW 1904 (M19) 23-Mar-92	BVAW 1905 (M19) 23-Mar-92	BVAW 1906 (M19) 23-Mar-92	BVAW 1906 (M19) FR 23-Mar-92	BVAW 1907 (M19) 25-Mar-92	BVAW 1908 (M19) 25-Mar-92	BVAW 1909 (M19) 25-Mar-92	BVAW 1910 (M19) 25-Mar-92	BVAW 2001 (M20) 3-Feb-92	BVAW 2003 (M20) 3-Feb-92	BVAW 2004 (M20) 3-Feb-92	BVAW ? (M20) 3-Feb-9
Chloromethane		0.5 U	0.5 U	0.5 U	0.5 U	2.5 Ud	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromomethane		0.5 U	0.5 U	0.5 U	0.5 U	2.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Vinyl chloride		0.5 U	0.5 U	0.5 U	0.5 U	2.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chloroethane		0.5 U	0.5 U	0.5 U	0.5 U	2.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Methylene chloride		0.5 U	0.5 U	0.5 U	0.5 U	2.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Acetone		2 U	2 U	2 U	2 U	10 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Carbon disulfide		0.6 U	0.5 U	0.5 U	0.5 U	2.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U	0.5 U	0.5 U
1,1-Dichloroethene		0.5 U	0.5 U	0.2 J	0.5 U	2.5 U	0.09 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1-Dichloroethane		0.5 U	0.5 U	0.12 J	0.18 J	2.5 U	0.15 J	0.05 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichloroethene (cis/trans)		0.5 U	0.5 U	0.42 J	0.27 J	2.5 U	0.4 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chloroform		0.5 U	0.5 U	0.12 J	0.5 U	2.5 U	0.11 J	0.05 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichloroethane		0.5 U	0.5 U	0.5 U	0.5 U	2.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
2-Butanone		2 U	2 U	1.4 J	2 U	10 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
1,1,1-Trichloroethane		0.5 U	0.5 U	0.5 U	0.5 U	2.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Carbon tetrachloride		0.5 U	0.5 U	0.5 U	0.5 U	2.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromodichloromethane		0.5 U	0.5 U	[illegible] U	0.5 U	2.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichloropropane		0.5 U	0.5 U	[illegible] U	0.33 J	2.5 U	0.37 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
trans-1,3-Dichloropropene		0.5 U	0.5 U	0.5 U	0.5 U	2.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Trichloroethene		0.5 U	0.5 U	5.1	4 J	2.2 J	3.4	0.83	0.11 J	0.07 J	0.5 U	0.5 U	0.5 U	0.5 U
Dibromochloromethane		0.5 U	0.5 U	0.5 U	0.5 U	2.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2-Trichloroethane		0.5 U	0.5 U	0.5 U	0.5 U	2.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Benzene		0.07 J	0.5 U	0.5 U	0.5 U	2.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
cis-1,3-Dichloropropene		0.5 U	0.5 U	0.5 U	0.5 U	2.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromoform		0.5 U	0.5 U	0.5 U	0.5 U	2.5 U	0.5 U	0.5 U	0.5 UJ	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U
4-Methyl-2-pentanone		2 U	2 U	2 U	2 U	10 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
2-Hexanone		3.2	2 U	2 U	2 U	6 J	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
1,1,2,2-Tetrachloroethane		0.5 U	0.5 U	0.5 U	0.5 U	2.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Tetrachloroethene		0.5 U	0.5 U	0.99	0.88	0.5 J	0.83	0.23 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Toluene		0.5 U	0.5 U	0.5 U	0.5 U	2.5 U	0.5 U	0.5 U	0.6 U	0.5 U	0.45 J	0.5 U	0.5 U	0.5 U
Chlorobenzene		0.5 U	0.12 J	0.5 U	0.5 U	2.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Ethylbenzene		1.5	1.1	0.5 U	0.5 U	2.5 U	0.11 J	0.06 J	0.13 J	0.5 U	1.3	0.5 U	0.5 U	0.5 U
Styrene		2.6	1.8	0.5 U	0.5 U	2.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.7	0.5 U	0.5 U	0.5 U
Xylenes (total)		0.5 U	0.5 U	0.5 U	0.5 U	2.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.2 J	0.5 U	0.5 U	0.5 U

Analyte concentrations in micrograms per liter (parts per billion [ppb]).
Analyses were performed by various analytical subcontractors using standard U.S. Environmental Protection Agency methodology.

D Compound concentration was determined at a secondary dilution factor.
J Estimated result.
U The compound was analyzed for, but not detected at the corresponding reporting limits.
d All reporting limits raised due to matrix interferences.
[illegible] All reporting limits raised due to high levels of other analytes.
R Result rejected.
FR Field replicate of previous sample.

Table 9 Concentrations of Volatile Organic Compounds in Groundwater Samples Collected from January to March 1992, OU II Remedial Investigation, Vega Alta, Puerto Rico.

Analyte	Sample ID: / Date:	BVAW 2006 (M20) 3-Feb-92	BVAW 2007 (M20) 3-Feb-92	BVAW 2007 (M20) FR 3-Feb-92	BVAW 2010 (M20) 7-Feb-92	BVAW 2201 (M22) 20-Feb-92	BVAW 2202 (M22) 20-Feb-92	BVAW 2203 (M22) 20-Feb-92	BVAW 2204 (M22) 20-Feb-92	BVAW 2205 (M22) 21-Feb-92	BVAW 2206 (M22) 21-Feb-92	BVAW 2207 (M22) 20-Feb-92	BVAW 2208 (M22) 21-Feb-92	BVAW (M22) I 21-Feb-9
Chloromethane		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 UJ	0.5 UJ	0.5 U	0.5 UJ	0.5 UJ	0.5 U	0.5 U
Bromomethane		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Vinyl chloride		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chloroethane		0.5 U	0.5 UJ	0.5 UJ	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Methylene chloride		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Acetone		2 U	2 U	2 U	2 U	2 UJ	2 U	2 U	2 U	2 UJ	2 U	2 U	2 UJ	2 UJ
Carbon disulfide		0.5 U	0.5 U	0.5 U	0.5 U	1 U	0.86 UJ	2.7 J	0.5 UJ	1.3 U	0.5 UJ	2.7 J	0.5 U	0.61 U
1,1-Dichloroethene		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.55	0.31 J	11	4	270 DJ	190 DJ
1,1-Dichloroethane		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.08 J	0.5 U	1.5	0.7	20 J	11 J
1,2-Dichloroethene (cis/trans)		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.2 J	0.51	0.35 J	3.1	3.2	28 J	18 J
Chloroform		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.08 J	1.8 J	1.1 J
1,2-Dichloroethane		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.5 J	1.2 J
2-Butanone		2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
1,1,1-Trichloroethane		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Carbon tetrachloride		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.08 J	0.5 U
Bromodichloromethane		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.08 J	0.5 U
1,2-Dichloropropane		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
trans-1,3-Dichloropropene		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Trichloroethene		0.5 U	0.5 U	0.5 U	0.5 U	0.31 J	0.29 J	1.6	36	22	370 D	390 D	2800 DJ	2100 DJ
Dibromochloromethane		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2-Trichloroethane		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.2	2.1
Benzene		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
cis-1,3-Dichloropropene		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromoform		0.5 U	0.5 UJ	0.5 UJ	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 UJ	0.5 UJ
4-Methyl-2-pentanone		2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
2-Hexanone		2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
1,1,2,2-Tetrachloroethane		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Tetrachloroethene		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.3	0.72	18	7.6	320 DJ	89 DJ
Toluene		0.2 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chlorobenzene		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Ethylbenzene		0.5 U	0.5 U	0.5 U	0.5 U	0.82	0.74	1.4	0.41 J	0.39 J	0.07 J	0.27 J	0.5 U	0.37 J
Styrene		0.5 U	0.5 U	0.5 U	0.5 U	1.6	1.2	2.2	0.29 J	0.4 J	0.5 U	0.19 J	0.5 U	0.23 J
Xylenes (total)		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.06 J	0.08 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U

Analyte concentrations in micrograms per liter (parts per billion [ppb]).
Analyses were performed by various analytical subcontractors using standard U.S. Environmental Protection Agency methodology.

D Compound concentration was determined at a secondary dilution factor.
J Estimated result.
U The compound was analyzed for, but not detected at the corresponding reporting limits.
d All reporting limits raised due to matrix interferences.
h All reporting limits raised due to high levels of other analytes.
R Result rejected.
FR Field replicate of previous sample.

Table 9 Concentrations of Volatile Organic Compounds in Groundwater Samples Collected from January to March 1992, OU II Remedial Investigation, Vega Alta, Puerto Rico.

Analyte	Sample ID: / Date:	BVAW 2209 (M22) 19-Feb-92	G & M Cash + Carry (67) 19-Jan-92	El Morro (80) 25-Mar-92	El Morro (80) FR 25-Mar-92	Forestal (74) 15-Jan-92	GE-2 (78) 31-Jan-92	GE-B3 (103) 14-Jan-92	Gramas Lindas 4 (119) 15-Jan-92	Harman 1 (104) 20-Jan-92	Harman 2 (105) 20-Jan-92	IT-3 (159) 15-Jan-92	La Calendria (new)(324) 19-Jan-92	Los Puertos (4) 19-Jan-9
Chloromethane		0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromomethane		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Vinyl chloride		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chloroethane		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Methylene chloride		0.5 U	0.14 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.14 J	0.1 J
Acetone		2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Carbon disulfide		0.5 UJ	0.5 U	0.66 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1-Dichloroethene		160 D	0.5 U	3.8	4	0.5 U	0.66	0.28 J	0.5 U	0.32 J	0.21 J	0.5 U	0.5 U	0.5 U
1,1-Dichloroethane		5.3	0.07 J	0.24 J	0.24 J	0.5 U	1.4	0.52	0.5 U	0.26 J	0.21 J	0.5 U	0.5 U	0.5 U
1,2-Dichloroethene (cis/trans)		16	0.08 J	0.51	0.56	0.17 J	1.3	1	0.17 J	0.76	1.1	0.5 U	0.5 U	0.19 J
Chloroform		0.33 J	1	0.1 J	0.09 J	0.08 J	0.43 J	0.28 J	0.11 J	0.5 U	0.5 U	0.24 J	0.5 U	0.5 U
1,2-Dichloroethane		1.6	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
2-Butanone		0.88 J	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
1,1,1-Trichloroethane		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.05 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Carbon tetrachloride		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromodichloromethane		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.05 J	0.5 U	0.5 U	0.05 J	0.5 U	0.5 U	0.5 U
1,2-Dichloropropane		0.5 U	0.06 J	0.22 J	0.26 J	0.14 J	0.5 U	0.5 U	0.14 J	0.5 U	0.5 U	0.5 U	0.5 U	0.16 J
trans-1,3-Dichloropropene		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 U	0.5 U	0.5 U
Trichloroethene		570 D	1.8	5.6	6.4	1.9	4.4	4.7	1.5	3.3	2.8	0.5 U	0.5 U	2.3
Dibromochloromethane		0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ
1,1,2-Trichloroethane		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Benzene		0.23 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
cis-1,3-Dichloropropene		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromoform		0.5 U	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 U	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ
4-Methyl-2-pentanone		2 U	2 UJ	2 U	2 U	2 UJ	2 U	2 UJ	2 UJ	2 UJ	2 UJ	2 UJ	2 UJ	2 UJ
2-Hexanone		2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
1,1,2,2-Tetrachloroethane		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Tetrachloroethene		11	0.58	3.6	3.8	0.43 J	3.5	2.2	0.65	4	18	0.5 U	0.05 J	0.37 J
Toluene		0.6 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chlorobenzene		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Ethylbenzene		1.3	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Styrene		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Xylenes (total)		0.52	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U

Analyte concentrations in micrograms per liter (parts per billion [ppb]).
Analyses were performed by various analytical subcontractors using standard U.S. Environmental Protection Agency methodology.

D Compound concentration was determined at a secondary dilution factor.
J Estimated result.
U The compound was analyzed for, but not detected at the corresponding reporting limits.
d All reporting limits raised due to matrix interferences.
l All reporting limits raised due to high levels of other analytes.
R Result rejected.
FR Field replicate of previous sample.

Table 9. Concentrations of Volatile Organic Compounds in Groundwater Samples Collected from January to March 1992, OU II Remedial Investigation, Vega Alta, Puerto Rico.

Analyte	Sample ID: / Date:	Maguayo 2 (97) 21-Jan-92	Maguayo 2 (97) FR 21-Jan-92	Maguayo 3 (161) 16-Jan-92	Maguayo 5 (11) 19-Jan-92	Maguayo 6 (112) 19-Jan-92	Maguayo 7 (113) 19-Jan-92	Manuel Gonzalez (120) 15-Jan-92	Monterrey 1 (64) 15-Jan-92	Monterrey 1 (64) FR 15-Jan-92	Monterrey 2 (88) 23-Jan-92	P-1 (109) 29-Jan-92	P-2 (110) 29-Jan-92	P-3 (111) 29-Jan-92
Chloromethane		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromomethane		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Vinyl chloride		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chloroethane		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Methylene chloride		0.5 U	0.5 U	0.5 U	0.12 J	0.15 J	0.12 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Acetone		2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	3 U	2 UJ	2.4 U
Carbon disulfide		0.61 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1-Dichloroethene		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.07 J	0.5 U	25	0.67	1.1	0.84
1,1-Dichloroethane		0.5 U	0.5 U	[illegible] J	0.5 U	0.5 U	0.5 U	0.5 U	0.06 J	0.06 J	0.72	1.1	1.7	1.6
1,2-Dichloroethene (cis/trans)		0.2 J	0.19 J	0.5 U	0.05 J	0.09 J	0.5 U	0.11 J	0.24 J	0.24 J	4.3	1.6	2.3	3.2
Chloroform		0.08 J	0.06 J	0.06 J	0.5 U	0.5 U	0.5 U	0.21 J	0.05 J	0.23 J	0.19 J	0.5 U	0.26 J	0.5 U
1,2-Dichloroethane		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
2-Butanone		2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
1,1,1-Trichloroethane		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.19 J	0.05 J	0.5 U
Carbon tetrachloride		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromodichloromethane		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichloropropane		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.15 J	0.13 J	0.12 J	0.48 J	0.24 J	0.34 J	0.77
trans-1,3-Dichloropropene		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Trichloroethene		1.2	1.2	1.6	0.33 J	0.52	0.25 J	0.99	2.6	2.6	130 D	11	18	22
Dibromochloromethane		0.5 U	0.5 U	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2-Trichloroethane		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.32 J	0.5 U	0.5 U	0.5 U
Benzene		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.2	0.23 J	1.9
cis-1,3-Dichloropropene		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromoform		0.5 U	0.5 U	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U
4-Methyl-2-pentanone		2 U	2 U	2 UJ	2 UJ	2 UJ	2 UJ	2 UJ	2 UJ	2 UJ	2 U	2 U	2 U	2 U
2-Hexanone		2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
1,1,2,2-Tetrachloroethane		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Tetrachloroethene		1.1	1.1	0.98	0.53	0.6	0.3 J	0.42 J	0.67	0.71	4.1	2.5	5	0.91
Toluene		0.11 J	0.07 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20	5.3	14
Chlorobenzene		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Ethylbenzene		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	3.2	0.56	1.5
Styrene		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Xylenes (total)		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	21	4.7	9.5

Analyte concentrations in micrograms per liter (parts per billion [ppb]).
Analyses were performed by various analytical subcontractors using standard U.S. Environmental Protection Agency methodology.

D Compound concentration was determined at a secondary dilution factor.
J Estimated result.
U The compound was analyzed for, but not detected at the corresponding reporting limits.
[illegible] All reporting limits raised due to matrix interferences.
[illegible] All reporting limits raised due to high levels of other analytes.
[illegible] Result rejected.
FR Field replicate of previous sample.

Table 9 Concentrations of Volatile Organic Compounds in Groundwater Samples Collected from January to March 1992, OU II Remedial Investigation, Vega Alta, Puerto Rico.

Analyte	Sample ID: P-5 (45)	Ponderosa (89)	Reyes (43)	USGS Sabana Hoyos (32)	Sabana Hoyos 1 (73)	Santa Ana (101)	Santa Ana (101) FR	Santa Rosa (61)	Santa Rosa II (61)	Tropi Gardens (163)	Vega Alta 1 (63)	Bottle Blank	Field Blank
Date:	30-Jan-92	31-Jan-92	19-Jan-92	22-Jan-92	21-Jan-92	19-Jan-92	19-Jan-92	15-Jan-92	19-Mar-92	15-Jan-92	11-Mar-92	29-Jan-92	15-Jan-92
Chloromethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromomethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Vinyl chloride	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chloroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Methylene chloride	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.14 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Acetone	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 UJ	1.5 J	2 U
Carbon disulfide	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.39 J	0.13 J
1,1-Dichloroethene	23 J	1.3	0.5 U	0.5 U	0.5 U	0.12 J	0.12 J	0.72	0.69	0.5 U	0.5 U	0.5 U	0.5 U
1,1-Dichloroethane	0.64 J	1.6	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichloroethene (cis/trans)	3.5 J	2.8	0.26 J	0.5 U	0.5 U	0.17 J	0.19 J	0.36 J	0.38 J	0.5 U	0.5 U	0.5 U	0.5 U
Chloroform	0.13 J	0.27 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.18 J	0.05 J	0.5 U	0.34 J	0.5 U	0.5 U
1,2-Dichloroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
2-Butanone	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
1,1,1-Trichloroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Carbon tetrachloride	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromodichloromethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.05 J	0.5 U	0.5 U
1,2-Dichloropropane	0.34 J	0.26 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.22 J	0.24 J	0.5 U	0.5 U	0.5 U	0.5 U
trans-1,3-Dichloropropene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Trichloroethene	100 DJ	19	1.8	0.2 J	0.5 U	2.1	2.1	7.8	7.7	0.5 U	0.12 J	0.5 U	0.5 U
Dibromochloromethane	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 UJ	0.5 UJ	0.5 UJ	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U
1,1,2-Trichloroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Benzene	0.33 J	0.5 U	0.5 U	0.08 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
cis-1,3-Dichloropropene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromoform	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 UJ	0.5 UJ	0.5 UJ	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U
4-Methyl-2-pentanone	2 U	2 U	2 UJ	0.84 J	2 U	2 UJ	2 UJ	2 UJ	2 U	2 UJ	2 U	2 U	2 UJ
2-Hexanone	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
1,1,2,2-Tetrachloroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Tetrachloroethene	3.6 J	7	0.76	0.08 J	0.5 U	0.28 J	0.29 J	0.06 J	0.05 J	0.5 U	0.09 J	0.5 U	0.5 U
Toluene	1.6 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.12 J
Chlorobenzene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Ethylbenzene	0.14 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Styrene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Xylenes (total)	1 J	0.12 J	0.5 U	0.08 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.08 J

Analyte concentrations in micrograms per liter (parts per billion [ppb]).
Analyses were performed by various analytical subcontractors using standard U.S. Environmental Protection Agency methodology.

D Compound concentration was determined at a secondary dilution factor.
J Estimated result.
U The compound was analyzed for, but not detected at the corresponding reporting limits.
d All reporting limits raised due to matrix interferences.
h All reporting limits raised due to high levels of other analytes.
R Result rejected.
FR Field replicate of previous sample.

Table 9 Concentrations of Volatile Organic Compounds in Groundwater Samples Collected from January to March 1992, OU II Remedial Investigation, Vega Alta, Puerto Rico.

Analyte	Sample ID: / Date:	Field Blank 22-Jan-92	Field Blank 29-Jan-92	Field Blank 30-Jan-92	Field Blank 31-Jan-92	Field Blank 3-Feb-92	Field Blank 4-Feb-92	Field Blank 5-Feb-92	Field Blank 6-Feb-92	Field Blank 7-Feb-92	Field Blank 10-Feb-92	Field Blank 11-Feb-92	Field Blank 12-Feb-92	Field Blank 13-Feb-9
Chloromethane		0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromomethane		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Vinyl chloride		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chloroethane		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U
Methylene chloride		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	5	0.15 J	0.15 J	0.19 J	0.23 J	0.24 J	0.5 U	0.5 U
Acetone		2 UJ	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Carbon disulfide		0.5 U	0.2 J	0.96	0.22 J	0.47 J	0.38 J	2.6	0.41 J	1.8	0.58	0.18 J	0.49 J	0.37 J
1,1-Dichloroethene		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1-Dichloroethane		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichloroethene (cis/trans)		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chloroform		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.08 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichloroethane		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
2-Butanone		2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
1,1,1-Trichloroethane		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.06 J	0.5 U	0.5 U	0.5 U
Carbon tetrachloride		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromodichloromethane		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichloropropane		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
trans-1,3-Dichloropropene		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Trichloroethene		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Dibromochloromethane		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2-Trichloroethane		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U
Benzene		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.06 J	0.5 U	0.5 U
cis-1,3-Dichloropropene		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromoform		0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
4-Methyl-2-pentanone		2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
2-Hexanone		2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
1,1,2,2-Tetrachloroethane		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Tetrachloroethene		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Toluene		0.07 J	0.5 U	0.5 U	0.06 J	0.5 U	0.15 J	0.5 U	0.07 J	0.5 U	0.5 U	0.13 J	0.23 J	0.5 U
Chlorobenzene		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Ethylbenzene		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Styrene		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Xylenes (total)		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.16 J	0.5 U	0.5 U	0.5 U	0.5 U	0.16 J	0.5 U	0.5 U

Analyte concentrations in micrograms per liter (parts per billion [ppb]).
Analyses were performed by various analytical subcontractors using standard U.S. Environmental Protection Agency methodology.

D Compound concentration was determined at a secondary dilution factor.
J Estimated result.
U The compound was analyzed for, but not detected at the corresponding reporting limits.
d All reporting limits raised due to matrix interferences.
j All reporting limits raised due to high levels of other analytes.
R Result rejected.
FR Field replicate of previous sample.

Table 9 Concentrations of Volatile Organic Compounds in Groundwater Samples Collected from January to March 1992, OU II Remedial Investigation, Vega Alta, Puerto Rico.

Analyte	Sample ID: Field Blank / Date: 14-Feb-92	Field Blank / 18-Feb-92	Field Blank / 19-Feb-92	Field Blank / 20-Feb-92	Field Blank / 21-Feb-92	Field Blank / 24-Feb-92	Field Blank / 25-Feb-92	Field Blank / 26-Feb-92	Field Blank / 27-Feb-92	Field Blank / 28-Feb-92	Field Blank / 2-Mar-92	Field Blank / 3-Mar-92	Field Blank / 4-Mar-9
Chloromethane	0.5 U	0.5 UJ	U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromomethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Vinyl chloride	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chloroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Methylene chloride	2.8	0.15 J	0.19 J	0.2 J	0.19 J	0.22 J	0.14 J	0.1 J	0.13 J	0.28 J	0.14 J	0.11 J	0.5 U
Acetone	2 U	2 U	2 UJ	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Carbon disulfide	0.29 J	0.64 J	0.25 J	0.38 J	0.75 J	0.09 J	0.24 J	0.48 J	0.31 J	0.17 J	0.41 J	0.24 J	0.43 J
1,1-Dichloroethene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1-Dichloroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichloroethene (cis/trans)	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chloroform	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.05 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichloroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
2-Butanone	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
1,1,1-Trichloroethane	0.09 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Carbon tetrachloride	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromodichloromethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichloropropane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
trans-1,3-Dichloropropene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Trichloroethene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Dibromochloromethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2-Trichloroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Benzene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
cis-1,3-Dichloropropene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromoform	0.5 U	0.5 U	0.5 UJ	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U
4-Methyl-2-pentanone	2 U	2 U	2 U	2 U	2 U	2 U	2 UJ	2 UJ	2 U	2 U	2 U	2 U	2 U
2-Hexanone	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
1,1,2,2-Tetrachloroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Tetrachloroethene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Toluene	0.5 U	0.5 U	0.06 J	0.5 U	0.08 J	0.1 J	0.5 U	0.5 U	0.5 U	0.05 J	0.5 U	0.06 J	0.5 U
Chlorobenzene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Ethylbenzene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Styrene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Xylenes (total)	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U

Analyte concentrations in micrograms per liter (parts per billion [ppb]).
Analyses were performed by various analytical subcontractors using standard U.S. Environmental Protection Agency methodology.

D Compound concentration was determined at a secondary dilution factor.
J Estimated result.
U The compound was analyzed for, but not detected at the corresponding reporting limits.
d All reporting limits raised due to matrix interferences.
l All reporting limits raised due to high levels of other analytes.
R Result rejected.
FR Field replicate of previous sample.

Table 9 Concentrations of Volatile Organic Compounds in Groundwater Samples Collected from January to March 1992, OU II Remedial Investigation, Vega Alta, Puerto Rico.

Analyte	Sample ID:	Field Blank	Field Blank	Field Blank	Field Blank	Field Blank	Field Blank	Field Blank	Field Blank	Field Blank	Field Blank	Field Blank	Field Blank	Field Blank
	Date:	5-Mar-92	6-Mar-92	9-Mar-92	10-Mar-92	11-Mar-92	12-Mar-92	13-Mar-92	16-Mar-92	17-Mar-92	18-Mar-92	19-Mar-92	20-Mar-92	23-Mar-92
Chloromethane		0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	R	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromomethane		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	R	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Vinyl chloride		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	R	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chloroethane		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	R	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Methylene chloride		0.5 U	0.5 U	0.28 J	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.26 J	0.26 J	0.29 J	0.5 U
Acetone		2 U	2 U	2 U	2 U	2 UJ	R	2 UJ	1.3 U	2 U	2 U	2 U	2 U	2 U
Carbon disulfide		0.17 J	0.46 J	0.75	0.33 J	0.18 J	R	0.21 J	0.5 U	0.25 J	0.25 J	0.54	0.44 J	1.1
1,1-Dichloroethene		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	R	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1-Dichloroethane		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	R	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichloroethene (cis/trans)		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	R	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chloroform		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.05 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichloroethane		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	R	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
2-Butanone		2 U	2 U	2 U	2 U	2 U	R	2 U	2 U	2 U	2 U	2 U	2 U	2 U
1,1,1-Trichloroethane		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	R	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Carbon tetrachloride		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	R	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromodichloromethane		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	R	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichloropropane		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	R	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
trans-1,3-Dichloropropene		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	R	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Trichloroethene		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	R	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Dibromochloromethane		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	R	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2-Trichloroethane		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	R	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Benzene		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	R	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
cis-1,3-Dichloropropene		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	R	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromoform		0.5 UJ	0.5 UJ	0.5 U	0.5 U	0.5 U	R	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
4-Methyl-2-pentanone		2 U	2 U	2 U	2 U	2 U	R	2 U	2 U	2 U	2 U	2 U	2 U	2 U
2-Hexanone		R	2 U	2 U	2 U	2 U	R	2 U	2 U	2 U	2 U	2 U	2 U	2 U
1,1,2,2-Tetrachloroethane		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	R	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Tetrachloroethene		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	R	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Toluene		0.07 J	0.5 U	0.5 U	0.5 U	0.09 J	0.05 J	0.5 U	0.5 U	0.06 J	0.5 U	0.5 U	0.06 J	0.16 J
Chlorobenzene		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	R	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Ethylbenzene		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	R	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Styrene		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	R	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Xylenes (total)		0.5 U	0.5 U	0.5 U	0.5 U	0.13 J	R	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.14 J

Analyte concentrations in micrograms per liter (parts per billion [ppb]).
Analyses were performed by various analytical subcontractors using standard U.S. Environmental Protection Agency methodology.

D Compound concentration was determined at a secondary dilution factor.
J Estimated result.
U The compound was analyzed for, but not detected at the corresponding reporting limits.
d All reporting limits raised due to matrix interferences.
h All reporting limits raised due to high levels of other analytes.
R Result rejected.
FR Field replicate of previous sample.

Table 9 Concentrations of Volatile Organic Compounds in Groundwater Samples Collected from January to March 1992, OU II Remedial Investigation, Vega Alta, Puerto Rico.

Analyte	Sample ID: Field Blank	Field Blank	Trip Blank	Trip Blank A	Trip Blank B	Trip Blank	Trip Blank	Trip Blank	Trip Blank A	Trip Blank	Trip Blank	Trip Blank	Trip Bla
Date:	24-Mar-92	25-Mar-92	14-Jan-92	15-Jan-92	15-Jan-92	16-Jan-92	19-Jan-92	20-Jan-92	20-Jan-92	21-Jan-92	22-Jan-92	23-Jan-92	28-Jan-9
Chloromethane	R	R	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U
Bromomethane	R	R	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Vinyl chloride	R	R	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chloroethane	R	R	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Methylene chloride	0.5 UJ	0.67 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.27 J	0.27 J	0.5 U	0.5 U	0.5 U	0.5 U
Acetone	R	1.3 J	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 UJ	2 UJ
Carbon disulfide	0.29 J	0.31 J	0.17 J	0.87	0.47 J	0.4 J	0.42 J	0.13 J	0.34 J	0.54	0.27 J	0.34 J	0.1 J
1,1-Dichloroethene	R	R	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1-Dichloroethane	R	R	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichloroethene (cis/trans)	R	R	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chloroform	0.05 J	R	0.5 U	0.5 U	0.5 U	0.5 U	0.19 J	0.13 J	0.23 J	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichloroethane	R	R	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
2-Butanone	R	R	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
1,1,1-Trichloroethane	0.05 J	R	0.5 U	0.5 U	0.5 U	0.06 J	0.07 J	0.06 J	0.06 J	0.09 J	0.09 J	0.06 J	0.05 J
Carbon tetrachloride	R	R	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromodichloromethane	R	R	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichloropropane	R	R	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
trans-1,3-Dichloropropene	R	R	0.5 U	0.5 UJ	0.5 UJ	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Trichloroethene	R	R	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Dibromochloromethane	R	R	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2-Trichloroethane	R	R	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Benzene	0.05 J	R	0.5 U	0.5 U	0.5 U	0.05 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
cis-1,3-Dichloropropene	R	R	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromoform	R	R	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 UJ
4-Methyl-2-pentanone	R	R	2 UJ	2 UJ	2 UJ	2 UJ	2 U	2 UJ	2 UJ	2 U	2 U	2 U	2 U
2-Hexanone	R	R	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
1,1,2,2-Tetrachloroethane	R	R	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Tetrachloroethene	R	R	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Toluene	0.17 J	0.21 J	0.09 J	0.14 J	0.14 J	0.14 J	0.38 J	0.11 J	0.1 J	0.14 J	0.14 J	0.13 J	0.5 U
Chlorobenzene	R	R	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Ethylbenzene	R	R	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Styrene	R	R	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Xylenes (total)	0.1 J	0.18 J	0.5 U	0.5 U	0.5 U	0.06 J	0.5 U	0.5 U	0.5 U	0.1 J	0.5 U	0.05 J	0.5 U

Analyte concentrations in micrograms per liter (parts per billion [ppb]).
Analyses were performed by various analytical subcontractors using standard U.S. Environmental Protection Agency methodology.

D Compound concentration was determined at a secondary dilution factor.
J Estimated result.
U The compound was analyzed for, but not detected at the corresponding reporting limits.
d All reporting limits raised due to matrix interferences.
h All reporting limits raised due to high levels of other analytes.
R Result rejected.
FR Field replicate of previous sample.

Table 9 Concentrations of Volatile Organic Compounds in Groundwater Samples Collected from January to March 1992, OU II Remedial Investigation, Vega Alta, Puerto Rico.

Analyte	Sample ID: / Date:	Trip Blank A 29-Jan-92	Trip Blank B 29-Jan-92	Trip Blank A 30-Jan-92	Trip Blank B 30-Jan-92	Trip Blank A 31-Jan-92	Trip Blank B 31-Jan-92	Trip Blank 3-Feb-92	Trip Blank 4-Feb-92	Trip Blank 5-Feb-92	Trip Blank 6-Feb-92	Trip Blank 7-Feb-92	Trip Blank 10-Feb-92	Trip Blank 11-Feb-92
Chloromethane		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromomethane		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Vinyl chloride		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chloroethane		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U
Methylene chloride		0.5 U	0.5 U	0.27 J	0.29 J	0.5 U	0.5 U	1 U	0.95	0.29 J	0.24 J	0.2 J	0.28 J	0.22 J
Acetone		2 UJ	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Carbon disulfide		0.38 J	0.4 J	0.16 J	0.46 J	0.24 J	0.08 J	0.28 J	0.23 J	1.5	0.46 J	0.64	0.58	0.25 J
1,1-Dichloroethene		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1-Dichloroethane		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichloroethene (cis/trans)		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chloroform		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichloroethane		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
2-Butanone		2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
1,1,1-Trichloroethane		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.09 J	0.5 U	0.5 U	0.5 U	0.08 J	0.18 J
Carbon tetrachloride		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromodichloromethane		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichloropropane		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
trans-1,3-Dichloropropene		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Trichloroethene		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Dibromochloromethane		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2-Trichloroethane		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Benzene		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.08 J	0.08 J
cis-1,3-Dichloropropene		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromoform		0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
4-Methyl-2-pentanone		2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
2-Hexanone		2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
1,1,2,2-Tetrachloroethane		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Tetrachloroethene		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Toluene		0.1 J	0.5 U	0.07 J	0.06 J	0.06 J	0.06 J	0.5 U	0.18 J	0.09 J	0.09 J	0.09 J	0.11 J	0.07 J
Chlorobenzene		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Ethylbenzene		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Styrene		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Xylenes (total)		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.16 J	0.2 J	0.19 J	0.21 J	0.5 U

Analyte concentrations in micrograms per liter (parts per billion [ppb]).
Analyses were performed by various analytical subcontractors using standard U.S. Environmental Protection Agency methodology.

D Compound concentration was determined at a secondary dilution factor.
J Estimated result.
U The compound was analyzed for, but not detected at the corresponding reporting limits.
d All reporting limits raised due to matrix interferences.
h All reporting limits raised due to high levels of other analytes.
R Result rejected.
FR Field replicate of previous sample.

Table 9 Concentrations of Volatile Organic Compounds in Groundwater Samples Collected from January to March 1992, OU II Remedial Investigation, Vega Alta, Puerto Rico.

Analyte	Sample ID: / Date:	Trip Blank 12-Feb-92	Trip Blank 13-Feb-92	Trip Blank 14-Feb-92	Trip Blank 18-Feb-92	Trip Blank 19-Feb-92	Trip Blank 20-Feb-92	Trip Blank 21-Feb-92	Trip Blank 24-Feb-92	Trip Blank B 25-Feb-92	Trip Blank 26-Feb-92	Trip Blank 27-Feb-92	Trip Blank 28-Feb-92	Trip Bla 2-Mar-9
Chloromethane		0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U
Bromomethane		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Vinyl chloride		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chloroethane		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Methylene chloride		0.31 J	0.5 U	0.83 U	1.9	0.25 J	0.2 J	0.37 J	0.3 J	0.14 J	2.1 U	1.7	0.18 J	0.21 J
Acetone		2 U	2 U	2 U	2 U	2 U	2 U	2 U	1.6 J	2 U	4.7	4.2	2 U	2 U
Carbon disulfide		0.33 J	0.11 J	0.11 J	0.55 J	0.48 J	0.18 J	0.5 UJ	0.5 UJ	0.15 J	0.5 UJ	0.12 J	0.16 J	0.45 J
1,1-Dichloroethene		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1-Dichloroethane		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichloroethene (cis/trans)		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chloroform		0.5 U	0.5 U	0.5 U	0.05 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichloroethane		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
2-Butanone		2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
1,1,1-Trichloroethane		0.21 J	0.5 U	0.4 J	0.13 J	0.5 U	0.5 U	0.18 J	0.21 J	0.5 U	0.5 U	0.09 J	0.07 J	0.13 J
Carbon tetrachloride		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromodichloromethane		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichloropropane		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
trans-1,3-Dichloropropene		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Trichloroethene		0.5 U	0.5 U	0.06 J	0.5 U	0.5 U	0.5 U	0.06 J	0.05 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Dibromochloromethane		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2-Trichloroethane		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Benzene		0.09 J	0.08 J	0.2 J	0.5 U	0.5 U	0.5 U	0.1 J	0.12 J	0.5 U	0.09 J	0.1 J	0.5 U	0.07 J
cis-1,3-Dichloropropene		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromoform		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
4-Methyl-2-pentanone		2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 UJ	2 U	2 U	2 U	2 U	2 U
2-Hexanone		2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
1,1,2,2-Tetrachloroethene		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Tetrachloroethene		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Toluene		0.08 J	0.14 J	0.15 J	0.5 U	0.07 J	0.05 J	0.11 J	0.11 J	0.09 J	0.34 J	0.36 J	0.09 J	0.1 J
Chlorobenzene		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Ethylbenzene		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Styrene		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Xylenes (total)		0.5 U	0.17 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.09 J	0.14 J	0.5 U	0.5 U

Analyte concentrations in micrograms per liter (parts per billion [ppb]).
Analyses were performed by various analytical subcontractors using standard U.S. Environmental Protection Agency methodology.

D Compound concentration was determined at a secondary dilution factor.
J Estimated result.
U The compound was analyzed for, but not detected at the corresponding reporting limits.
d All reporting limits raised due to matrix interferences.
h All reporting limits raised due to high levels of other analytes.
R Result rejected.
FR Field replicate of previous sample.

Table 9. Concentrations of Volatile Organic Compounds in Groundwater Samples Collected from January to March 1992, OU II Remedial Investigation, Vega Alta, Puerto Rico.

Analyte	Sample ID: Trip Blank	Trip Blank	Trip Blank	Trip Blank	Trip Blank	Trip Blank	Trip Blank	Trip Blank	Trip Blank	Trip Blank	Trip Blank	Trip Blank	Trip Blan
	Date: 3-Mar-92	4-Mar-92	5-Mar-92	6-Mar-92	9-Mar-92	10-Mar-92	11-Mar-92	12-Mar-92	13-Mar-92	16-Mar-92	17-Mar-92	18-Mar-92	19-Mar-9
Chloromethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromomethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Vinyl chloride	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chloroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Methylene chloride	0.2 J	0.5 U	0.5 U	0.5 U	0.35 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.37 J	0.28 J
Acetone	2 U	2 U	2 U	2 U	2 U	2 U	2 UJ	2 U	2 UJ	2 U	1.8 U	2 U	2 U
Carbon disulfide	0.18 J	0.2 J	0.36 J	0.76 J	0.08 J	0.5 UJ	0.5 UJ	0.5 UJ	0.16 J	0.17 J	0.15 J	0.22 J	0.29 J
1,1-Dichloroethene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1-Dichloroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichloroethene (cis/trans)	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chloroform	0.5 U	0.5 U	0.05 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichloroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
2-Butanone	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
1,1,1-Trichloroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.05 J	0.5 U	0.5 U	0.08 J	0.1 J	0.14 J	0.46 J	0.5 U
Carbon tetrachloride	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromodichloromethane	0.5 U	0.5 U	[illegible]	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichloropropane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
trans-1,3-Dichloropropene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Trichloroethene	0.5 U	0.5 U	0.5 U	0.11 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.09 J	0.5 U
Dibromochloromethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2-Trichloroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Benzene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.07 J	0.09 J	0.27 J	0.5 U
cis-1,3-Dichloropropene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromoform	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U
4-Methyl-2-pentanone	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
2-Hexanone	2 U	2 U	2 U	R	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
1,1,2,2-Tetrachloroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Tetrachloroethene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Toluene	0.1 J	0.12 J	0.16 J	0.08 J	0.09 J	0.5 U	0.5 U	0.5 U	0.11 J	0.09 J	0.07 J	0.11 J	0.05 J
Chlorobenzene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Ethylbenzene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Styrene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Xylenes (total)	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U

Analyte concentrations in micrograms per liter (parts per billion [ppb]).
Analyses were performed by various analytical subcontractors using standard U.S. Environmental Protection Agency methodology.

D Compound concentration was determined at a secondary dilution factor.
J Estimated result.
U The compound was analyzed for, but not detected at the corresponding reporting limits.
[illegible] All reporting limits raised due to matrix interferences.
[illegible] All reporting limits raised due to high levels of other analytes.
R Result rejected.
FR Field replicate of previous sample.

Table 9 Concentrations of Volatile Organic Compounds in Groundwater Samples Collected from January to March 1992, OU II Remedial Investigation, Vega Alta, Puerto Rico.

Analyte	Sample ID: Trip Blank Date: 20-Mar-92	Trip Blank 23-Mar-92
Chloromethane	0.5 U	0.5 U
Bromomethane	0.5 U	0.5 U
Vinyl chloride	0.5 U	0.5 U
Chloroethane	0.5 U	0.5 U
Methylene chloride	0.35 J	0.5 U
Acetone	2 U	2 U
Carbon disulfide	0.33 J	1.4
1,1-Dichloroethene	0.5 U	0.5 U
1,1-Dichloroethane	0.5 U	0.5 U
1,2-Dichloroethene (cis/trans)	0.5 U	0.5 U
Chloroform	0.5 U	0.5 U
1,2-Dichloroethane	0.5 U	0.5 U
2-Butanone	2 U	2 U
1,1,1-Trichloroethane	0.23 J	0.05 J
Carbon tetrachloride	0.5 U	0.5 U
Bromodichloromethane	0.5 U	0.5 U
1,2-Dichloropropane	0.5 U	0.5 U
trans-1,3-Dichloropropene	0.5 U	0.5 U
Trichloroethene	0.08 J	0.5 U
Dibromochloromethane	0.5 U	0.5 U
1,1,2-Trichloroethane	0.5 U	0.5 U
Benzene	0.11 J	0.5 U
cis-1,3-Dichloropropene	0.5 U	0.5 U
Bromoform	0.5 U	0.5 U
4-Methyl-2-pentanone	2 U	2 U
2-Hexanone	2 U	2 U
1,1,2,2-Tetrachloroethane	0.5 U	0.5 U
Tetrachloroethene	0.5 U	0.5 U
Toluene	0.17 J	0.15 J
Chlorobenzene	0.5 U	0.5 U
Ethylbenzene	0.5 U	0.5 U
Styrene	0.5 U	0.5 U
Xylenes (total)	0.5 U	0.5 U

Analyte concentrations in micrograms per liter (parts per billion [ppb]).
Analyses were performed by various analytical subcontractors using standard U.S. Environmental Protection Agency methodology.

D Compound concentration was determined at a secondary dilution factor.
J Estimated result.
U The compound was analyzed for, but not detected at the corresponding reporting limits.
d All reporting limits raised due to matrix interferences.
j All reporting limits raised due to high levels of other analytes.
R Result rejected.
FR Field replicate of previous sample.

Table 10 Summary of Volatile Organic Compounds Statistical Information for the January to March 1992 Groundwater Sampling Event, OU II Remedial Investigation, Vega Alta, Puerto Rico.

Compound Name	Total Number of Detects (1)	Number of Discrete Detects (2)	Discrete Detection Frequency (%)	Maximum Concentration (ug/L)	Number of Detects Qualified J	Number of Observations Qualified R
1,1,1-Trichloroethane	5	5	2.27	0.19	5	5
1,1,2-Trichloroethane	8	7	3.18	2.2	6	5
1,1-Dichloroethane	121	109	49.55	20	61	0
1,1-Dichloroethene	117	104	47.27	270	39	1
1,2-Dichloroethane	4	3	1.36	1.6	3	5
1,2-Dichloroethene (cis/trans)	151	136	61.82	28	62	0
1,2-Dichloropropane	100	91	41.36	5.2	70	0
2-Butanone	3	3	1.36	1.4	3	5
2-Hexanone	36	34	15.45	7.3	23	13
4-Methyl-2-pentanone	1	1	0.45	0.84	1	5
Acetone	4	4	1.82	5.5	2	5
Benzene	19	18	8.18	2.2	17	3
Bromodichloromethane	10	9	4.09	0.26	10	4
Carbon disulfide	20	18	8.18	7.6	15	1
Carbon tetrachloride	1	1	0.45	0.08	1	5
Chlorobenzene	6	6	2.73	12	6	4
Chloroform	112	100	45.45	1.9	109	0
Chloromethane	6	6	2.73	5.7	2	5
Dibromochloromethane	1	1	0.45	0.75	0	5
Ethylbenzene	85	76	34.55	12	47	4
Methylene chloride	12	12	5.45	0.29	12	1
Styrene	59	53	24.09	14	22	4
Tetrachloroethene	157	141	64.09	120	62	0
Toluene	28	24	10.91	20	22	3
Trichloroethene	183	165	75.00	2800	37	0
Vinyl chloride	3	3	1.36	2.7	1	4
Xylenes (total)	41	37	16.82	21	31	3

Computations are based on 220 discrete samples and do not include field replicates.
(1) Excludes quality assurance/quality control (QA/QC) blanks.
(2) Excludes quantifiable field replicates.
ug/L Micrograms per liter (parts per billion [ppb]).
J Result is detected below the reporting limit and/or is an estimated concentration.
R Result rejected.

le 11 Volatile Organic Compounds Concentrations in Groundwater Samples Collected from Monitoring Wells at the PRIDCO Industrial Park in August and September 1993, OU II Remedial Investigation, Vega Alta, Puerto Rico.

	Sample ID:	BVAW-22-01	BVAW-22-02	BVAW-22-03	BVAW-22-04	BVAW-22-05	BVAW-22-06	BVAW-22-07	BVAW-22-08	BVAW-22-09	GM-01	GM-01 FR	GM-02	GMW-01-01
alyte	Date:	1-Sep-93	1-Sep-93	1-Sep-93	1-Sep-93	1-Sep-93	1-Sep-93	1-Sep-93	1-Sep-93	1-Sep-93	3-Sep-93	3-Sep-93	3-Sep-93	2-Sep-93
romethane		0.50 UJ	0.50 UJ	0.50 UJ	0.50 UJ	0.50 UJ	5.0 UJ	8.1 J	50 UJ	12 UJ	62 U	62 U	100 U	0.62 J
omethane		0.50 UJ	0.50 UJ	0.50 UJ	0.50 UJ	0.50 U	5.0 UJ	10 U	50 UJ	12 U	62 U	62 U	100 U	0.5 U
l chloride		0.50 UJ	0.50 UJ	0.50 UJ	0.50 UJ	0.50 UJ	5.0 UJ	10 UJ	50 UJ	12 UJ	62 UJ	62 UJ	100 UJ	0.5 UJ
roethane		0.50 UJ	0.50 UJ	0.50 UJ	0.50 UJ	0.50 UJ	5.0 UJ	10 UJ	50 UJ	12 UJ	62 U	62 U	100 U	0.5 U
ylene chloride		1.4 U	37 U	4.6 U	2.8 U	3.3 U	5 U	10 U	50 U	12 U	62 UJ	62 UJ	100 UJ	12
one		2.0 U	15	2.0 U	2.0 U	2.0 UJ	20 U	40 UJ	200 U	50 UJ	250 U	250 U	400 U	2 UJ
on disulfide		0.50 UJ	0.50 UJ	0.50 UJ	0.50 UJ	0.50 UJ	5 UJ	10 UJ	50 UJ	12 UJ	62 UJ	62 UJ	100 UJ	0.77 UJ
Dichloroethene		0.50 U	0.50 U	0.50 U	0.92	0.77	19	17	160	290	230	230	250	0.5 U
Dichloroethane		0.50 U	0.50 U	0.50 U	0.13 J	0.50 U	2.6 J	2.2 J	13 J	9.6 J	19 J	16 J	51 J	0.5 U
Dichloroethene (cis/trans)		0.50 U	0.50 U	0.50 U	0.67	0.57	4.4 J	5.7 J	19 J	28	50 J	49 J	100	0.5 U
roform		0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	5.0 U	10 U	50 U	12 U	62 U	62 U	100 U	0.5 U
Dichloroethane		0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	5.0 U	10 U	50 U	12 U	62 U	62 U	100 U	0.5 U
tanone		2.0 U	2.0 U	2.0 U	2.0 U	2.0 UJ	20 U	40 UJ	200 U	50 UJ	250 U	250 U	400 U	2 U
-Trichloroethane		0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	5.0 U	10 U	50 U	12 U	62 U	62 U	100 U	0.5 U
on tetrachloride		0.50 U	0.50 U	0.50 U	0.50 U	0.50 UJ	5.0 U	10 UJ	50 U	12 UJ	62 U	62 U	100 U	0.5 UJ
mdichloromethane		0.50 UJ	0.50 UJ	0.50 UJ	0.50 UJ	0.50 UJ	5.0 UJ	10 UJ	50 UJ	12 UJ	62 UJ	62 UJ	100 UJ	0.5 UJ
Dichloropropane		0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	5.0 U	10 U	50 U	12 U	62 U	62 U	100 U	0.5 U
,3-Dichloropropene		0.50 UJ	0.50 UJ	0.50 UJ	0.50 UJ	0.50 UJ	5.0 UJ	10 UJ	50 UJ	12 UJ	62 UJ	62 UJ	100 UJ	0.5 UJ
loroethene		0.2 J	0.48 J	0.24 J	48 D	48 D	600 D	530	1700	730	3100	3300	4600	0.32 J
nochloromethane		0.50 UJ	0.50 UJ	0.50 UJ	0.50 UJ	0.50 UJ	5.0 UJ	10 UJ	50 UJ	12 UJ	62 UJ	62 UJ	100 UJ	0.5 UJ
-Trichloroethane		0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	5.0 U	10 U	50 U	12 U	62 U	62 U	100 U	0.5 U
ene		0.076 J	2.7 J	0.66 J	0.11 J	0.16 J	5.0 UJ	10 UJ	50 UJ	12 UJ	62 U	62 U	100 U	0.44 J
1,3-Dichloropropene		0.50 UJ	0.50 UJ	0.50 UJ	0.50 UJ	0.50 UJ	5.0 UJ	10 UJ	50 UJ	12 UJ	62 U	62 U	100 U	0.5 UJ
oform		0.50 UJ	0.50 UJ	0.50 UJ	0.50 UJ	0.50 UJ	5.0 UJ	10 UJ	50 UJ	12 UJ	62 UJ	62 UJ	100 UJ	0.5 UJ
thyl-2-pentanone		2.0 U	2.0 U	2.0 U	2.0 U	2.0 UJ	20 U	40 UJ	200 U	50 UJ	250 U	250 U	400 U	2 UJ
anone		2.0 U	2.0 U	2.0 U	2.0 U	2.0 UJ	20 U	40 UJ	200 U	50 UJ	250 U	250 U	400 U	2 UJ
,2-Tetrachloroethane		0.50 UJ	0.50 UJ	0.50 UJ	0.50 UJ	0.50 UJ	5.0 UJ	10 UJ	50 UJ	12 UJ	62 U	62 U	100 U	0.5 UJ
chloroethene		0.50 U	0.50 U	0.50 U	1.7	1.5	28	23	68	28	98	110	200	0.5 U
ene		0.50 UJ	0.11 J	0.071 J	0.50 UJ	0.50 UJ	5.0 UJ	10 UJ	5.3 J	12 UJ	62 U	62 U	100 U	0.5 U
ylbenzene		0.50 UJ	0.50 UJ	0.50 UJ	0.50 UJ	0.50 UJ	5.0 UJ	10 UJ	50 UJ	12 UJ	62 U	62 U	100 U	0.5 U
benzene		0.42 J	0.7 J	0.27 J	0.50 UJ	0.50 UJ	5.0 UJ	10 UJ	50 UJ	12 UJ	62 U	62 U	100 U	0.5 U
ne		0.47 J	1.5 J	0.4 J	0.50 UJ	0.50 UJ	5.0 UJ	10 UJ	50 UJ	12 UJ	62 U	62 U	100 U	0.21 J
es (total)		0.50 UJ	0.50 UJ	0.50 UJ	0.50 UJ	0.50 UJ	5.0 UJ	10 UJ	50 UJ	12 UJ	62 U	62 U	100 U	0.5 U

te concentrations in micrograms per liter (parts per billion [ppb]).
ses were performed by various analytical subcontractors, using standard U.S. Environmental Protection Agency (USEPA) methodology.

The compound was also detected in the associated method blank.
Compound concentration was determined at a secondary dilution factor.
Estimated result.
The compound was analyzed for, but not detected at the corresponding reporting limits.
All reporting limits raised due to matrix interferences.
Not applicable.

r 11 Volatile Organic Compounds Concentrations in Groundwater Samples Collected from Monitoring Wells at the PRIDCO Industrial Park in August and September 1993, OU II Remedial Investigation, Vega Alta, Puerto Rico.

	Sample ID:	GMW-01-02	GMW-01-03	GMW-01-04	GMW-01-05	GMW-01-06	GMW-01-07	GMW-01-08	GMW-01-08 FR	GMW-01-09	GMW-01-10	GMW-01-11	GMW-02-01	GMW-02-02
ilyte	Date:	2-Sep-93	2-Sep-93	2-Sep-93	2-Sep-93	3-Sep-93	3-Sep-93	3-Sep-93	3-Sep-93	3-Sep-93	3-Sep-93	3-Sep-93	31-Aug-93	31-Aug-93
romethane		0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	25 UJ	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.50 UJ	0.50 UJ
omethane		0.5 U	0.5 U	0.5 U	0.5 U	25 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.50 U	0.50 U
l chloride		0.5 UJ	0.5 UJ	0.5 UJ	0.22 J	25 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 U	0.50 UJ	0.50 UJ
roethane		0.5 U	0.5 U	0.5 U	0.5 U	25 UJ	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.50 UJ	0.50 UJ
ylene chloride		1.1 U	3.2 U	3.3 U	3.6 UJ	25 U	0.5 U	0.93 UJ	2.2 UJ	1.1 UJ	0.88 UJ	1.8 B	66 D	5.5
ne		2 UJ	2 UJ	2 UJ	2 UJ	100 UJ	2 UJ	2 U	2 U	2 U	2 U	2 U	18 J	2.0 UJ
on disulfide		0.5 UJ	0.5 U	0.5 U	0.5 J	25 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	2.4 UJ	0.25 J	0.50 UJ	0.50 U
Dichloroethene		0.17 J	0.5 U	0.53	1.6	15 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.50 U	0.50 U
Dichloroethane		0.5 U	0.5 U	0.5 U	0.5 U	25 U	0.5 U	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 U	0.50 U	0.50 U
Dichloroethene (cis/trans)		0.52	1.1	1.1	10	26	0.5 U	0.5 U	0.5 U	0.24 J	0.5 U	0.5 U	0.50 UJ	0.50 U
oform		0.5 U	0.5 U	0.5 U	0.5 U	25 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.1 J	0.50 U	0.50 U
ichloroethane		0.5 U	0.53	0.5 U	0.5 U	25 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.50 U	0.50 U
none		2 UJ	2 UJ	2 UJ	2 UJ	100 UJ	2 UJ	2 U	2 U	2 U	2 U	2 U	2.0 UJ	2.0 UJ
-Trichloroethane		0.5 U	0.5 U	0.5 U	0.5 U	25 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.50 U	0.50 U
n tetrachloride		0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	25 UJ	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.50 U	0.50 U
dichloromethane		0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	25 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 U	0.50 UJ	0.50 UJ
ichloropropane		0.5 U	0.5 U	0.5 U	0.5 U	25 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	84 D	0.50 U	0.50 U
3-Dichloropropene		0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	25 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 U	0.50 UJ	0.50 UJ
oroethene		14	19	49 D	130 D	1000	3.8	4.1	4.2	3.6	2.9	1.2	1.7	0.62
mochloromethane		0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	25 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 U	0.50 UJ	0.50 UJ
Trichloroethane		0.5 U	0.5 U	0.5 U	0.5 U	25 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.50 U	0.50 U
ne		2.2	0.58	0.095 J	0.5 U	25 U	0.5 U	0.17 J	0.36 J	0.065 J	0.5 U	0.14 J	1.2 J	0.53 J
1,3-Dichloropropene		0.5 U	0.5 U	0.5 U	0.5 U	25 UJ	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.50 U	0.50 U
form		0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	25 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 U	0.50 UJ	0.50 UJ
yl-2-pentanone		2 UJ	2 UJ	2 UJ	2 UJ	100 UJ	2 UJ	2 U	2 U	2 U	2 U	2 U	2.0 U	2.0 U
none		2 UJ	2 UJ	2 UJ	2 UJ	100 UJ	2 UJ	2 U	2 U	2 U	2 U	2 U	2.0 UJ	2.0 UJ
2-Tetrachloroethane		0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	25 UJ	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.50 UJ	0.50 U
loroethene		0.088 J	0.2 J	0.94	0.58	12 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.15 J	0.50 U	0.50 U
e		0.5 U	0.5 U	0.5 U	0.5 U	25 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.50 UJ	0.50 UJ
benzene		0.5 U	0.5 U	0.5 U	0.5 U	25 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.064 J	0.50 UJ	0.50 UJ
enzene		0.5 U	0.5 U	0.5 U	0.5 U	25 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.50 UJ	0.50 U
e		0.5 U	0.088 J	0.5 U	0.5 U	25 U	0.5 U	0.5 U	0.5 U	0.092 J	0.3 J	0.26 J	0.50 UJ	0.14 J
s (total)		0.5 U	0.5 U	0.5 U	0.5 U	25 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.50 UJ	0.50 UJ

e concentrations in micrograms per liter (parts per billion (ppb)).
es were performed by various analytical subcontractors, using standard U.S. Environmental Protection Agency (USEPA) methodology.

The compound was also detected in the associated method blank.
Compound concentration was determined at a secondary dilution factor.
Estimated result.
The compound was analyzed for, but not detected at the corresponding reporting limits.
All reporting limits raised due to matrix interferences.
Not applicable.

e 11 Volatile Organic Compounds Concentrations in Groundwater Samples Collected from Monitoring Wells at the PRIDCO Industrial Park in August and September 1993, OU II Remedial Investigation, Vega Alta, Puerto Rico.

lyte	Sample ID: / Date:	GMW-02-03 31-Aug-93	GMW-02-04 31-Aug-93	GMW-02-05 31-Aug-93	GMW-02-06 31-Aug-93	GMW-02-07 1-Sep-93	GMW-02-08 1-Sep-93	GMW-02-09 1-Sep-93	GMW-03-01 30-Aug-93	GMW-03-02 30-Aug-93	GMW-03-03 30-Aug-93	GMW-03-04 30-Aug-93	GMW-03-05 30-Aug-93	GMW-03-06 30-Aug-93
romethane		6.9 UJ	5.0 UJ	5.0 UJ	12 UJ	25 U	25 U	25 U	0.5 U	0.5 UJ	2 UJ	0.5 U	1.2 UJ	0.5 UJ
nomethane		5.0 U	5.0 U	5.0 U	12 U	25 U	25 U	25 U	0.5 UJ	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U
l chloride		5.0 UJ	5.0 U	5.0 U	12 U	25 U	25 U	25 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
roethane		5.0 UJ	5.0 UJ	5.0 UJ	12 UJ	25 UJ	25 UJ	25 UJ	0.5 U	0.5 UJ	2 UJ	0.5 UJ	1.2 UJ	0.5 UJ
ylene chloride		140	12	24 J	95 J	86 U	99 U	57 U	0.5 UJ	87 D	88	0.5 UJ	70 U	39 U
one		20 UJ	20 UJ	20 UJ	50 UJ	100 UJ	100 UJ	100 UJ	31	20 UJ	24 UJ	280 d	27 UJ	16 UJ
on disulfide		5.0 U	5.0 UJ	5.0 UJ	12 UJ	25 UJ	25 UJ	25 UJ	10 UJ	0.5 UJ	2 UJ	130 UJ	1.2 UJ	0.5 UJ
Dichloroethene		3.8 J	14	5.0 U	14	220	140	230	4.6 UJ	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U
Dichloroethane		5.0 U	2.3 J	5.0 U	12 U	28	20 J	63	0.5 U	0.5 U	0.5 U	0.31 J	0.5 U	0.5 U
Dichloroethene (cis/trans)		1.2 J	3.4 J	12	9.1 J	29	12 J	76	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
roform		5.0 U	5.0 U	5.0 U	12 U	25 U	25 U	25 U	0.5 U	0.5 U	0.5 U	0.5 U	6 U	4.8 U
Dichloroethane		5.0 U	5.0 UJ	5.0 UJ	12 UJ	25 UJ	25 UJ	25 UJ	0.5 U	0.5 U	0.5 U	1.3	0.5 U	0.5 U
tanone		20 UJ	20 UJ	20 UJ	50 UJ	100 UJ	100 UJ	100 UJ	0.5 U	0.5 UJ	8 UJ	0.5 U	5 UJ	2 UJ
-Trichloroethane		5.0 U	5.0 U	5.0 U	12 U	25 U	25 U	25 U	0.5 U	0.5 U	0.5 U	2 UJ	0.5 U	0.5 U
on tetrachloride		5.0 U	5.0 U	5.0 U	12 U	25 U	25 U	25 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
odichloromethane		5.0 U	5.0 U	5.0 U	12 U	25 U	25 U	25 U	0.5 UJ	0.5 UJ	2 UJ	0.5 U	1.2 UJ	0.5 UJ
Dichloropropane		5.0 U	5.0 U	5.0 U	12 U	25 U	25 U	25 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
,3-Dichloropropene		5.0 UJ	5.0 UJ	5.0 UJ	12 UJ	25 UJ	25 UJ	25 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
loroethene		170	430 D	750 D	920	3900 D	2000 D	2700 D	0.43 J	0.2 UJ	0.5 U	0.5 U	1.9 U	2 U
omochloromethane		5.0 UJ	5.0 UJ	5.0 U	12 U	25 UJ	25 UJ	25 UJ	0.5 UJ	0.5 UJ	2 UJ	2.1	1.2 UJ	NA
-Trichloroethane		5.0 U	5.0 U	5.0 U	12 U	25 U	25 U	25 U	0.5	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U
ene		5.0 UJ	5.0 UJ	5.0 UJ	3.7 UJ	25 U	25 U	25 U	0.5 UJ	2.1	7	0.5 U	0.67 J	1.1 U
-1,3-Dichloropropene		5.0 U	5.0 U	5.0 UJ	12 UJ	25 UJ	25 UJ	25 UJ	0.5 UJ	0.5 UJ	2 UJ	3.6	1.2 UJ	0.5 UJ
oform		5.0 UJ	5.0 UJ	5.0 UJ	12 UJ	25 UJ	25 UJ	25 UJ	0.5 U	0.5 U	2 UJ	0.5 U	1.2 UJ	0.5 UJ
thyl-2-pentanone		20 U	20 UJ	20 UJ	50 UJ	100 U	100 U	100 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U
enzene		20 UJ	20 U	20 U	50 U	100 UJ	100 UJ	100 UJ	0.5 U	2 UJ	8 UJ	0.5 U	5 UJ	2 UJ
,2-Tetrachloroethane		5.0 U	5.0 U	5.0 U	12 U	25 U	25 U	25 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
chloroethene		6.4	26	3.8 J	16	240	120	86	0.5 U	0.5 U	0.5 U	0.5 U	0.26 J	0.47 J
ene		5.0 UJ	5.0 UJ	5.0 UJ	12 UJ	25 U	25 U	25 U	0.5 U	0.5 U	0.2 UJ	0.3 J	0.5 U	0.5 U
robenzene		5.0 UJ	5.0 UJ	5.0 UJ	12 UJ	25 U	25 U	25 U	0.5 U	0.5 U	0.5 U	0.06 J	0.5 U	0.5 U
benzene		5.0 UJ	5.0 UJ	5.0 UJ	12 UJ	25 U	25 U	25 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
ne		5.0 UJ	5.0 UJ	5.0 UJ	12 UJ	25 U	25 U	4.5 J	0.5 U	0.073	0.5 U	0.5 U	0.5 U	0.5 U
nes (total)		5.0 UJ	5.0 UJ	5.0 U	12 U	25 U	25 U	25 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U

yte concentrations in micrograms per liter (parts per billion [ppb]).
yses were performed by various analytical subcontractors, using standard U.S. Environmental Protection Agency (USEPA) methodology.

The compound was also detected in the associated method blank.
Compound concentration was determined at a secondary dilution factor.
Estimated result.
The compound was analyzed for, but not detected at the corresponding reporting limits.
All reporting limits raised due to matrix interferences.
Not applicable.

ble 11 Volatile Organic Compounds Concentrations in Groundwater Samples Collected from Monitoring Wells at the PRIDCO Industrial Park in August and September 1993, OU II Remedial Investigation, Vega Alta, Puerto Rico.

Sample ID:	Field Blank	Field Blank	Field Blank M	Field Blank S.W.	Field Blank	Trip Blank	Trip Blank	Trip Blank	Trip Blank
nalyte Date:	1-Sep-93	2-Sep-93	3-Sep-93	3-Sep-93	7-Sep-93	1-Sep-93	2-Sep-93	3-Sep-93	7-Sep-93
loromethane	0.50 UJ	0.5 U	0.5 UJ	0.5 UJ	0.5 U	0.50 UJ	0.5 U	0.5 U	0.5 U
omomethane	0.50 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.50 U	0.5 U	0.5 U	0.5 U
yl chloride	0.50 UJ	0.5 U	0.5 UJ	0.5 UJ	0.5 U	0.50 U	0.5 U	0.5 UJ	0.5 U
oroethane	0.50 UJ	0.5 U	0.5 UJ	0.5 UJ	0.5 U	0.50 UJ	0.5 U	0.5 UJ	0.5 U
thylene chloride	4.5 B	0.5 U	0.22 J	0.5 U	0.26 J	0.50 UJ	0.5 UJ	0.5 U	0.5 U
tone	2.0 U	2 UJ	2 U	2 U	2 U	2.0 U	2 UJ	2 U	2 U
bon disulfide	1.1 J	1.3 J	1 J	0.91 J	1.4	0.50 UJ	0.5 U	0.5 U	0.17 J
Dichloroethene	0.50 U	0.5 U	0.5 U	0.5 U	0.5 U	0.50 U	0.5 U	0.5 U	0.5 U
Dichloroethane	0.50 U	0.5 U	0.5 U	0.5 U	0.5 U	0.50 U	0.5 U	0.5 U	0.5 U
Dichloroethene (cis/trans)	0.50 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.50 U	0.5 UJ	0.5 U	0.5 U
roform	0.50 U	0.5 U	0.5 U	0.5 U	0.5 U	0.50 U	0.5 U	0.5 U	0.5 U
Dichloroethane	0.50 U	0.5 U	0.5 U	0.5 U	0.5 U	0.50 U	0.5 U	0.5 U	0.5 U
tanone	2.0 U	2 U	2 UJ	2 UJ	2 U	2.0 U	2 U	2 UJ	2 U
1-Trichloroethane	0.50 U	0.5 U	0.5 U	0.5 U	0.5 U	0.50 U	0.5 U	0.5 U	0.5 U
on tetrachloride	0.50 U	0.5 U	0.5 U	0.5 U	0.5 U	0.50 U	0.5 U	0.5 U	0.5 U
modichloromethane	0.50 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 U	0.50 UJ	0.5 UJ	0.5 UJ	0.5 U
Dichloropropane	0.50 U	0.5 U	0.5 U	0.5 U	0.5 U	0.50 U	0.5 U	0.5 U	0.5 U
1,3-Dichloropropene	0.50 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 U	0.50 UJ	0.5 UJ	0.5 UJ	0.5 U
loroethene	0.50 U	0.5 U	0.5 U	0.5 U	0.5 U	0.50 U	0.5 U	0.5 U	0.5 U
omochloromethane	0.50 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 U	0.50 UJ	0.5 UJ	0.5 UJ	0.5 U
2-Trichloroethane	0.50 U	0.5 U	0.5 U	0.5 U	0.5 U	0.50 U	0.5 U	0.5 U	0.5 U
ene	0.50 U	0.5 U	0.5 U	0.5 U	0.5 U	0.50 U	0.5 U	0.5 U	0.5 U
-1,3-Dichloropropene	0.50 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.50 UJ	0.5 U	0.5 U	0.5 U
roform	0.50 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 U	0.50 UJ	0.5 UJ	0.5 UJ	0.5 U
thyl-2-pentanone	2.0 U	2 U	2 UJ	2 UJ	2 U	2.0 U	2 U	2 UJ	2 U
xanone	2.0 U	2 U	2 U	2 U	2 U	2.0 U	2 U	2 U	2 U
,2-Tetrachloroethane	0.50 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.50 UJ	0.5 U	0.5 U	0.5 U
chloroethene	0.50 U	0.5 U	0.5 U	0.5 U	0.5 U	0.50 U	0.5 U	0.5 U	0.5 U
ene	0.50 U	0.088 J	0.07 J	0.063 J	0.14 J	0.50 U	0.5 U	0.5 U	0.5 U
robenzene	0.50 U	0.5 U	0.5 U	0.5 U	0.5 U	0.50 U	0.5 U	0.5 U	0.5 U
lbenzene	0.50 U	0.5 U	0.5 U	0.5 U	0.5 U	0.50 U	0.5 U	0.5 U	0.5 U
ne	0.50 U	0.5 U	0.5 U	0.5 U	0.5 U	0.50 U	0.5 U	0.5 U	0.5 U
nes (total)	0.50 U	0.5 U	0.5 U	0.5 U	0.5 U	0.50 U	0.5 U	0.5 U	0.5 U

yte concentrations in micrograms per liter (parts per billion [ppb]).
yses were performed by various analytical subcontractors, using standard U.S. Environmental Protection Agency (USEPA) methodology.

The compound was also detected in the associated method blank.
Compound concentration was determined at a secondary dilution factor.
Estimated result.
The compound was analyzed for, but not detected at the corresponding reporting limits.
All reporting limits raised due to matrix interferences.
Not applicable.

Table 12 Summary of Volatile Organic Compounds Statistical Information for the August through September 1993 Groundwater Sampling, OU II Remedial Investigation, Vega Alta, Puerto Rico.

Component Name	Total Number of Detects	Number of Discrete Detects	Discrete Detection Frequency (%)	Maximum Concentration (ug/L)	Number of Detects Qualified J	Number of Observations Qualified R
1,1,1-Trichloroethane	0	0	0.00	2	1	0
1,1,2-Trichloroethane	1	1	2.22	0.51	1	0
1,1-Dichloroethane	13	12	26.67	63	15	0
1,1-Dichloroethene	19	18	40.00	290	4	0
1,2-Dichloroethane	2	2	4.44	1.3	6	0
1,2-Dichloroethene (cis/trans)	22	21	46.67	76	12	0
1,2-Dichloropropane	1	0	0.00	84	0	0
2-Butanone	0	0	0.00	100	26	0
2-Hexanone	0	0	0.00	100	20	0
4-Methyl-2-pentanone	0	0	0.00	100	17	0
Acetone	4	4	8.89	280	24	0
Benzene	18	16	35.56	7	23	0
Bromodichloromethane	0	0	0.00	100	37	0
Carbon disulfide	8	7	15.56	11	39	0
Carbon tetrachloride	0	0	0.00	25	10	0
Chlorobenzene	2	1	2.22	0.06	17	0
Chloroform	1	0	0.00	0.1	1	0
Chloromethane	2	2	4.44	8.1	30	0
Dibromochloromethane	1	1	2.22	2.1	42	0
Ethylbenzene	3	3	6.67	0.1	14	0
Methylene chloride	13	12	26.67	140	16	0
Styrene	11	10	22.22	4.5	20	0
Tetrachloroethene	24	22	48.89	240	7	0
Toluene	8	8	17.78	5.3	21	0
Trichloroethene	34	31	68.89	4600	7	0
Vinyl chloride	1	1	2.22	22	30	0
Xylenes (total)	0	0	0.00	50	13	0

Computations are based on 48 discrete samples and do not include field replicates.

ug/L Micrograms per liter (parts per billion [ppb]).
J Result is detected below the reporting limit and/or is an estimated concentration.
R Result rejected.

C:kj/pdox35/special2

Table 13 Soil-Gas Survey Areas and Number of Points Sampled and Analyzed from February through April 1992, OU II Remedial Investigation, Vega Alta, Puerto Rico.

AREA	SAMPLES ANALYZED
Concrete Pad	76
Honda Creek	61
Caribe GE Parking Lot	61
Caribe GE Pilot Bldg. No. 1	25
Caribe GE Pilot Bldg. No. 2	21
Rovipak (formerly Motorola)	19
Drainage Ditch	17
Former Drainage Ditch	27
Formerly West Co.	48
West Co. No. 1	61
West Co. No. 2	59
Elba Ceramics	12
Harman Auto	69
Caribe GE Control Plant	90
Teledyne Packaging	46
Sam Food	4
Landfill	38
TOTAL	734

COMMONWEALTH OF PUERTO RICO
LETTER OF CONCURRENCE

VEGA ALTA PUBLIC SUPPLY WELLS SITE
VEGA ALTA, PUERTO RICO

APPENDIX C

COMMONWEALTH OF PUERTO RICO / OFFICE OF THE GOVERNOR

ENVIRONMENTAL QUALITY BOARD
EMERGENCY RESPONSE AND SUPERFUND AREA

CORE & RPM Divisions
Superfund Program

September 24, 1997

Eng. Adalberto Bosque
Project Manager
Vega Alta Public Supply Wells Site
US Environmental Protection Agency
Caribbean Environmental Protection Division
Centro Europa Building, Suite 417
San Juan, Puerto Rico 00907-4127

RE:
P.R. ENVIRONMENTAL QUALITY BOARD
CONCURRENCE LETTER FOR THE RECORD OF DECISION
VEGA ALTA PUBLIC SUPPLY WELLS SITE
OPERABLE UNIT TWO
VEGA ALTA, PUERTO RICO

Dear engineer Bosque:

The Puerto Rico Environmental Quality Board (PREQB) has been consulted about the selection by the U.S. Environmental Protection Agency (USEPA) of a source control remedy for the Vega Alta Public Supply Wells Site regarding the Second Operable Unit. This decision has been made in accordance with the requirements of the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA), as amended by the Superfund Amendments and Reauthorization Act of 1986.

After reviewing the Record of Decision (ROD) documents provided by USEPA the PREQB concurs with this ROD for the Second Operable Unit of the Vega Alta Public Supply Wells Site.

We also request that USEPA keep us informed of all future activities performed on this site. If you have any questions regarding this matter please contact Mr. Jimmy A. Drowne, Remedial Project Manager, Emergency Response and Superfund Area, at phone numbers (787) 767-8181, extension 2234 and 766-2823.

Sincerely yours,

Héctor Russe Martínez
Chairman

fjd
c: Genaro Torres León, PREQB
Miguel A. Maldonado Negrón, PREQB

OPTIONAL FORM 99 (7-90)

FAX TRANSMITTAL

# of pages ▶ 1

To Mill Hardman	From Marisol Gonzalez
Dept./Agency	Phone # E.P.A.
Fax # 337-9720	Fax #

NSN 7540-01-317-7368 5099-101 GENERAL SERVICES ADMINISTRATION

RESPONSIVENESS SUMMARY

VEGA ALTA PUBLIC SUPPLY WELLS SITE
VEGA ALTA, PUERTO RICO

APPENDIX D

RESPONSIVENESS SUMMARY
FOR THE
REMEDIAL ACTION
AT THE
VEGA ALTA PUBLIC SUPPLY WELLS SITE, PUERTO RICO
Operable Unit II

TABLE OF CONTENTS

RESPONSIVENESS SUMMARY
Vega Alta Public Supply Wells Site
Vega Alta, Puerto Rico

INTRODUCTION

This Responsiveness Summary documents the public's comments and concerns and the U.S. Environmental Protection Agency's (EPA's) responses to those comments regarding the Proposed Plan (PP) for the Vega Alta Public Supply Well Superfund Site ("Site") in Vega Alta, Puerto Rico. EPA's preferred remedial alternative addresses the second of two operable units (OU-II). This remedy will address the primary remaining source of contamination and the potential migration of contaminants from the soil to groundwater. The contaminated groundwater is the subject of the first operable unit (OU-1).

EPA held a public comment period from July 30, 1997 through August 29, 1997 to provide interested parties with the opportunity to comment on the PP for the Site.

On August 20, 1997, EPA presented its preferred alternatives for the Site to the community. EPA held a public meeting for the general public at 7:00 p.m. in the Municipal Assembly Room of Vega Alta Town Hall, Vega Alta, Puerto Rico. Approximately 36 people attended the meeting.

EPA conducted the briefing and the meeting in Spanish as Spanish is spoken by the majority of the local residents. EPA made English and Spanish versions of the PP available to the public for their review prior to the public meeting. The Site information repositories are located at the Vega Alta Municipal Town Hall, Vega Alta, Puerto Rico; the Puerto Rico Environmental Quality Board (PREQB) library in San Juan, Puerto Rico; EPA's Regional Office at 290 Broadway, New York, NY; and EPA's Caribbean Environmental Protection Division Office at 1492 Ponce de León Avenue in San Juan, Puerto Rico.

Based on the comments received during the public comment period, EPA believes that the residents and town officials of Vega Alta are in agreement with the PP and support EPA's preferred alternative. At the public meeting, citizens and officials raised no objections to the PP or to EPA's preferred alternative.

This Responsiveness Summary is divided into the following sections:

I. BACKGROUND ON COMMUNITY INVOLVEMENT AND CONCERNS: This section provides the history of community concerns and describes community involvement in the process of selecting a remedy for the Site.

II. COMPREHENSIVE SUMMARY OF MAJOR QUESTIONS, COMMENTS, CONCERNS, AND RESPONSES: This section summarizes the written comments EPA received during the public comment period, oral comments received at the public meeting, and EPA's responses to both.

In addition to Sections I and II, a list of EPA community relations activities conducted at the Site is included as an attachment to this Responsiveness Summary. A Spanish transcript of the proceedings of the public meeting is available in the information repository.

I. BACKGROUND ON COMMUNITY INVOLVEMENT AND CONCERNS

The Vega Alta Public Supply Wells Site is located north of the town of Vega Alta. Groundwater is the primary source of water for the public water supply system, as well as other private (industrial, commercial and agricultural) users. The Vega Alta municipal well field became a concern of EPA in June 1983 after the discovery of trichloroethene (TCE), a volatile organic compound (VOC), in a groundwater sample collected by the United States Geological Survey (USGS) from a Puerto Rico Aqueduct and Sewer Authority (PRASA) public water supply well known as the Ponderosa Well. Vega Alta is governed by a Mayor and Municipal Assembly, all of whom are elected by the community to serve four-year terms.

In August 1986, EPA held a public meeting to inform the public about the results of the OU-I Remedial Investigation. Notification of such meeting was published in a local newspaper. In September 1987, EPA issued a Record of Decision (ROD) for OU-I selecting a groundwater remedy which included the provision of a water supply for Vega Alta. As part of this remedial process, a Public Meeting was held on August 26, 1987.

In August 1989, EPA awarded a Technical Assistance Grant (TAG) to a citizen group in the amount of $49,975. The group recipient, the Committee for the Rescue of the Health and Environment of Vega Alta, was to receive this grant to assist the community in evaluating technical activities at the Site.

In March 1989 and August 1994, EPA published notices of significant changes to the OU-I remedy in newspapers of local circulation. The notices informed the public about

the Explanation of Significant Differences (ESD) which modified the 1987 ROD remedy.

In July 1997, EPA released the PP and Feasibility Study (FS) Report for OU-II to allow the public an opportunity for comment. These reports are part of the administrative record and can be reviewed at any of the information repositories. EPA made Spanish translations of the PP available for public review and comment as well.

EPA publicized and held a public meeting at the Vega Alta Municipal Town Hall on August 20, 1997 to describe the FS Report and PP and to respond to citizen concerns. A transcript of this meeting is available both English and Spanish in the information repositories (September 1997).

EPA held a 30-day public comment period on the PP. The public comment period ran from July 30,1997 through August 29, 1997.

During the comment period, comments were expressed on the following issues:

- **Implementation of the SVE System:** Residents and local officials have expressed concern regarding the implementation of the Soil Vapor Extraction (SVE) System.

- **Aquifer Contamination:** Residents and local officials have expressed concern regarding the aquifer contamination and its effect on public health and the environment.

II. COMPREHENSIVE SUMMARY OF MAJOR QUESTIONS, COMMENTS, CONCERNS, AND RESPONSES

Public comments on the PP submitted between July 30, 1997 and August 29, 1997 are summarized and addressed below. EPA has separated oral comments from written comments. In addition, EPA has categorized the comments by topic and consolidated similar comments on a single topic. Individual commentors and their questions are identified in the meeting transcript on file at the information repository.

A. SUMMARY OF ORAL QUESTIONS AND RESPONSES FROM THE PUBLIC MEETING CONCERNING THE VEGA ALTA PUBLIC SUPPLY WELLS SITE

Part I - Summary and Response to Local Community Concerns

Contamination at Site

Comment: Community members asked if the contamination is a real emergency and if the contamination has reached the aquifer.

EPA Response: EPA does not consider the contamination problem to be an actual emergency since the soil contaminants are at depths of 20 to 40 feet below the ground surface; thus, it is really unlikely that people will come into contact with them. The groundwater underlying the Site was found to be contaminated in 1983. The contaminant levels in some wells were found to exceed drinking water standards for potable water. Based on this, PRASA was directed by the Puerto Rico Department of Health to close the impacted drinking water supply wells.

Comment: A community member and former General Electric (GE) employee stated that during his 15 year employment at the facility, GE discharged thousands of gallons of poisons into a ditch, including cyanide, mercury, and lead.

EPA Response: The Remedial Investigation conducted at the Site identified the soils at the GE Controls Facility as the primary source of contamination, thus necessitating the proposed remedial action.

Comment: A community member asked how the soil and groundwater became contaminated, when the industry became aware of the contamination, what the industry has done about it?

EPA Response: The information currently available does not reveal the specific incident or cause of the release of volatile organic compounds (VOCs). In 1983, groundwater samples collected from PRASA wells revealed the presence of VOCs. Soon after, the current operators and owner of the Industrial Park were notified of the contamination. In 1984, the Site was included on the National Priorities List (NPL), and numerous groundwater and soil investigations have been conducted pursuant to Orders with the Potentially Responsible Parties (PRPs).

Comment: A community member asked whether the operations that led to the release of contamination had been changed, what measures the facility has taken to ensure that it would not happen again, and whether there were any regular inspections at the facility to make sure that the chemicals are properly handled and disposed of.

EPA Response: There is no information regarding a specific incident or type of operations that caused the contamination. However, as an active facility, it is subject to all EPA regulations, EQB regulations, and local regulations regarding the handling and disposal of hazardous substances, and is also subject to compliance inspections.

Comment: A community member attempted to relate the cleanup time of a Site to the severity of its contamination by comparing the Vega Alta Site to that of the Upjohn

Superfund Site. The member asked that since the cleanup of the Upjohn Site took over 10 years and EPA estimated that the cleanup at the Vega Alta Site could take from 5 to 7 years, could one assume that the contamination at the Upjohn Site was worse than that at the Vega Alta Site?

EPA Response: Each Superfund site has unique characteristics, such as the amount and type of contaminants that have been released into the environment, that make it different from other sites. Thus, one should not make assumptions about the severity of contamination from the comparison of cleanup rates at two unrelated sites. Also, the estimated 5 to 7 year cleanup time cited for the Vega Alta Site is only for OU-II, soil contamination/source control remediation; the groundwater remedy may take significantly longer.

Logistics of the Cleanup

Comment: Several community members asked how long it would take to clean up all the contamination at the Site.

EPA Response: The OU-II (soil) remedy is estimated to take about 4 to 7 years to complete. The OU-I (groundwater) remedy may require up to 30 years to restore the aquifer.

Comment: Many community members wanted to know who was going to pay for the cleanup.

EPA Response: Under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA or "Superfund" as it is commonly referred to), four classes of parties, usually referred to as Potentially Responsible Parties ("PRPs"), are liable for the costs of cleanup. PRPs generally include the: 1) present owner(s) of a facility, 2) past owner(s) or operator(s) of a facility at the time hazardous wastes were disposed of, 3) generator(s) of hazardous wastes, and 4) transporter(s) of hazardous wastes. Several PRPs were identified for this Site and have been undertaking the necessary investigations. However, if no PRPs were identified at a given Site, EPA could use funds from the Federal Superfund to pay for site investigation and remediation activities.

Comment: A community member was concerned about who would pay for the cleanup if the industry (in this case, GE) filed for bankruptcy. He asked if GE headquarters would be held responsible for the costs if the local GE division filed for bankruptcy.

EPA Response: EPA has no reason to be concerned as to the ability of the PRPs in this case to fund the cleanup. Also, there is a provision in CERCLA that establishes a "Superfund" to pay for the cleanup of sites when the PRPs cannot pay or cannot be

located. However, if EPA has to use Superfund money for the cleanup of a Site, EPA will attempt to recover these costs from the PRPs at a later time.

Comment: Community members were concerned that, although the PRPs may agree to pay for the cleanup at the time of the PP, what happens if the cleanup time and costs exceed those in the Agreement.

EPA Response: Regardless of the costs or length of time for the cleanup, the PRPs are still liable, whether or not they agree to pay for the cleanup. EPA has the authority, and has used such authority at this Site before, to order the PRPs to undertake the necessary investigations and response actions.

Comment: A community member asked if the Commonwealth of Puerto Rico is considered a PRP, since the Puerto Rico Industrial Development Company (PRIDCO), owner of the property, is an agency of the Commonwealth.

EPA Response: Since PRIDCO is the owner of the Industrial Park and leased facilities in the Industrial Park to GE and other PRPs at the time that hazardous substances were disposed of at those facilities, PRIDCO is considered a PRP for the Site.

Comment: A community member stated that it had been 14 years since the Site was first investigated in 1983. The member asked how long it would take to implement the Proposed Plan. Another community member asked why it took 14 years to start the cleanup, and why the source had not yet been located.

EPA Response: The remediation of this Site has been divided in two remedial phases or operable units. Groundwater was designated the first phase or operable unit (OU-1). Because contaminated groundwater was determined to be the primary source of exposure, it was addressed first. While the ROD for OU-1 was released in 1987, modifications were made to this remedy in 1989 and 1994 in response to changes in pumping stresses induced by new production wells. The remedial action for OU-I was initiated in 1994 with the start-up of the Ponderosa Well and Treatment System.

The source of the groundwater contamination has recently been identified as the soils near the GE Controls Facility in the Industrial Park; this is noted in the PP. Before the remedy proposed in the PP is constructed, a necessary remedial design phase has to be completed. This design phase could take up to a year or two and after that, construction would proceed. The estimated construction time for OU-II (soil/source control) is approximately 8 months, and the cleanup is expected to take 48 to 60 months (4 to 5 years).

Technical Issues Regarding Cleanup

Comment: A community member asked how many wells were closed and what were their pumping rates. The member also asked how much water will be pumped from the vapor extraction wells.

EPA Response: Approximately seven extraction wells, with an estimated pumping rate of 3,150 gallons per minute (gpm), have been closed due to the presence of VOCs. A groundwater supply well is a well that extends below the water table and is used to extract groundwater for either drinking or industrial use; a SVE well is a dry well used to extract only VOC vapors from the soil.

Comment: A community member wanted to know the approximate amount of treated groundwater to be discharged from the wells, specifically from the Ponderosa Well.

EPA Response: Treated groundwater from the Ponderosa Well and Treatment System is currently being discharged to Honda Creek. The system was designed to treat approximately 600 gallons per minute (gpm). However, there have been mechanical failures and loss of electricity in the area, resulting in performance fluctuations. The average discharge per month has varied from 24 to 570 gpm.

Comment: A community member cited the cleanup rate for VOCs in soil of 3 lbs/hr or 15 lbs/day, and asked why and how this rate was judged sufficient for cleanup when the industry was polluting at a rate of 24 hrs/day.

EPA Response: The numbers refer to emission rates, not soil cleanup rates. The limits for VOC emissions to the atmosphere are established in the Federal Clean Air Act. Air quality emissions were also established by the Puerto Rico Regulation for the Control of Atmospheric Pollution (PRRCAP), Rule 419. The maximum limit for such emissions is 3 lbs/hr or 15 lbs/day.

Comment: Members of the community expressed concern regarding the toxic vapors to be extracted from the soil. They wanted to know where the vapors go once they are extracted.

EPA Response: EPA explained that SVE is a technology which removes VOCs from the soil by inducing air flow through the soil, using a vacuum for extraction. The flowing air volatilizes the compounds and carries them through extraction wells to a SVE unit, where they are treated or released to the atmosphere untreated. The SVE system may include air treatment to ensure that air discharges do not exceed permissible limits. As long as the emissions stay within the limits of the PRRCAP, there should be no harmful effect on air quality.

Comment: A community member asked if the 15 lb/day standard took into account the synergetic effects of the chemicals.

EPA Response: Synergetic effects were not considered. However, EPA does utilize an additive risk approach for individual chemicals to compensate for a lack of comprehensive scientific information on chemicals capable of causing synergistic effects.

Comment: A community member asked how many technologies were included in EPA's Presumptive Remedy Guidance to treat VOCs. The member also inquired if bioremediation had been considered for this Site.

EPA Response: EPA stated that there are three technologies described in the Presumptive Remedy Guidance applicable to the Vega Alta Site: 1) soil vapor extraction, 2) incineration, and 3) low temperature thermal desorbtion.

Bioremediation was not considered feasible in the source area because of the lack of oxygen and indigenous organisms required for bioremediation to be successful. In addition, bioremediation is not effective for treating all of the VOCs present at the Site.

Public Participation Process

Comment: A community member expressed concern that EPA's presentations were too technical, and that unless one is educated about technical matters, it is difficult to determine the significance of some of the data. He cited the term "parts per million" as an example of something that a lay person would not be able to understand without explanation from EPA.

EPA Response: EPA's public participation process includes a public meeting in which EPA representatives will answer questions from the public as well as present the Proposed Plan. Public meetings are intended to facilitate a better understanding of EPA's investigations to affected and/or interested citizens.

Comment: Members of the community also expressed concern about educating students so that they could fully participate in future environmental decisions involving their welfare. Observations were made about the lack of environmental curriculum in the area's high schools. Questions were asked whether EPA could assume responsibility for educating students or if GE might be required to pay for community education.

EPA Response: Educational grants are available through EPA to provide financial support for projects which design, demonstrate or disseminate environmental education

practices, methods or techniques. [Note: additional information on educational grants was provided to the commenter after the public meeting].

Comment: A community member wanted to know if GE had been informed of the findings of the study and of the public meeting.

EPA Response: GE is well aware of the findings and the public meeting.

Comment: A community member asked if public meetings really have any impact on the final remedial decision.

EPA Response: EPA relies on public input to ensure that the concerns of the community are considered in selecting an effective and appropriate remedy for each Superfund site. Public comments are evaluated and later addressed in the Responsiveness Summary of the ROD. If public comments necessitate modifications to the Proposed Plan, such modifications will be reflected in the ROD.

Regional Contamination

Comment: A member of the assembly asked if the Maguayo and Ponderosa Wells drew water from the same aquifer, and how this condition was determined.

EPA Response: There are two primary aquifers in the area, an unconfined upper aquifer and a confined aquifer. The Maguayo and Ponderosa Wells both draw water from the unconfined aquifer.

Comment: A community member expressed concern that industries from other areas, such as Vega Baja and Dorado, could contaminate wells in Vega Alta.

EPA Response: Studies and investigations conducted at and in the vicinity of the Site do not indicate any contaminant threat from other industries to the Vega Alta area.

Comment: A community member asked if sediment samples were collected from Honda Creek, and expressed concern that if the contamination plume crossed the Creek, it may also reach the Rio-Cibuco River.

EPA Response: VOCs were not detected in surface water samples collected from Honda Creek and, as such, no impact to Rio-Cibuco is expected.

Comment: A community member asked how many contaminated sites there were in Puerto Rico, and how this number compared with the number of sites in the continental United States.

EPA Response: There are currently ten sites in Puerto Rico that are listed on the NPL and there are 1,204 sites for the entire United States. There are numerous other hazardous waste sites that are not listed on the NPL. Sites become listed because they present, or potentially present, a threat to public health or the environment.

Other Environmental Concerns Not Related to the Site

Comment: Community members, including a member of the Group for Better Environment, expressed concern regarding the Pampanos quarry. According to one community member, the original plan to build a housing development has been changed in order to create a quarry. She cited a study conducted by Careb contractors, which determined that the wetlands should not be developed, and if a housing development was to be built, then a barrier for the wetlands would have to be constructed. She also said that the headwaters of the Quebrada were disturbed and, as a result, wetlands were destroyed. Community members wanted to know what EPA could do about the situation, and also asked if EPA could spend funds to clean up the contamination (specifically, solvents) at the quarry.

EPA Response: The installation and operation of quarries is regulated by local agencies such as the Puerto Rico Planning Board, Puerto Rico Department of Natural Resources & Environment (DNR&E) and the Environmental Quality Board. EPA's regulations at 40 C.F.R. Part 60 (New Source Performance Standards) apply to quarries with a capacity greater than 150 tons/day. The correct name of the facility is the Vega Alta Quarry. Any activity involving changes to wetlands such as landfilling or regrading is regulated by the U.S Corps of Engineer.

Comment: A community member expressed concern regarding tanks containing toxic materials that were still in the neighborhood of Espinosa despite the fact that the incineration has been completed.

EPA Response: The tanks in question are part of the Safety-Kleen Envirosystem Co. facility. This facility is permitted by EQB and EPA to store hazardous waste for subsequent transportation to the continental United States for treatment.

Comment: A community member inquired if EPA's new ozone standards were going to be implemented in Puerto Rico.

EPA Response: EPA stated that the new standards would be implemented in Puerto Rico.

Comment: A community member expressed concern that young people sometimes removed the catalytic converters from their automobiles and consequently were polluting the air.

EPA Response: EPA stated that they are aware of this problem and are working with the EQB to set up an inspection program to ensure that catalytic converters are used properly.

B. Summary of Written Questions and Responses Received During the Public Comment Period

1. Comments from the Puerto Rico Industrial Development Company (PRIDCO)

Comment: PRIDCO asked if the remedy insures that workers at the Site will be safe from VOC exposure.

EPA Response : Maximum concentrations of VOCs were detected at the PRIDCO Industrial Park soils at a depth of about 30 feet. Current worker exposure was not assessed since no direct contact with contaminated soil is expected.

The application of the SVE will greatly reduce the VOCs in soils, thus reducing their vertical migration to the groundwater. In turn, this action will reduce the length of time required to achieve groundwater cleanup goals by preventing VOCs from continuing to enter the groundwater.

Comment: How will the decision to "turn off" the SVE system be made?

EPA Response: The SVE will operate until VOCs can no longer be effectively removed. Soil samples will be collected after the implementation of the SVE program to determine the soil concentrations that remain.

Comment: In general, PRIDCO supported the use of SVE for OU-II at the Site.

2. Comments submitted by the proposed Comunidad Monterey and M.R. Vega Alta, Inc., Santa Cruz, Inc., and Gomera (Dorado), Inc., the owners of the property near and to the north of the Site.

Comment: Will groundwater cleanup be terminated if SVE is required?

EPA Response: Groundwater cleanup will not be terminated with the implementation of SVE. Groundwater remedial activities will continue to operate, and be modified, if necessary, until the Site remediation goals for groundwater are achieved.

Comments: There is a clear relationship between the groundwater remediation (OUI) and the soil remediation/source control (OU II).

EPA Response: The remedial action selected for OU II will greatly reduce the vertical migration of VOCs from the soil to the groundwater. As a result, this action should reduce the amount of time required to achieve groundwater cleanup by preventing VOCs from continuing to enter the groundwater. Activities conducted as part of OU-I are therefore related to OU-II activities.

Comment: It is important to know whether adoption of SVE will mean that the concept of pumping groundwater near the source will be abandoned or otherwise limited.

EPA Response: Implementation of the SVE will not eliminate the need for pumping and treatment of contaminated groundwater at a location near the source. EPA anticipates issuing an ESD containing such a modification to the OU-I remedy in the near future.

Comment: The agency should provide information about the relationship between decisions made on source control and decisions that may be made to revise the groundwater remedy.

EPA Response: EPA's OU-I remedy is a separate action from the source control remedial alternative proposed for OU-II. The only connection is that by implementing SVE in contaminated Site soils, the vertical migration of VOCs from soils into groundwater will be reduced or eliminated. This will reduce the time needed to restore the aquifer. In this respect, the OU-I remedy and the OU-II remedy are linked.

Comment: The groundwater remediation currently depends on operation of the Ponderosa Well treatment system. Our review of the logs of that facility, as well as review of the drawdown record from an adjacent monitoring well, indicate that the Ponderosa Well treatment system has never operated as intended. Thus, we are concerned that there may not be appropriate data from operations at the Ponderosa Well to justify adjustments to the groundwater treatment regime.

EPA Response: Adjustments to the groundwater treatment regime will not be based solely on the operation and performance of the Ponderosa Well, but will also be based upon information regarding the location of the highest VOC concentrations relative to the areal extent of the plume, pumping stresses induced by production wells within the affected area, monitoring data to be collected over a period of time, the evaluation of a groundwater model developed specifically for the Site, and the aquifer's response to the pumping and treatment.

Comments: How do the risk levels between soil and groundwater contamination correlate? The Proposed Plan addresses the risk levels for contaminants in the soils. EPA selected SVE in order to reduce those risk levels. EPA should provide information about how much SVE will shorten the groundwater cleanup time frame. It would also

help to know if EPA has any information about the quantitative impact SVE will have on the duration of the contamination in the groundwater.

EPA Response: Operation of the SVE System will minimize the amount of VOCs that may migrate from the soil to the groundwater. Once the source of contamination is removed and the groundwater remedial measures are in place, we should see a significant reduction in the VOC concentrations in the groundwater near the source area. No information is currently available regarding how much SVE will shorten the groundwater cleanup time frame or the quantitative impact SVE will have on the duration of the contamination in the groundwater.

Comment: The paved areas at the Industrial Park do not sufficiently "cap" the contaminants.

EPA Response: Part of the source area is currently covered with pavement, concrete, or buildings which prevent the infiltration of rain water into the soils. This does reduce the leaching potential of the VOCs from the source soils into the groundwater. However, EPA agrees that the paved areas are not a sufficient "cap" for the entire remaining source of contamination; thus, we are selecting a remedy involving the use of SVE to permanently remove VOCs from the Site.

Comment: Will the plant be closed, in whole or in part, or over some period of time? Will EPA seek to avoid plant shut downs and will this adversely impact the success of SVE in cleaning the soils? To the extent that these decisions are made following the public comment period, it is important for EPA to keep the public informed of any such determinations.

EPA response: The proposed SVE system will be designed and implemented in a staged approach which will involve the use of at least one mobile SVE unit. The mobile unit will be operated at a designed area until no more VOCs can be removed at that location. The unit will then be moved to another designated area for treatment. The GE Controls Plant is an active facility and, as such, the SVE system will be operated in a manner to avoid interfering with plant operations to the greatest extent possible while not sacrificing the effectiveness of the remedy.

Comment: How long will the SVE system operate? When will the SVE system be operational?

EPA Response: It is unclear at this stage how long the SVE system will be in operation. Typically, SVE systems are operated until no more product can be recovered or until cleanup goals are achieved. In the Feasibility Study Report, a ten-year operation scenario was assumed, however, it is more likely that this phase of the remediation will be completed in a shorter period of time. Assuming the PRPs'

willingness to undertake SVE, the design phase may take 1 to 2 years to complete. Actual operation of the SVE system will follow.

Comment: What will EPA do if General Electric refuses to implement SVE?

EPA Response: EPA can exercise its enforcement authority under CERCLA to compel the PRPs to implement the required remedial actions at the Site.

Comment: EPA's Proposed Plan leaves the impression that the risks are the same throughout the region, but they are not. The groundwater is contaminated at different levels in the aquifer, very high near the industrial park and lower elsewhere in the region. Future residents who are located a distance away from the GE Controls Plant do not face the same risk as those close to the plant; nor do people located at the GE Controls Plant face high actual risks.

EPA Response: In order to protect public health and the environment, EPA's risk assessment considered risks and hazards to individuals exposed to reasonable maximum levels under current and future conditions. The assessment used data from samples taken in the aquifer. Where adequate numbers of samples were available to support the calculation of the 95% upper confidence level on the mean, this value was used as representative of the concentration to which users of the aquifer were exposed. The sampling concentrated in the areas with the highest concentrations of soil contamination with less samples taken in areas where the concentration was lower. Where adequate numbers of samples to calculate the 95% upper confidence level were not available, the maximum concentration found in the aquifer for an individual chemical was used in the assessment, i.e., it was assumed that an individual may be exposed to the highest concentration found in the aquifer. In addition, the concentrations found in all wells were also compared in the assessment to the Maximum Contaminant Levels (MCLs). MCLs are enforceable limits under the Safe Drinking Water Act and are designed to ensure the quality of the population's drinking water supplies.

Comment: The risk discussion does not advise the public of the nature of the carcinogenic and non-carcinogenic hazard. What kind of cancer risks are presented? What are the non-carcinogenic hazards?

EPA Response: EPA developed a risk assessment that evaluated future risks from the chemicals in the groundwater in the absence of remediation at the Site. The calculated risks are based on a number of assumptions and represent a probability of an individual developing cancer as a result of specific exposures. The exposure assumptions are listed below.

Carcinogen Assessment for Adults

Ingestion of Water: The cancer risk assessment for the adult residents assumed an individual consumed 2 liters of water/day (8 eight ounce glasses per day) at the current contaminant level for 350 days per year for the next 30 years and weighed 154 lbs. These are standard default assumptions used in EPA's risk assessments at other sites. The calculated risks were approximately 3 additional cases in one thousand people exposed under the assumptions listed above. The primary chemicals of concern were 1,1-dichloroethene, ethylene dibromide, trichloroethylene, arsenic, and beryllium. This calculated risk exceeds EPA's acceptable risk range.

Dermal Contact: Other risks to the residents are associated with contact with metals while showering. It was assumed that an adult resident would shower 350 days/year for 30 years and would weigh 154 lbs. The risk is approximately 4 additional cases of cancer in 1,000,000 people exposed under the assumptions listed. This risk is within EPA's risk range.

Inhalation While Showering: The risks from inhalation of contaminants while showering were also modeled assuming an adult weighed 154 lbs and would shower 350 days/year for 30 years. The risks were calculated at approximately 4 additional cases of cancer in ten thousand people exposed. The main contaminants of concern were 1,1-dichloroethene and trichloroethene. This risk is near the upper bounds of EPA's acceptable risk range.

Childhood - Carcinogen Assessment

Ingestion: The potential risks to children were assessed assuming ingestion of water at the current concentration for 350 days/year for 6 years at an ingestion rate of 1 liter/day and assuming the child weighed 30 lbs. The risk was calculated at 1 in one thousand; the primary chemicals of concern are 1,1-dichlorethene, ethylene dibromide and arsenic. This risk exceeds EPA's acceptable risk range.

Carcinogen Assessment - Workers

Other Populations: Risks to site workers/employees and construction workers were also assessed. This assessment assumed the site workers/employees would be exposed 250 days/year for 25 years and ingest 1 liter/day of water from the Site. The construction worker was assumed to be exposed for a shorter period of time, i.e., 65 days in one year. The risk to the site worker was 8 additional cases in 10,000 which slightly exceeds EPA's acceptable risk range. The primary chemicals of concern were 1,1-dichloroethylene, ethylene dibromide and arsenic. The risk to the construction worker was calculated to be 8 additional cancers in a population of 1,000,000, which is within EPA's acceptable risk range.

Evaluation of Non-Cancer Hazards

For non-cancer evaluation, EPA uses a Reference Dose as an indicator of potential non-cancer effects. The Reference Dose is defined "as a daily exposure level (with an uncertainty spanning perhaps an order of magnitude) that is likely to be without an appreciable risk of adverse health effects for humans." To evaluate non-cancer effects, EPA evaluates the exposures using the exposure assumptions identified for cancer above with the exception that the average time reflects a different averaging time. The exposure is then compared to the Reference Dose to determine whether this value is exceeded for either an individual chemical or pathway. The total hazard is also evaluated by combining the individual Hazard Quotients for each chemical and pathway to determine the total Hazard Index. The results of this analysis for the individual populations potentially exposed are listed below.

Evaluation of Non-Cancer Hazards for Adults

Ingestion: For ingestion of water, using the exposure assumptions identified in the cancer assessments, the Hazard Index (HI) was 9.4. The HI was 6.5 for trichloroethylene and 1.9 for arsenic. The HIs for the other chemicals were less than 1.0.

For dermal contact while showering, and inhalation of volatile organic chemicals, the hazard indices were less than 1.0, respectively.

Non-Cancer Assessment for Children

Ingestion:	The HI for children, using the exposure assumptions used in the carcinogen assessment, was 22. The main chemicals contributing to this hazard were trichloroethene (15) and arsenic (4.3) ; the remaining chemicals contributed less than 1.0.

Non-Cancer Assessment - Site Workers/Employees and Construction Workers

Site Workers/Employees and Construction Workers:	For site workers/employees and construction workers, the assumptions used in the cancer assessment were used. The HI for construction workers was less than 1.0. The HI for site workers/employees was 3.4, exceeding the acceptable level of 1.0. The primary chemical of concern was trichloroethylene with an HI of 2.3.

Comment: EPA should provide realistic information about how long the aquifer will be contaminated and when the community can expect to be able to tap the aquifer again.

EPA Response: It is estimated that the aquifer might take up to 30 years to return to its original condition as a potable water source.

Comment: We support EPA's efforts to use SVE to control the sources of contamination in the soils at the GE Controls Facility. However, we want to emphasize that SVE is not a substitute for groundwater treatment near the sources or elsewhere in the contaminated plume.

EPA Response: The adoption of SVE as a source control action does not mean that near source pumping of groundwater will be abandoned or otherwise limited.

3. Comments from the Vega Alta Steering Committee.

Comment: The Proposed remedy is not justified based upon potential risks posed by the Site. The Proposed remedy is based upon a flawed risk assessment.

EPA Response: The highest concentrations of VOCs in soil and groundwater were detected at the GE Controls facility. The SVE Performance Test Result Report submitted to EPA on February 1996 by the Vega Alta Steering Committee determined

that the use of the SVE was effective in remediating the source soils. SVE will minimize the migration of VOCs from the soil to the groundwater and reduce the length of time required to achieve the groundwater cleanup goals. Groundwater at the Site presents an unacceptable risk to human health. Groundwater samples have revealed VOC concentrations up to 6,000 ppb. These levels are significant in relation to the MCLs.

The risk assessment was re-evaluated based on the comments received from the Vega Alta Steering Committee. Detailed responses to those comments are provided in the attachment. In summary, the PRPs raised issues concerning the following points: a) Inclusion of inorganic compounds in the risk assessment that are inappropriate (e.g. arsenic, manganese...); b) Use of inappropriate criteria for the selection of the chemicals of concern (COCs). c) Ethylene dibromide was included as a COC (accounting for more than 42% of the total cancer risk); and d) CDM wrongly assumed a log normal distribution for each constituent in calculating the 95 % UCLs. Brief responses to each of these issues is provided below.

a and b. Inclusion of arsenic and other metals as chemicals of concern.

Arsenic was retained as a chemical of concern since it is a known human carcinogen and contributed significantly to the risk as outlined in the Risk Assessment Guidance for Superfund. The risk assessment identifies that this chemical is below the MCL and, consequently, is not addressed in the Feasibility Study. The risks and hazards posed by the other metals did not exceed EPA's risk values and their inclusion does not impact the risk assessment. The risks from trichloroethylene and other volatile organic compounds still exceed EPA's acceptable risk range for both cancer and non-cancer, supporting the conclusions that further remediation at the Site is warranted.

c. Ethylene dibromide.

The data sheets were re-evaluated by EPA's contractor and the transcription error was verified. However, the risks posed by trichloroethylene and the other volatile organic compounds still exceed EPA's acceptable risk range and, therefore, require remediation.

d. 95% Upper Confidence Limit

The analysis of the data distribution presented in Table I of the Vega Alta Steering Committee Report indicates that the Responsible Party was not able to demonstrate the data distribution. The "Supplemental Guidance to RAGS: Calculating the Concentration Term" guidance indicates that "... it is valuable to plot the data to better understand the contaminant distribution at the site". Following this guidance, CDM evaluated the groundwater data (page 50) and applied the formula for calculating the

UCL of the arithmetic mean for a lognormal distribution as recommended in the guidance.

Comment: The Proposed Plan failed to consider the influence of the planned OU-I remedy on the appropriateness of any remedy selected for OU-II.

EPA Response: The OU-I remedy and/or any modification to it will remediate the groundwater. However, soil remediation is needed in order to avoid further migration of contaminants into the groundwater. The concurrent implementation of both remedies will expedite the cleanup of the Site.

Comment: The Proposed Plan overestimates the potential contribution of VOCs from soil to groundwater.

EPA Response: The OU-II Remedial Investigation showed that the highest concentration of VOCs in the groundwater was located near the source area. This data indicates that the VOCs from soil are leaching into the groundwater. In recent SVE performance tests, 553 pounds of VOCs were removed from the extraction wells at the source area in a 28 day period. This result clearly demonstrates the effectiveness of this approach and the fact that implementation of SVE will greatly reduce the migration of VOCs to the groundwater.

Comment: The 1994 ESD was technically appropriate due to concerns regarding saltwater intrusion and not due to plume migration, as stated by EPA in the Proposed Plan.

EPA Response: As stated in the 1994 ESD: "EPA must change the location of the extraction wells selected in the 1987 ROD, because recent groundwater investigations at the Site show that in the six years since EPA issued the ROD, the plume of groundwater contamination has migrated downgradient of three of the extraction wells (GE-1, GE-2, and Bajura 3) selected in the 1987 ROD, and that these wells are no longer capable of effectively remediating the Vega Alta Aquifer."

Comment: EPA stated that the Site "groundwater contamination exists in an unconfined aquifer that is used for public, agricultural, industrial, and private water supply." The steering committee believes that this statement is misleading and should indicate that Site groundwater is not currently used for drinking water.

EPA Response: Both public and private wells currently withdraw water from the unconfined aquifer. Several wells have been closed due to the VOC contamination, but others have remained operational. While EPA has informed the users of the affected or contaminated wells that the water should not be utilized for drinking water purposes, we cannot confirm that the water is not being used for such purposes.

Comment: The implementation of the OU-II remedy will cause a slowdown or possible shutdown of plant operations.

EPA Response: While a slowdown or shutdown of plant operations may be necessary during the implementation of SVE, the implementation will be managed in a way to minimize any interruption to plant operations.

Comment: Termination criteria for SVE should be based on the reduction of soil gas VOCs as measured relative to baseline sampling performed in the air stream before initiating SVE and should be incorporated in the ROD.

EPA Response: The SVE system will operate until VOCs can no longer be effectively removed from the source area. Specific criteria for SVE shutdown will be included in the Remedial Deign Report, Remedial Action Work Plan, and in the Operation and Maintenance Plan to be submitted to and approved by EPA.

ATTACHMENT 1

COMMUNITY RELATIONS ACTIVITIES AT VEGA ALTA PUBLIC SUPPLY WELLS SITE

Community relations activities conducted at the Vega Alta Superfund Site to date have included, but are not limited to the following:

- EPA publicized and held a public meeting on August 19, 1986 to inform the public about the findings of the Remedial Investigation (RI). (OU-I).
- EPA publicized and held a public meeting at the Vega Alta Town Hall on August 26, 1987 to describe EPA's proposed plan for OU-I and to respond to public questions and comments. (OU-I).
- EPA published a Notice of Significant changes to the 1987 ROD-selected remedy on March 22, 1989 ("1989 ESD"). (OU-I).
- EPA published a second Notice of Significant changes to the OU-I remedy on August 26, 1994. This remedy was selected in the 1987 ROD and initially modified by the 1989 ESD. (OU-I).
- EPA established an information repository at the Vega Alta Municipal Town Hall. Copies of the documents in the repository were also placed in files in EPA's offices in San Juan, and New York, as well as at the Environmental Quality Board Office. Administrative Records for both operable units are continually updated and additional documents are supplied to each repository. (OU-I & OU-II).
- EPA released the Proposed Plan (PP) and Feasibility Study (FS) Report to allow the public an opportunity for comment. These reports are part of the information repository. (July 1997). EPA made Spanish translations of the PP available for public review and comment. The PP is also part of the information repository. (July 1997). (OU-II).
- EPA publicized and held a public meeting at the Vega Alta Town Hall on August 20, 1997 to discuss the FS Report and PP and to respond to public comments. A transcript of this meeting is available in the Site information repository in both English and Spanish (September 1997). (OU-II).
- EPA held a 30 day public comment period on the PP. The public comment period ran from July 30, 1997 through August 29, 1997. (OU-II).
- EPA prepared a Responsiveness Summary to address public comments received in writing and at the public meeting (September 1997). (OU-II).

ADMINISTRATIVE RECORD INDEX

VEGA ALTA PUBLIC SUPPLY WELLS SITE
VEGA ALTA, PUERTO RICO

APPENDIX E

VEGA ALTA SITE
OPERABLE UNIT TWO
ADMINISTRATIVE RECORD INDEX
INDEX OF DOCUMENTS

1.0 SITE IDENTIFICATION

1.1 Background - RCRA and Other Information

P. 100001-100020 Hazardous Ranking System Package, reviewer: Mr. Wayne Pierre, PRASA, June 7, 1983. (Note: This document is CONFIDENTIAL. It is located at U.S. EPA Superfund Records Center, 290 Broadway, 18th Floor, N.Y., N.Y. 10007-1866).

P. 100021-100045 Report: The Application of CERCLA in Puerto Rico: An Options Paper, prepared by the Hazardous Waste Site Branch, Air & Waste Management Division, U.S. EPA, Region II, July 7, 1983.

P. 100046-100073 Memorandum to Mr. Pedro A. Gelabert, Chairman, Commonwealth of Puerto Rico, Environmental Quality Board, from Mr. Luz V. Garcia, Chemist, Commonwealth of Puerto Rico, Environmental Quality Board, re: Requested Report from Kevin Lynch regarding Ponderosa Well Contamination in Vega Alta, August 17, 1983. Attached: (1) Letter to Mr. Kevin Lynch, On-Scene Coordinator, U.S. EPA, Region II, from Mr. Pedro A. Gelabert, Chairman, Commonwealth of Puerto Rico, Environmental Quality Board, re: the attached enclosed report of the information requested on letter dated June 30, 1983, to investigate the Ponderosa Well pollution sources in Vega Alta, August 16, 1983; (2) Listing of Addressees to which Information Request is being sent (includes handwritten comments), undated; (3) Table 2 - Hazardous Substances at the Wellhead Compounds in ppb; (4) Table 3 - Hazardous Substances Involved and Concentrations Detected After Treatment or in the Distribution System, undated; and (5) Hazardous Waste Report, prepared by U.S. EPA, March 17, 1982.

1.3 Preliminary Assessment Reports

P. 100074-100098 Preliminary Assessment Review Form, Reviewer: Mr. Juan Davila, U.S. EPA, Region II, November 7, 1984. Attached: (1) Potential Hazardous Waste Site Identification and Preliminary Assessment, prepared by Maria L. Morales, U.S. EPA, May 14, 1984; (2) Annexes 1 -3; (3) Request for Analysis; and (4) Attachment C: Potential Hazardous Waste Site, Site Inspection Report, April 17, 1984.

1.4 Site Investigation Reports

P. 100099-100119 Report: Draft Site Inspection Report Vega Alta Solid Waste Disposal - Field Investigation Team Activities at Uncontrolled Hazardous Substances Facilities - Zone 1, prepared by NUS Corporation, Superfund Division, prepared for Environmental Services Division, September 12, 1988.

1.5 Previous Operable Unit Information

P. 100120-100143 Data: "Draft 10-Point Document, Immediate Removal Request", undated.

P. 100144-100165 Letter to Mr. Scott A. Baker, Supervisor, Hazardous Materials and Environmental Services, The West Company, from Mr. Stephen P. Cline, Project Manager, Environmental Resources Management, Inc., re: The West Company Site, Vega Alta, Puerto Rico, February 9, 1988. (Attachments: (1) "Standard Method for Penetration Test and Split-Barrel Sampling Of Soils" (2) "Standard Method for Thin-Walled Tube Sampling of Soils" (3)"Standard Method for Particle-Size Analysis of Soils" and data (4) Table 1: "Methodology Summary and References".)

P. 100166-100170 Letter to Mr. Stephen D. Luftig, Director, Emergency and Remedial Response Division, U.S. EPA, Region II, from Mr. Santos Rohena Betancourt, Chairman, Commonwealth of Puerto Rico Environmental Quality Board, re: Vega Alta Superfund Site, March 21, 1989. (Attachment: Letter to Mr. Douglas Blazey, Regional Counsel, Office of Regional Counsel, U.S. EPA, Region II, from Mr. Santos Rohena Betancourt, Chairman, Commonwealth of Puerto Rico Environmental Quality Board, re: Vega Alta Superfund Site, October 17, 1988.)

P. 100171-100198 Presentation Materials: Vega Alta Superfund Site, Vega Alta, Puerto Rico, prepared for U.S. EPA, prepared by General Electric Company, April 13, 1989.

P. 100199-100377 Plan: Draft Sampling, Analysis and Monitoring Plan (SAMP), Vega Alta Superfund Site per Administrative Order II-CERCLA-90302, prepared by General Electric Company, May 12, 1989.

P. 100378-100421 Plan: Final Statement of Work for Remedial Design for the Vega Alta Well Field Site, Vega Alta, Puerto Rico, prepared for Motorola, Inc., Harman Automotive, Inc., The West Company of Puerto Rico, Inc., prepared by Environmental Resources Management, Inc., January 8, 1990.

P. 100422-100422 Letter to Ms. Debra Wroblewski, NUS Corporation, from Mr. Jose C. Font, Project Manager, U.S. EPA, Region II, re: submittal of Draft Statement of Work for the Remedial Design for the Vega Alta Site and Unilateral Administrative Order for the site, June 13, 1990.

P. 100423-100435 Letter to Eduardo Negron-Navas, Esquire, Fiddler, Gonzalez & Rodriguez, from Ms. Susan T. Barry, Project Manager, Environmental Resources Management, Inc., re: attached Analytical results of purged water from the Vega Alta July 1990 sampling event, September 10, 1990. (Attachment.)

P. 100436-100487 Report: Vega Alta, Puerto Rico, August 1990 Progress Report, prepared for Vega Alta Project Manager, Site Compliance Branch, Emergency and Remedial Response Division, U.S. EPA, Region II, prepared by Ms. Susan T. Barry, Project Manager, Environmental Resources Management, Inc., September 21, 1990. (Attachments: Appendices A-C.)

P. 100488-100498 Report: Vega Alta, Puerto Rico, September 1990 Progress Report, prepared for Vega Alta Project Manager, Site Compliance Branch, Emergency and Remedial Response Division, U.S. EPA, Region II, prepared by Ms. Susan T. Barry, Project Manager, Environmental Resources Management, Inc., October 22, 1990. (Attachments: data.)

P. 100499-100513 Letter to Eduardo Negron-Navas, Esquire, Fiddler, Gonzalez & Rodriguez, from Ms. Susan T. Barry, Project Manager, Environmental Resources Management, Inc., re: attached analytical results of the purged water from the Vega Alta October 1990 sampling event, November 27, 1990. (Attachment.)

P. 100514-100517 Report: Vega Alta, Puerto Rico, October and November 1990 Progress Reports, prepared for Vega Alta Project Manager, Site Compliance Branch, Emergency and Remedial Response Division, U.S. EPA, Region II, prepared by Ms. Susan T. Barry, Project Manager, Environmental Resources Management, Inc., December 31, 1990.

P. 100518-100530 Letter to Mr. Jose Font, Project Manager, Caribbean Field Office, U.S. EPA, Region II, from Ms. Susan T. Barry, Environmental Resources Management, Inc., re: Final discharge of purged water from the Vega Alta Superfund Site to PRASA, January 4, 1991. (Attachment: data.)

P. 100531-100533 Letter to Mr. George J. Miller, Esquire, Dechart, Price & Rhoads, from Ms. Susan T. Barry, Project Manager, Environmental Resources Management, Inc., re: Complicatcns during the January 1991 ground water sampling event at the Vega Alta Site, February 12, 1991.

P. 100534-100543 Letter to Ms. Carole Peterson, Chief, New York/Caribbean Compliance Branch, U.S. EPA, Region II, from Mr. Ronald A. Landon, P.G., ERM Principle in Charge, and G.L. Kirkpatrick, P.G., ERM Project Manager, Environmental Resources Management, Inc., re: Vega Alta Public Supply Well Site Remedial Design EPA ROD dated 23 March 1989, March 5, 1991.

P. 100544-100550 Letter to Maria Luis Gonzalez, Esquire, Fiddler, Gonzalez & Rodriguez, from Ms. Susan T. Barry, Project Manager, Environmental Resources Management, Inc., re: attached analytical results of the contained purge water from the Vega Alta January 1991 sampling event, March 18, 1991. (Attachment.)

P. 100551-100606 Report: Vega Alta, Puerto Rico, January 1991 Progress Report, prepared for Vega Alta Project Manager, Site Compliance Branch, Emergency and Remedial Response Division, U.S. EPA, Region II, prepared by Ms. Susan T. Barry, Project Manager,

Environmental Resources Management, Inc., March 22, 1991. (Attachment: Attachment A.)

P. 100607-100610 Letter to George J. Miller, Esquire, Dechert, Price & Rhoads, from Mr. Carl E. Petrus, P.E., Environmental Resources Management, Inc., re: attached list of information needs for Vega Alta site remediation, April 5, 1991. (Attachment.)

P. 100611-100615 Report: Vega Alta, Puerto Rico, February and March 1991 Progress Reports, prepared for Vega Alta Project Manager, Site Compliance Branch, Emergency and Remedial Response Division, U.S. EPA, Region II, prepared by Ms. Susan T. Barry, Project Manager, Environmental Resources Management, Inc., April 8, 1991.

P. 100616-100663 Report: Vega Alta, Puerto Rico, April and May 1991 Progress Reports, prepared for Vega Alta Project Manager, Site Compliance Branch, Emergency and Remedial Response Division, U.S. EPA, Region II, prepared by Ms. Susan T. Barry, Project Manager, Environmental Resources Management, Inc., June 18, 1991. (Appendices A-B.)

P. 100664-100665 Letter to Mr. Pedro Maldonado Ojeda, Jr. Chairman, Puerto Rico Environmental Quality Board, from Ms. Kathleen Callahan, Director, Emergency and Remedial Response Division, U.S. EPA, Region II, re: U.S. EPAs comments on April 18, 1991 meeting, June 28, 1991.

P. 100666-100709 Report: Vega Alta, Puerto Rico, June 1991 Progress Report, prepared for Vega Alta Project Manager, Site Compliance Branch, Emergency and Remedial Response Division, U.S. EPA, Region II, prepared by Ms. Susan T. Barry, Project Manager, Environmental Resources Management, Inc., July 29, 1991. (Attachments: Appendices A-B.)

P. 100710-100790 Report: Estimate of Probable Construction Cost for Ground Water Remediation, Vega Alta, Puerto Rico, prepared by Environmental Resources Management, Inc., August 26, 1991. (Note: This document is CONFIDENTIAL. It is located at the U.S. EPA Superfund Records Center, 290 Broadway, 18th floor, New York, N.Y. 10007.)

P. 100791-100831 Plan: Operating and Maintenance Plan for the Vega Alta Well Field Site, prepared for Motorola

Telcarro de Puerto Rico, Inc., and The West Company of Puerto Rico, Inc., prepared by Environmental Resources Management, Inc., August 26, 1991.

P. 100832-100908 Report: Design Analysis Report for the Vega Alta Well Field Site, Vega Alta, Puerto Rico, prepared for Motorola Telcarro de Puerto Rico, Inc., Harman Automotive Puerto Rico, Inc., and The West Company of Puerto Rico, Inc., prepared by Environmental Resources Management, Inc., August 26, 1991.

P. 100909-100976 Plan: Construction Plan for Ground Water Remediation, Vega Alta, Puerto Rico, prepared by Environmental Resources Management, Inc., August 26, 1991.

P. 100977-101171 Report: Technical Specifications for Ground Water Remediation, Vega Alta, Puerto Rico, Wells GE-1, GE-2, Ponderosa, Bajura III, prepared by Environmental Resources Management, Inc., August 26, 1991.

P. 101172-101231A Report: Vega Alta Site,Puerto Rico, Third Quarter Calendar Year 1991, Progress Report, prepared for Vega Alta Project Manager, Site Compliance Branch, Emergency and Remedial Response Division, U.S. EPA, Region II, prepared by Ms. Susan T. Barry, Project Manager, Environmental Resources Management, Inc., October 3, 1991.

P. 101232-101270 Letter to Vega Alta Project Manager, Site Compliance Branch, Emergency and Remedial Response Division, U.S. EPA, Region II, from Ms. Susan T. Barry, Project Manager, Environmental Resources, Inc., re: REVISED Vega Alta, Puerto Rico, October 1991 Ground Water Sampling Event, October 11, 1991. (Attachment: Report: Analytical Quality Assurance Report, Grcund Water Samples collected April and May 1991, Vega Alta Superfund Site, Vega Alta, Puerto Rico, prepared for Motorola, Inc., Harman Automotive, Inc., and The West Company of Puerto Rico, Inc., prepared by Environmental Resources Management, Inc., July 3, 1991.)

P. 101271-101273 Report: Vega Alta, Puerto Rico, October and November 1991 Progress Reports, prepared for Vega Alta Project Manager, Site Compliance Branch, Emergency and Remedial Response Division, U.S. EPA, Region II, prepared by Ms. Susan T. Barry,

Project Manager, Environmental Resources Management, Inc., December 9, 1991.

P. 101274-101293 Letter to John Zakrison, Esquire, Kirkland & Ellis, from Ms. Carole Petersen, Chief, New York/Caribbean Superfund Branch, U.S. EPA, Region II, re: Vega Alta Public Supply Wells Site 90% Remedial Design Report, August 1991, EPA Review Comments, December 26, 1991.

P. 101294-101377 Report: Estimate of Probable Construction Cost for Ground Water Remediation, Vega Alta, Puerto Rico, prepared by Environmental Resources Management, Inc., January 17, 1992. (Note: This document is CONFIDENTIAL. It is located at the U.S. EPA Superfund Records Center, 290 Broadway, 18th floor, New York, N.Y. 10007.)

P. 101378-101445 Plan: Construction Plan for Ground Water Remediation, Vega Alta, Puerto Rico, prepared by Environmental Resources Management, Inc., January 17, 1992.

P. 101446-101644 Report: Technical Specifications for Ground Water Remediation, Vega Alta, Puerto Rico, Wells GE-1, GE-2, Ponderosa, Bajura III, prepared by Environmental Resources Management, Inc., January 17, 1992.

P. 101645-101686 Plan: Operating & Maintenance Plan for the Vega Alta Well Field Site, prepared for Motorola Telcarro de Puerto Rico, Inc., and The West Company of Puerto Rico, Inc., prepared by Environmental Resources Management, Inc., January 17, 1992.

P. 101687-101758 Report: Design Analysis Report for the Vega Alta Well Field Site, Vega Alta, Puerto Rico, prepared for Motorola Telcarro de Puerto Rico, Inc., Harman Auto Puerto Rico, Inc., and The West Company of Puerto Rico, Inc., prepared by Environmental Resources Management, Inc., January 17, 1992.

P. 101759-101830 Report: Vega Alta, Puerto Rico, December 1991 and January 1992 Progress Reports, prepared for Vega Alta Project Manager, Site Compliance Branch, Emergency and Remedial Response Division, U.S. EPA, Region II, prepared by Ms. Susan T. Barry, Project Manager, Environmental Resources Management, Inc., February 27, 1992.

P. 101831-101837 Letter to John Zakrison, Esquire, Kirkland & Ellis, and George J. Miller, Esquire, Dechert, Price & Rhoads, from Ms. Carole Petersen, Chief, New York/Caribbean Superfund Branch, U.S. EPA, Region II, re: 100% Remedial Design Report (January 1992) for the Vega Alta Public Supply Wells Site, March 19, 1992. (Attachment: Construction Plan Summary of Work and Construction Schedule.)

P. 101838-101840 Report: February 1992 Progress Report for the Vega Alta Well Field Site, Puerto Rico, prepared for Vega Alta Project Manager, Site Compliance Branch, Emergency and Remedial Response Division, U.S. EPA, Region II, prepared by Ms. Susan T. Barry, Project Manager, Environmental Resources Management, Inc., March 26, 1992.

P. 101841-101858 Report: Annual Report for Historical VOC Distribution in the Ground Water at the Vega Alta Superfund Site, Vega Alta, Puerto Rico, prepared for Vega Alta Project Manager, Site Compliance Branch, Emergency and Remedial Response Division, U.S. EPA, Region II, prepared by Ms. Susan T. Barry, Project Manager, and Mr. Ronald A. Landon, P.G., Principal, Environmental Resources Management, Inc., April 17, 1992.

P. 101859-101927 Report: March 1992 Progress Report for the Vega Alta Well Field Site, Puerto Rico, prepared for Vega Alta Project Manager, Site Compliance Branch, Emergency and Remedial Response Division, U.S. EPA, Region II, prepared by Ms. Susan T. Barry, Project Manager, Environmental Resources Management, Inc., April 28, 1992.

P. 101928-101929 Report: April 1992 Progress Report for the Vega Alta Well Field Site, Puerto Rico, prepared for Vega Alta Project Manager, Site Compliance Branch, Emergency and Remedial Response Division, U.S. EPA, Region II, prepared by Ms. Susan T. Barry, Project Manager, Environmental Resources Management, Inc., May 12, 1992.

P. 101930-101937 Letter to Mr. Jose C. Font, Project Manager, Caribbean Field Office, U.S. EPA, Region II, from Mr. Yaron M. Sternberg, Ph.D., Principal, Environ Corporation, re: Vega Alta Superfund Site, Vega Alta, Puerto Rico, May 21, 1992. (Attachments: (1) Table 1 - Historical VOC Data Table, 1983-1989, Bajura III Ground Water Sample Results

(2)Table 2 - Effluent Limitations for the Bajura III Well (3) Table 3 - Historical VOC Data Table, 1990- Present, Bajura III Ground Water Sample Results.)

P. 101938-101941 Letter to Ms. Bernice I. Corman, Assistant Regional Counsel, U.S. EPA, Region II, from Mr. Mark E. Grummer, Kirkland & Ellis, re: Vega Alta CERCLA Site, Vega Alta, Puerto Rico, June 19, 1992.

P. 101942-101966 Letter to Mr. Pedro Maldonado Ojeda, Esquire, Chairman, Puerto Rico Environmental Quality Board, from Ms. Kathleen Callahan, Director, Emergency and Remedial Response Division, U.S. EPA, Region II, re: July 15, 1992 EPA and EQB Board Meeting Agenda, July 9, 1992. (Attachments: (1) Attachment A - Letter to Mr. Pedro Maldonado Ojeda, Esquire, Chairman, Puerto Rico Environmental Quality Board, from Ms. Kathleen Callahan, Director, Emergency and Remedial Response Division, U.S. EPA, Region II, re: July 15, 1992 EPA and EQB Board Meeting Agenda, July 9, 1992, with agenda and attendance sheet attached (2) Attachment B - Potentially applicable permitting requirements and/or authorizations (3) Attachment C - Memorandum to Ms. Rita M. Lavelle, Assistant Administrator for Solid Waste and Emergency Response, U.S. EPA, from Mr. Robert M. Perry, Associate Administrator for General Counsel, re: Applicability of Section 102(2)(c) of the National Environmental Policy Act of 1969 to Response Actions under Section 104 of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, September 1, 1992 (4) Attachment D - List of efforts by the EPA to incorporate public participation in its decision-making processes, undated.)

P. 101967-102045 Report: <u>May/June 1992 Progress Report for the Vega Alta Well Field Site, Puerto Rico,</u> prepared for Vega Alta Project Manager, Site Compliance Branch, Emergency and Remedial Response Division, U.S. EPA, Region II, prepared by Ms. Susan T. Barry, Project Manager, Environmental Resources Management, Inc., July 24, 1992. (Attachments: Appendices A-B.)

P. 102046-102051 Letter to Bernice I. Coreman, Esquire, Assistant Regional Counsel, U.S. EPA, Region II, from Mr. Mark E. Grummer, Kirkland & Ellis, re:

Vega Alta CERCLA Site--Results of July 21 Meeting on OU-1 Progress, July 30, 1992.

P. 102052-102053 Facsimile to Mr. Carlos M. Padin and Ms. Sara Cortes, Department of Natural Resources, from Mr. Mark E. Grummer, Kirland & Ellis, re: Vega Alta, Puerto Rico, Superfund Site, August 14, 1992.

P. 102054-102057 Facsimile to Mr. Robert Fuhrer, Puerto Rico Aqueduct and Sewer Authority, from Mr. Mark E. Grummer, Kirkland & Ellis, re: Vega Alta, Puerto Rico Superfund Site, August 14, 1992. (Attachment: Facsimile to Mr. Carlos M. Padin and Ms. Sara Cortes, Department of Natural Resources, from Mr. Mark E. Grummer, Kirland & Ellis, re: Vega Alta, Puerto Rico, Superfund Site, August 14, 1992.)

P. 102058-102059 Report: July and August 1992 Progress Report for the Vega Alta Well Field Site, Puerto Rico, prepared for Vega Alta Project Manager, Site Compliance Branch, Emergency and Remedial Response Division, U.S. EPA, Region II, prepared by Ms. Susan T. Barry, Project Manager, Environmental Resources Management, Inc., September 9, 1992.

P. 102060-102068 Letter to Ms. Carol Petersen, Chief, New York/Caribbean Superfund Branch, U.S. EPA, Region II, from Messrs. Gerald L. Kirkpatrick, P.G., Project Director and Ronald A. Landon, P.G., Principal in Charge, Environmental Resources Management, Inc., re: attached revised letter regarding Vega Alta Puerto Rico Public Supply Well Field Site, Operable Unit II Preliminary Investigation Report Comments, September 11, 1992. (Attachment.)

P. 102069-102078 Letter to Ms. Carol Petersen, Chief, New York/Caribbean Superfund Branch, U.S. EPA, Region II, from Mr. Ronald A. Landon, P.G., Principal in Charge, Environmental Resources Management, Inc., re: attached revised letter regarding Vega Alta Puerto Rico Public Supply Well Field Site, Operable Unit II Preliminary Investigation Report Comments, September 15, 1992. (Attachment.)

P. 102079-102115 Letter to Vega Alta Project Manager, Site Compliance Branch, Emergency and Remedial Response Division, U.S. EPA, Region II, prepared by Ms. Susan T. Barry, Project Manager, Environmental Resources Management, Inc., re: Vega Alta October

1992 Ground Water Sampling Event, Puerto Rico, October 5, 1992. (Attachments: (1) Letter to Mr. Jose Font, Project Manager, Caribbean Field Office, U.S. EPA, Region II, from Ms. Susan T. Barry, Project Manager, Environmental Resources Management, Inc., re: Vega Alta Site Sampling Analysis and Monitoring Plan (SAMP), May 18, 1990 (2) Facsimile to Ms. Bernice Coreman, Esquire, Assistant Regional Counsel, U.S. EPA, Region II, from Ms. Susan T. Barry, Project Manager, Environmental Resources Management, Inc., re: submittal of attached preliminary results of the Vega Alta Site, Puerto Rico, collected the week of July 9, 1990.)

P. 102116-102117 Letter to Mr. Thomas Trebilcok, from Mr. Mark E. Grummer, Kirkland & Ellis, re: Monterrey 2 Well, October 16, 1992.

P. 102118-102119 Report: September 1992 Progress Report for the Vega Alta Well Field Site, Puerto Rico. prepared for Vega Alta Project Manager, Site Compliance Branch, Emergency and Remedial Response Division, U.S. EPA, Region II, prepared by Ms. Susan T. Barry, Project Manager, Environmental Resources Management, Inc., October 26, 1992.

P. 102120-102126 Letter to Ms. Carole Petersen, Chief, New York/Caribbean Branch, U.S. EPA, Region II, from Carmen E. Marquez Parrilla, Secretaria Suplente, Esatado Libre Asociado de Puerto Rico, Administracion de Reglamentos y Permisos, (in spanish), October 30, 1992. (Attachment: "Resolucion", prepared by Ana Esther Oyoia Colon, Secreteria, October 30, 1992.)

P. 102127-102128 Report: October 1992 Progress Report for the Vega Alta Well Field Site, Puerto Rico. prepared for Vega Alta Project Manager, Site Compliance Branch, Emergency and Remedial Response Division, U.S. EPA, Region II, prepared by Ms. Susan T. Barry, Project Manager, Environmental Resources Management, Inc., November 24, 1992.

P. 102129-102130 Letter to Mr. Jose C. Font, Project Manager, Caribbean Field Office, U.S. EPA, Region II, from Mr. Yaron M. Sternberg, Ph.D., Principal, Environ Corporation, re: Vega Alta Superfund Site, Vega Alta, Puerto Rico, December 4, 1992.

P. 102131-102145 Report: Progress Report No. 1, Ground Water Treatment Facilities, Vega Alta, Puerto Rico, prepared for Mr. Carl E. Petrus, Project Manager, Environmental Resources Management, Inc., prepared by Mr. F. Rene Garcia, Project Manager, Jafer Construction, S.E., January 8, 1993. (Attachments: (1) Letter to CISCO, from Noel Fernandez, Vice President, Jafer Construction, S.E., re: Ground Water Remediation - Vega Alta, Ponderosa Well & Sam Cash & Carry, October 6, 1992 (2) Letter to R.Q. Engineering, from Mr. F. Rene Garcia, Chief Engineer, Jafer Construction, S.E., re: Ground Water Remediation - Vega Alta, Ponderosa Well & Sam Cash & Carry, October 6, 1992 (3) Letter to Luis Caratini & Son, Inc., from Mr. F. Rene Garcia-Ramirez, Chief Engineer, Jafer Construction, S.E., re: Ground Water Remediation - Vega Alta, Ponderosa Well & Sam Cash & Carry, November 6, 1992 (4) Letter to J.P. Industrial Sales Co., Inc., from Mr. F. Rene Garcia-Ramirez, Chief Engineer, Jafer Construction, S.E., re: Ground Water Remediation - Vega Alta, Ponderosa Well & Sam Cash & Carry, November 6, 1992 (5) Letter to Mr. F. Rene Garcia- Ramirez, Chief Engineer, Jafer Construction, S.E., from Mr. Ivan Usero Perez, Geotechnical Engineer, GeoPractica, Inc., re: Pozos Ponderosa, November 24,1992 (6) Ponderosa Well data (7) Letter to Mr. Carl E. Petrus, Project Manager, Environmental Resources Management, Inc., from Jafer Construction, S.E., re: Ground Water Treatment Facilities, Vega Alta, Puerto Rico, January 11, 1993 (7) Jose A. Torres Ramos corporate resume.)

P. 102146-102152 Letter of Transmittal to Mr. F. Rene Garcia, Project Manager, Jafer Construction S.E., from Mr. Carl E. Petrus, P.E., Project Manager, Environmental Resources Management, Inc., re: attached Initial Progress Schedule - Bar Chart, Initial Progress Schedule - Classic Report, and Schedule of Values (Estimate Breakdown), January 13, 1993. (Attachments.) (Note: This document is CONFIDENTIAL. It is located at the U.S. EPA Superfund Records Center, 290 Broadway, 18th floor, New York, N.Y. 10007.)

P. 102153-102227 Report: December 1992 Progress Report for the Vega Alta Well Field Site, Puerto Rico, prepared for Vega Alta Project Manager, Site Compliance Branch, Emergency and Remedial Response Division, U.S. EPA, Region II, prepared by Ms. Susan T.

Barry, Project Manager, Environmental Resources Management, Inc., January 19, 1993. (Attachments: Appendices A-B.)

P. 102228-102230 Report: January 1993 Progress Report for the Vega Alta Well Field Site, Puerto Rico, prepared for Vega Alta Project Manager, Site Compliance Branch, Emergency and Remedial Response Division, U.S. EPA, Region II, prepared by Ms. Susan T. Barry, Project Manager, Environmental Resources Management, Inc., February 17, 1993.

P. 102231-102232 Report: February 1993 Progress Report for the Vega Alta Well Field Site, Puerto Rico, prepared for Vega Alta Project Manager, Site Compliance Branch, Emergency and Remedial Response Division, U.S. EPA, Region II, prepared by Ms. Susan T. Barry, Project Manager, Environmental Resources Management, Inc., March 29, 1993.

P. 102233-102234 Facsimile to Mr. Jose Font, Project Manager, Caribbean Field Office, U.S. EPA, Region II, from Mr. Carl E. Petrus, P.E., Project Manager, Environmental Resources Management, Inc., re: Vega Alta Remediation Construction Schedule, March 31, 1993. (Attachment: Letter to Mr. Jose Font, Project Manager, Caribbean Field Office, U.S. EPA, Region II, from Mr. Carl E. Petrus, P.E., Project Manager, Environmental Resources Management, Inc., re: Vega Alta Remediation Construction Schedule, March 31, 1993.)

P. 102235-102235 Letter to Mr. F. Rene Garcia, Project Manager, Jafer Construction S.E., from Yaron M. Sternberg, Ph.D., Principal, re: Vega Alta Remediation Project, April 20, 1993.

P. 102236-102238 Letter to Mr. Jose Font, Project Manager, Caribbean Field Office, U.S. EPA, Region II, from Ms. Susan T. Barry, Project Manager, Environmental Resources Management, Inc., re: Vega Alta Superfund Site-Confirm cancellation of April 1993 ground water sampling, April 23, 1993.

P. 102239-102241 Letter to Lourdes Rodriguez, Esquire, Assistant to the Governor, Office of the Governor, from Mr. George Pavlou, Acting Director, Emergency and Remedial Response Division, U.S. EPA, Region II, re: Vega Alta and Upjohn Superfund Sites, May 7, 1993.

P. 102242-102243 Letter to Mr. Jose Font, Project Manager, Caribbean Field Office, U.S. EPA, Region II, from Mr. Carl E. Petrus, P.E., Project Manager, Environmental Resources Management, Inc., re: initial mechanical checkout schedule of the Ponderosa Remediation System, June 3, 1993.

P. 102244-102246 Letter to Mr. Jose Font, Project Manager, Caribbean Field Office, U.S. EPA, Region II, from Mr. Carl E. Petrus, P.E., Project Manager, Environmental Resources Management, Inc., re: attached copy of the Procedure Outline, Mechanical Checkout, Ponderosa Air Stripper, Vega Alta Remediation, June 9, 1993. (Attachment.)

P. 102247-102257 Letter to Mr. Jose Font, Project Manager, Caribbean Field Office, U.S. EPA, Region II, from Mr. Carl E. Petrus, P.E., Project Manager, Environmental Resources Management, Inc., re: reasons for delays incurred by the Contractor in arriving at Substantial Completion of the Ponderosa Remediation System, June 18, 1993. (Attachments: (1) Letter to Mr. Carl E. Petrus, P.E., Project Manager, Environmental Resources Management, Inc., from Mr. F. Rene Garcia, Project Manager, Jafer Construction, S.E., re: Ground Water Treatment Facilities, Vega Alta, Puerto Rico, June 2, 1993 (2) Certificacion de Instalacion Electrica, undated (3) Letter to Autoridad de Energia Electrica de PR, Oficina de Inspecion, Area de Bayamon, from Ing. Manuel Exposito, CPM, re: Subestacion Electrica de "Ponderosa Well Ground Water Remediation", (in spanish), May 11, 1995 (4) Letter to A.R.P.E., from Enrique Morales Roldan, Superintendente de Inspecciones, Autoridad de Energia Electrica de Puerto Rico, re: E-93-IV-06, AB-199-IV-93, (in spanish), May 24, 1993 (5) Puerto Rico Electric Power Authority Electric Service Contract Bond prepared for Jafer Ccnstruction, (bilingual: spanish and english), May 21, 1993.)

P. 102258-102277 Letter of Transmittal to Mr. Jose Font, Project Manager, Caribbean Field Office, U.S. EPA, Region II, from Mr. Carl E. Petrus, P.E., Project Manager, Environmental Resources Management, Inc., re: attached Operations Report for Mechanical Checkout of Ponderosa Remediation System, Vega Alta, Puerto Rico, prepared by Environmental Resources Management, Inc., July 7, 1993, July 8, 1993. (Attachment.)

P. 102278-102281 Facsimile to Mr. Jose Font, Project Manager, Caribbean Field Office, U.S. EPA, Region II, from Mr. Carl E. Petrus, P.E., Project Manager, Environmental Resources Management, Inc., re: Vega Alta Remediation Final Completion, July 16, 1993. (Attachment: Letter to Mr. Carl E. Petrus, Project Manager, Environmental Resources Management, Inc., from Mr. F. Rene Garcia, Project Manager, Jafer Construction, S.E., re: Ground Water Treatment Facilities, July 14, 1994.)

P. 102282-102282 Letter to Lourdes Rodriguez, Esquire, Assistant to the Governor, Office of the Governor, from Mr. George Pavlou, Acting Director, Emergency and Remedial Response Division, U.S. EPA, Region II, re: Vega Alta Public Supply Wells Superfund Site, July 16, 1993.

P. 102283-102284 Report: April, May, June 1993 Progress Report for the Vega Alta Well Field Site, Puerto Rico, prepared for Vega Alta Project Manager, Site Compliance Branch, Emergency and Remedial Response Division, U.S. EPA, Region II, prepared by Ms. Susan T. Barry, Project Manager, Environmental Resources Management, Inc., July 19, 1993.

P. 102285-102298 Letter to Mr. Jose Font, Project Manager, Caribbean Field Office, U.S. EPA, Region II, from Mr. Carl E. Petrus, P.E., Project Manager, Environmental Resources Management, Inc., re: attached Vega Alta Remediation Analytical Results, July 27, 1993. (Attachments.)

P. 102299-102301 Letter to Mr. F. Rene Garcia, Project Manager, Jafer Construction, S.E., from Mr. Carl E. Petrus, P.E., Project Manager, Environmental Resources Management, Inc., re: Vega Alta Remediation Final Completion Inspection, August 2, 1993.

P. 102302-102303 Report: July and August 1993 Progress Report for the Vega Alta Well Field Site, Puerto Rico, prepared for Vega Alta Project Manager, Site Compliance Branch, Emergency and Remedial Response Division, U.S. EPA, Region II, prepared by Ms. Susan T. Barry, Project Manager, Environmental Resources Management, Inc., September 2, 1993.

P. 102304-102305 Letter to Ms. Aida Casanova, Director, Scientist Assessment Office, Environmental Quality Board, from Ms. Laura J. Livingston, Assistant Chief, Environmental Impacts Branch, U.S. EPA, Region II,

re: Environmental assessment (EA) for the consolidation of manufacturing operations at the Vega Alta site, October 8, 1993.

P. 102306-102330 Letter to Mr. Jose Font, Project Manager, Caribbean Field Office, U.S. EPA, Region II, from Mr. Carl E. Petrus, P.E., Project Manager, Environmental Resources Management, Inc., re: attached plan: Initial Testing Program, Ponderosa Air Stripper Program, Vega Alta, Puerto Rico, prepared for U.S. EPA, Region II, prepared by Environmental Resources Management, Inc., October 22, 1993. (Attachment.)

P. 102331-102332 Report: September 1993 Progress Report for the Vega Alta Well Field Site, Puerto Rico, prepared for Vega Alta Project Manager, Site Compliance Branch, Emergency and Remedial Response Division, U.S. EPA, Region II, prepared by Ms. Susan T. Barry, Project Manager, Environmental Resources Management, Inc., November 1, 1993.

P. 102333-102334 Letter to Mark E. Grummer, Esquire, Kirkland & Ellis, from Ms. Carol Petersen, New York/Caribbean Superfund Branch, U.S. EPA, Region II, re: EPA comments on the Revised Initial Testing Program, November 15, 1993.

P. 102335-102336 Report: October 1993 Progress Report for the Vega Alta Well Field Site, Puerto Rico, prepared for Vega Alta Project Manager, Site Compliance Branch, Emergency and Remedial Response Division, U.S. EPA, Region II, prepared by Ms. Susan T. Barry, Project Manager, Environmental Resources Management, Inc., November 19, 1993.

P. 102337-102342 Letter to Vega Alta Project Manager, Site Compliance Branch, Emergency and Remedial Response Division, U.S. EPA, Region II, from Ms. Susan T. Barry, Project Manager, Environmental Resources Management, Inc., re: Vega Alta November 1993 Ground Water Sampling Event, Puerto Rico, November 19, 1993. (Attachments: (1) Letter to Vega Alta Project Manager, Site Compliance Branch, Emergency and Remedial Response Division, U.S. EPA, Region II, from Ms. Susan T. Barry, Project Manager, Environmental Resources Management, Inc., re: Vega Alta November 1993 Ground Water Sampling Event, Puerto Rico, November 19, 1993 (2) Report: October 1993 Progress Report for the Vega Alta Well Field Site, Puerto Rico, prepared for Vega

Alta Project Manager, Site Compliance Branch, Emergency and Remedial Response Division, U.S. EPA, Region II, prepared by Ms. Susan T. Barry, Project Manager, Environmental Resources Management, Inc., November 19, 1993.

P. 102343-102386 Memorandum to Mr. Jose Font, Project Manager, Caribbean Field Office, U.S. EPA, Region II, from Mr. Carl E. Petrus, P.E., Project Manager, Environmental Resources Management, Inc., re: Enclosed analytical results, Vega Alta ITP, December 8, 1993. (Attachment.)

P. 102387-102388 Letter to Mr. Jose Font, Project Manager, Caribbean Field Office, U.S. EPA, Region II, from Mr. Carl E. Petrus, P.E., Project Manager, Environmental Resources Management, Inc., re: Vega Alta Remediation ITP Report, January 18, 1994.

P. 102389-102391 Report: November and December 1993 Progress Report Vega Alta Well Field Site, Puerto Rico - Public Supply Case, prepared for Vega Alta Project Manager, Site Compliance Branch, Emergency and Remedial Response Division, U.S. EPA, Region II, prepared by Ms. Susan T. Barry, Project Manager, Environmental Resources Management, Inc., January 26, 1994.

P. 102392-102397 Letter to Margaret N. Strand, Esquire, Eckert, Seamans, Cherin & Mellot, from Mr. Alexander Schmandt, Assistant Region Counsel, U.S. EPA, Region II, re: Vega Alta Public Supply Wells Superfund Site, Vega Alta, Puerto Rico, February 18, 1994. (Attachment: Monte Rey Farm Document Request, February 1994.)

P. 102398-102399 Report: January 1994 Progress Report Vega Alta Well Field Site, Puerto Rico - Public Supply Case, prepared for Vega Alta Project Manager, Site Compliance Branch, Emergency and Remedial Response Division, U.S. EPA, Region II, prepared by Ms. Susan T. Barry, Project Manager, Environmental Resources Management, Inc., February 22, 1994.

P. 102400-102403 Letter to Mr. Jose Font, Project Manager, Caribbean Field Office, U.S. EPA, Region II, from Ms. Susan T. Barry, Project Manager, Environmental Resources Management, Inc., re: Request for Modification of Disposal Procedures for the Purge Water contained from the Vega Alta Site, Puerto Rico, February 23, 1994. (Attachments: (1) PRASA

Bulk Discharge Permit #GDG 90-708-057, Purge Water Analytical Results from December 1993 Sampling Event (2) Summary of recommended EPA action items.)

P. 102404-102680 Report: Draft Initial Testing Program, Air Stripper System, Ponderosa Well, Vega Alta Superfund Site, prepared for U.S. EPA, Region II, prepared by Environmental Resources Management, Inc., February 25, 1994.

P. 102681-102761 Report: February 1994 Progress Report Vega Alta Well Field Site, Puerto Rico - Public Supply Case, prepared for Vega Alta Project Manager, Site Compliance Branch, Emergency and Remedial Response Division, U.S. EPA, Region II, prepared by Ms. Susan T. Barry, Project Manager, Environmental Resources Management, Inc., March 10, 1994. (Attachments: Appendices A-C.)

P. 102762-102762 Facsimile to Mr. Juan Fajardo, U.S. EPA, Region II, from Mr. Jose Font, Project Manager, Caribbean Field Office, U.S. EPA, Region II, re: Letter to Mr. George Pavlou, Acting Director, Emergency and Remedial Response Division, from Mr. Hector Russe Martinez, Chairman, Puerto Rico Environmental Quality Board, re: "Draft Explanation of Significant Differences (ESD) to the 1987 Record of Decision" and "Draft Remedial Design/Remedial Action (RD/RA) Statement of Work", April 8, 1994.

P. 102763-102769 Letter to Mr. Jose Font, Project Manager, Caribbean Field Office, U.S. EPA, Region II, Ms. Charyl Fines, P.E., Work Assignment Manager, CDM Federal Programs Corporation, re: attached letter report "Evaluation of the Potential Need to Perform an Ecological Assessment, Vega Alta Site, Vega Alta, Puerto Rico", April 21, 1994. (Attachment.)

P. 102770-102772 Letter to Mr. Carl E. Petrus, P.E., Project Manager, Environmental Resources Management, Inc., from Ms. Carole Petersen, Chief, New York/Caribbean Superfund Branch, U.S. EPA, Region II, re: Initial Testing Program Report, Vega Alta Public Supply Wells Site, Vega Alta, Puerto Rico, May 18, 1994.

P. 102773-102775 Letter to Mr. Jose Font, Project Manager, U.S. EPA, Region II, from Mr. Carl E. Petrus, P.E., Project Manager, Environmental Resources

Management, Inc., re: Vega Alta Remediation, ITP Report, May 26, 1994. (Attachment: Letter to Vega Alta Project Manager, Site Compliance Branch, Emergency Remedial Response Division, U.S. EPA, Region II, from Ms. Susan T. Barry, Project Manager, Environmental Resources Management, Inc., re: Vega Alta June 1994 Ground Water Sampling Event, Puerto Rico, June 17, 1994.)

P. 102776-102777 Report: March/April/May 1994 Progress Report Vega Alta Well Field Site, Puerto Rico - Public Supply Case, prepared for Vega Alta Project Manager, Site Compliance Branch, Emergency and Remedial Response Division, U.S. EPA, Region II, prepared by Ms. Susan T. Barry, Project Manager, Environmental Resources Management, Inc., June 20, 1994.

P. 102778-102779 Letter to Mr. Carl E. Petrus, P.E., Project Manager, Environmental Resources Management, Inc., from Ms. Carole Petersen, Chief, New York/Caribbean Superfund Branch, U.S. EPA, Region II, re: Start-Up Approval for the Ponderosa Well Groundwater Treatment System, June 28, 1994. (Attachment: Letter to Mr. Angus Macbeth, Esquire, Sidley & Austin, from Mr. Paul Simon, Section Chief, New York/Caribbean Superfund Branch, U.S. EPA, Region II, re: Administrative Order Index No. II-CERCLA-90302; Start-Up Approval for the Ponderosa Well Groundwater Treatment System at the Vega Alta Wellfield Site, July 8, 1994.)

P. 102780-102781 Report: June 1994 Progress Report Vega Alta Well Field Site, Puerto Rico - Public Supply Case, prepared for Vega Alta Project Manager, Site Compliance Branch, Emergency and Remedial Response Division, U.S. EPA, Region II, prepared by Ms. Susan T. Barry, Project Manager, Environmental Resources Management, Inc., July 11, 1994.

P. 102782-102782 Letter to Mr. Jose Font, Project Manager, U.S. EPA, Region II, from Mr. Mark E. Grummer, Kirkland & Ellis, re: Vega Alta CERCLA Site, August 5, 1994.

P. 102783-102792 Transmittal sheet to Mr. Jose Font, Project Manager, Caribbean Field Office, U.S. EPA, Region II, from CDM Federal Programs Corporation, re: attached TES V documents, July 14, 1994. (Attachments: (1)Letter to Mr. Erwin Smieszek, Tes V Regional Project Officer, U.S. EPA, Region II,

from Mr. Scott B. Graber, TES V Regional Manager, CDM Federal Programs Corporation, re: Further Review of Geraghty & Millers Modeling Effort, Particularly their Response to CDMs Initial Comments, January 19, 1993 (2)Letter to Mr. Jose Font, Project Manager, Caribbean Field Office, U.S. EPA, Region II, from Ms. Sally Odland, Work Assignment Manager, CDM Federal Programs Corporation, re: Memorandum Concerning CDMs Further Review of Geraghty & Millers Modeling Effort, Particularly their Responses to CDMs Initial Comments, January 19, 1993 (3)Memorandum to Mr. Jose Font and Ms. Bicky Coreman, U.S. EPA, Region II, from Mr. Rob Schreiber and Ms. Bernadette Kolb, CDM, re: Vega Alta Site, Puerto Rico, Further Review of Geraghty & Millers Modeling Effort Particularly their Responses to CDMs Initial Comments, January 19, 1992.) (Note: This document is CONFIDENTIAL. It is located at the U.S. EPA Superfund Records Center, 290 Broadway, 18th floor, New York, N.Y. 10007.)

P. 102793-102796 Letter to Mr. Jose Font, Project Manager, Caribbean Field Office, U.S. EPA, Region II, from Mr. Rober J. Bauerle, P.E., Work Assignment Manager, CDM Federal Programs Corporation, re: attached Final Inspection Field Report, September 9, 1994. (Attachment.)

P. 102797-102932 Report: July and August 1994 Progress Report Vega Alta Well Field Site, Puerto Rico - Public Supply Case, prepared for Vega Alta Project Manager, Site Compliance Branch, Emergency and Remedial Response Division, U.S. EPA, Region II, prepared by Ms. Susan T. Barry, Project Manager, Environmental Resources Management, Inc., September 15, 1994. (Attachments: Appendices A-E.)

P. 102933-102933 Letter to Vega Alta Project Manager, Site Compliance Branch, Emergency and Remedial Response Division, U.S. EPA, Region II, from Ms. Susan T. Barry, Project Manager, Environmental Resources Management, Inc., re: Vega Alta October 1994 Ground Water Sampling Event, Puerto Rico, October 5, 1994.

P. 102934-102968 Report: September/October 1994 Progress Report Vega Alta Well Field Site, Puerto Rico - Public Supply Case, prepared for Vega Alta Project Manager, Site Compliance Branch, Emergency and

Remedial Response Division, U.S. EPA, Region II, prepared by Ms. Susan T. Barry, Project Manager, Environmental Resources Management, Inc., November 22, 1994. (Attachments: Appendices A-B.)

P. 102969-102970 Report: November 1994 Progress Report Vega Alta Well Field Site, Puerto Rico - Public Supply Case, prepared for Vega Alta Project Manager, Site Compliance Branch, Emergency and Remedial Response Division, U.S. EPA, Region II, prepared by Ms. Susan T. Barry, Project Manager, Environmental Resources Management, Inc., November 30, 1994.

P. 102971-102974 Letter to Ms. Iris Cuadrado, Commonwealth of Puerto Rico Planning Board, from Ms. Carole Petersen, Chief, New York/Caribbean Superfund Branch, U.S. EPA, Region II, re: Environmental Impact Statement, Complejo Residencial, Comercjal, Comunidad Monterrey, Bo. Espinosa, Vega Alta, Puerto Rico, December 9, 1994.

P. 102975-102984 Facsimile transmittal to Mr. Jose Font, Project Manager, Caribbean Field Office, U.S. EPA, Region II, from Mr. James Delaney, Burns and Roe Industrial Services Company, re: attached Draft Comments on RD Work Plan and Sampling Analysis and Monitoring Plan, Vega Alta, Puerto Rico, January 11, 1995. (Attachments.)

P. 102985-102996 Letter to Ms. Alison Devine, Project Officer, U.S. EPA, Region II, from Mr. Robert T. Goltz, P.E., ARCS II Program Manager, CDM Federal Programs Corporation, re: Document Review of the Remedial Design Work Plan and Sampling Analysis and Monitoring Plan for the Vega Alta Public Supply Wells, February 9, 1995. (Attachments: Letter to Mr. Jose Font, Project Manager, Caribbean Field Office, U.S. EPA, Region II, from Mr. Robert J. Baurerle, P.E., Work Assignment Manager, CDM Federal Programs Corporation, re: attached Document Review of the Remedial Design Work Plan and Sampling Analysis and Monitoring Plan for the Vega Alta Public Supply Wells, February 9, 1995.)

P. 102997-103106 Report: Analytical Results/Vega Alta, prepared for Mr. Joe Mohahan, Unisys Corporation, prepared by Ms. Karen R. Chirgwin, Laboratory Operations Director, Inchcape Testing Services, Aquatec Laboratories, March 28, 1995.

P. 103107-103108 Report: March 1995 Progress Report Vega Alta Well Field Site, Puerto Rico, prepared for Vega Alta Project Manager, Site Compliance Branch, Emergency and Remedial Response Division, U.S. EPA, Region II, prepared by Messrs. David J. Martin, Environmental Project Manager, and Peter P. Mele, Program Manager, Unisys Corporation, April 10, 1995.

P. 103109-103109 Letter to Mr. Jose Font, Project Manger, U.S. EPA, Region II, from Mr. Hector Russe Martinez, Chairman, Commonwealth of Puerto Rico Environmental Quality Board, re: Sampling Analysis and Monitoring Plan & Supplemental Ground Water Remedial Design Work Plan, Vega Alta Superfund Site, Vega Alta, Puerto Rico, April 10, 1995.

P. 103110-103113 Letter to Ms. Alison Devine, Regional Project Officer, U.S. Environmental Protection Agency, Region II, from Mr. Robert T. Goltz, P.E., ARCS II Program Manager, CDM Federal Programs Corporation, re: Review of Supplemental Groundwater Remedial Design Work Plan and Sampling Analysis and Monitoring Plan, April 1995 Comments, May 23, 1995. (Attachment: Letter to Mr. Jose Font, Project Manager, Caribbean Field Office, U.S. EPA, Region II, from Mr. Robert J. Bauerle, P.E., Work Assignment Manager, CDM Federal Programs Corporation, re: attached Review of Supplemental Groundwater Remedial Design Work Plan and Sampling Analysis and Monitoring Plan, April 1995 Comments, May 23, 1995.)

P. 103114-103116 Letter to Messrs. Dave Thompson, General Electric Company, and Peter P. Mele, Unisys Corporation, from Ms. Carole Petersen, Chief, New York/Caribbean Superfund Branch, U.S. EPA, Region II, re: Review of Supplemental Groundwater Design Work Plan (SGDWP) and Sampling Analysis and Monitoring Plan (SAMP) - April 1995 Comments, June 9, 1995.

P. 103117-103168 Plan: Supplemental Groundwater Remedial Design Work Plan, Vega Alta Superfund Site, Vega Alta Puerto Rico, prepared for U.S. EPA, prepared by Unisys Corporation, June 23, 1995.

P. 103169-103184 Report: Field Summary Report for September 1995, prepared by Ms. Charyl Fines, P.E., Work Assignment Manager, CDM Federal Programs Corporation, prepared for Mr. Jose Font, Project

Manager, Caribbean Field Office, U.S. EPA, Region II, September 22, 1995.

P. 103185-103200 Report: August 1995 OU I Progress Report, Vega Alta WellField Site, Puerto Rico, prepared for Vega Alta Project Manager, Site Compliance Branch, Emergency and Remedial Response Division, U.S. EPA, Region II, prepared by Messrs. David J. Martin and Peter P. Mele, Vega Alta Steering Committee, Vega Alta Superfund Site, Puerto Rico, September 27, 1995.

P. 103201-103229 Report: September 1995 OU I Progress Report, Vega Alta WellField Site, Puerto Rico, prepared for Vega Alta Project Manager, Site Compliance Branch, Emergency and Remedial Response Division, U.S. EPA, Region II, prepared by Messrs. David J. Martin and Peter P. Mele, Vega Alta Steering Committee, Vega Alta Superfund Site, Puerto Rico, October 30, 1995.

P. 103230-103233 Facsimile to Mr. Jose C. Font, Project Manager, Caribbean Field Office, U.S. EPA, Region II, from Messrs. David J. Martin and Peter P. Mele, Vega Alta Steering Committee, Vega Alta Superfund Site, Puerto Rico, re: Vega Alta Well Field Site, Puerto Rico, Recommendation for Final Well A Location, November 15, 1995. (Attachments: (1) Figure 1: "Distribution of TCE Residuals in Model Layer 2 After 30 Years of Pumping at a Location Southeast of Monterrey Well 2" (2) Figure 2: "Distribution of TCE Residuals in Model Layer 2 After 30 Years of Pumping at the Northern Limit of the Highway Department Property".)

P. 103234-103293 Report: Assessment of the Placement of Well-A, Vega Alta Public Supply Wells Site, Vega Alta, Puerto Rico, prepared for U.S. EPA, Region II, prepared by Unisys Coporation, November 20, 1995.

3.0 REMEDIAL INVESTIGATION

3.1 Sampling and Analysis Plan

P. 300001-300381 Plan: Sampling, Analysis, and Monitoring Plan (SAMP) for the Vega Alta Superfund Site, prepared for Motorola Inc., Harmon Automotive, Inc., and The West Company of Puerto Rico, Inc., prepared

by Environmental Rescurces Management, Inc., October 11, 1989.

P. 300382-300538 Plan: Field Sampling Plan Operable Unit Two (Source) and Supplemental Ground-Water Investigations, Vega Alta, Puerto Rico, prepared for Caribe General Electric Products, Inc., prepared by Geraghty & Miller, Inc., November 1991.

P. 300539-300610 Plan: Quality Assurance Project Plan Operable Unit Two (Source) and Supplemental Ground-Water Investigations, Vega Alta, Puerto Rico, prepared for Caribe General Electric Products, Inc., prepared by Geraghty & Miller, Inc., November 1991.

P. 300611-300856 Plan: Sampling Analysis and Monitoring Plan, Vega Alta Superfund Site, Vega Alta, Puerto Rico, prepared by Unisys, June 21, 1995.

3.2 Sampling and Analysis Data/Chain of Custody Forms

P. 300857-300865 Report: Response Actions Needed, undated.

P. 300866-301008 Water Quality Data, undated.

P. 301009-301066 Report: Analytical Data Report, prepared for Mr. Joe Fromal, Environmental Strategy Corporation, prepared by Compuchem Laboratories, March 1, 1988.

P. 301067-301565 Report: The West Company, Vega Alta, Puerto Rico, Additional Soils Investigations, Confidential, prepared for The West Company, prepared by Environmental Resources Management, Inc., July 8, 1988. (Note: This document is CONFIDENTIAL. It is located at U.S. EPA, Superfund Records Center, 290 Broadway, 18th Floor, New York, New York, 10007).

P. 301566-301580 Report: Analytical Quality Assurance Report, Ground Water Samples Collected 22 October 1990 through 24 October 1990, Vega Alta Superfund Site, Vega Alta, Puerto Rico, prepared for Motorola, Inc., Harman Automotive, Inc. and The West Company of Puerto Rico, Inc., prepared by Environmental Resource Management, Inc., February 13, 1991, revised March 8, 1991.

P. 301581-301583 Fax to Mr. Jose Font, from Messrs. Mike Reive and Brian Smith, re: G. L. Soil Boring Results, December 12, 1992. (Attached: Analytical Results for BH-03 and BH-03A.)

P. 301584-301678 Report: Analytical Quality Assurance Report, Unisys Corporation, Ground Water Samples Collected 17 through 20 October 1994, Vega Alta Superfund Site, Vega Alta, Puerto Rico, prepared by Environmental Resources Management, Inc., January 3, 1995.

P. 301679-302040 Letter to Messrs. David W. Thompson, Manager, Mid-Atlantic/Southeast Region, General Electric Corporate Environmental Programs, and Peter Mele, Environmental Program Manager, Unisys Corporate Environmental Affairs, from Mr. David Andersen, Project Manager, Unisys, re: SAMP Activities, First Operable Unit, Vega Alta Public Supply Wells Site, May 5, 1995. (Attached: (1) Tables 1 - 3; (2) Figures 1 - 3; and (3) Attachments A and B.)

P. 302041-302114 Letter to Mr. Jose C. Font, Project Manager, U.S. EPA, from Messrs. David J. Martin, Environmental Project Manager, Vega Alta Steering Committee and Mr. Peter P. Mele, Program Manager, Unisys Corporation, Vega Alta Steering Committee, re: Vega Alta Well Field Site, Puerto Rico, Analysis of Inorganics in Ground Water, July 25, 1995. (Attached: (1) Report: Data Validation for Vega Alta Site, Vega Alta, Puerto Rico, Inorganic Analysis Data, Total and Dissolved Metals in Water, Laboratory SDG No. 51472, prepared for Unisys Corporation, prepared by Trillium, Inc. July 18, 1995 (Attachments A and B included); (2) Report: Data Validation for Vega Alta Site, Vega Alta, Puerto Rico, Inorganic Analysis Data, Total and Dissolved Metals in Water, Laboratory SDG No. 51496, prepared for Unisys Corporation, prepared by Trillium, Inc. July 19, 1995 (Attachments A and B included); and (3) Report: Data Validation for Vega Alta Site, Vega Alta, Puerto Rico, Inorganic Analysis Data, Total and Dissolved Metals in Water, Laboratory SDG No. 51719, prepared for Unisys Corporation, prepared by Trillium, Inc. July 19, 1995 (Attachments A and B included); and (4) Report: Data Validation for Vega Alta Site, Vega Alta, Puerto Rico, Inorganic Analysis Data, Total and Dissolved Antimony and Suspended Solids in Water, Laboratory SDG No. 52019, prepared for

Unisys Corporation, prepared by Trillium, Inc. July 21, 1995 (Attachments A and B included)).

P. 302115-302244 Report: Soil Vapor Extraction Performance Test Results, Vega Alta Superfund Site, submitted to Vega Alta Steering Committee, prepared by Groundwater Technology, Inc.,February 1996.

3.3 Work Plans

P. 302245-302285 Report: Health and Safety Plan, Operable Unit Two (Source) and Supplemental Ground-Water Investigations, Vega Alta, Puerto Rico, prepared for Caribe General Electric Products, Inc., prepared by Geraghty & Miller, Inc., November 1991.

3.4 Remedial Investigation Reports

P. 302286-302291 Report: Hydrology and Effects of Development of the Water-Table Aquifer in the Vega Alta Quadrangle, Puerto Rico, prepared by Mr. Fernando Gomez-Gomez and Mr. Heriberto Torres-Sierra, U.S. Geological Survey, Water Resources Investigations Report 87-4105, 1988.

P. 302292-302341 Report: Westbay Multiport Wells at the Vega Alta Site, Part I - Basis for Selection, prepared by Beak Consultants Limited, prepared for General Electric Company, March 1990.

P. 302342-302577 Report: Final Work Plan, Vega Alta Site, Operable Unit Two (Source) and Supplemental Groundwater Investigations, prepared for U.S. EPA, Region II, prepared by Ebasco Services Incorporated, July 27, 1990

P. 302578-302766 Report: Vega Alta Project, Caribe GE Groundwater Investigation Report, Volume 1 of 5, Chapters 1 - 3, prepared for Caribe General Electric Products, Inc., prepared by Bechtel Environmental, Inc., in consultation with Beak Consultants Limited, and Environmental Solutions, Inc., November 1990.

P. 302767-302978 Report: Vega Alta Project, Caribe GE Groundwater Investigation Report, Volume 2 of 5, Chapters 4 - 6, prepared for Caribe General Electric Products, Inc., prepared by Bechtel Environmental, Inc, in

consultation with Beak Consultants Limited, and Environmental Solutions, Inc., November 1990.

P. 302979-303410 Report: Vega Alta Project, Appendices in Support of Caribe GE Groundwater Investigation Report, Volume 3 of 5, Appendices A - E, prepared for Caribe General Electric Products, Inc., prepared by Bechtel Environmental, Inc, in consultation with Beak Consultants Limited, and Environmental Solutions, Inc., November 1990.

P. 303411-303767 Report: Vega Alta Project, Appendices in Support of Caribe GE Groundwater Investigation Report, Volume 4 of 5, Appendix F, prepared for Caribe General Electric Products, Inc., prepared by Bechtel Environmental, Inc, in consultation with Beak Consultants Limited, and Environmental Solutions, Inc., November 1990.

P. 303768-304082 Report: Vega Alta Project, Appendices in Support of Caribe GE Groundwater Investigation Report, Volume 5 of 5, Appendices G - L, prepared for Caribe General Electric Products, Inc., prepared by Bechtel Environmental, Inc, in consultation with Beak Consultants Limited, and Environmental Solutions, Inc., November 1990.

P. 304083-304138 Report: Caribe GE Groundwater Investigation Report, Technical Summary, prepared for Caribe General Electric Products, Inc., prepared by Environmental Solutions, Inc., in consultation with Bechtel Environmental, Inc., and Beak Consultants Limited, December 1990.

P. 304139-304163 Report: Caribe GE Groundwater Investigation Report, Executive Summary, prepared for Caribe General Electric Products, Inc., prepared by Environmental Solutions, Inc., in consultation with Bechtel Environmental, Inc., and Beak Consultants Limited, January 1991.

P. 304164-304219 Report: Soil Vapor Extraction Technology, Reference Handbook, prepared by U.S. EPA, Superfund, February 1991.

P. 304220-304251 Quick Reference Fact Sheet: Presumptive Remedies: Policy and Procedures, prepared by U.S. EPA, Office of Solid Waste Management, Office of Emergency and Remedial Response Hazardous Site Control Division 5203G, September 1993. Attached: Quick Reference Fact Sheet:

Presumptive Remedies: Site Characterization and Technology Selection for CERCLA Sites with Volatile Organic Compounds in Soils, prepared by U.S. EPA, Office of Solid Waste Management, Office of Emergency and Remedial Response Hazardous Site Control Division 5203G, September 1993.

P. 304252-304547 Report: Operable Unit Two Remedial and Supplemental Groundwater Investigation of the Vega Alta Superfund Site, Vega Alta, Puerto Rico, Volume I of IV, Chapters 1-8, Tables, prepared for Caribe General Electric Products, Inc. and Unisys Corporation, prepared by Geraghty & Miller, Inc., April 1995.

P. 304548-304599 Report: Operable Unit Two Remedial and Supplemental Groundwater Investigation of the Vega Alta Superfund Site, Vega Alta, Puerto Rico, Volume II of IV, Figures, prepared for Caribe General Electric Products, Inc. and Unisys Corporation, prepared by Geraghty & Miller, Inc., April 1995.

P. 304600-304857 Report: Operable Unit Two Remedial and Supplemental Groundwater Investigation of the Vega Alta Superfund Site, Vega Alta, Puerto Rico, Volume III of IV, Appendices A-H, prepared for Caribe General Electric Products, Inc. and Unisys Corporation, prepared by Geraghty & Miller, Inc., April 1995.

P. 304858-305332 Report: Operable Unit Two Remedial and Supplemental Groundwater Investigation of the Vega Alta Superfund Site, Vega Alta, Puerto Rico, Volume IV of IV, Appendices I-J, prepared for Caribe General Electric Products, Inc. and Unisys Corporation, prepared by Geraghty & Miller, Inc., April 1995.

3.5 Correspondence

P. 305333-305339 Letter to Mr. Lee M. Thomas, Assistant Administrator, U.S. EPA, Region II, from Mr. Gene A. Lucero, Director, Office of Waste Programs Enforcement, U.S. EPA, Region II, re: Authorization to Proceed with Remedial Planing Activities at the Vega Alta Site - ACTION MEMORANDUM, September 19, 1983. (Attached: ACTION MEMORANDUM, Vega Alta Site, Vega Alta, Puerto Rico, undated; (1) Memorandum to Mr. Gene A.

Lucero, Director, Office of Waste Programs Enforcement, (WH-527), U.S. EPA, Region II, from Mr. Kirk Sniff, Acting Associate Enforcement Counsel for Waste (LE-134S), re: Authorization to Proceed with Remedial Investigation and Feasibility Study at the Vega Alta Site, Vega Alta, Puerto Rico--ACTION MEMORANDUM, September 15, 1983; (2) Memorandum to Mr. Gene A. Lucero, Director, Office of Waste Programs Enforcement, (WH-527), U.S. EPA, Region II, from Mr. William N. Hedeman, Jr., Director, Office of Emergency and Remedial Response (WH-527), re: Authorization to Proceed with Remedial Investigation and Feasibility Study at the Vega Alta Site, Vega Alta, Puerto Rico--ACTION MEMORANDUM, September 15, 1983; (3) Letter to Mr. John Frisco, Chief, Hazard Assessment Section, U.S. EPA, Region II, from Mr. Francisco Gonzalez Quinones, Deputy Executive Director, re: Deep Wells Contaminated with Volatile Organics in Vega Alta, June 24, 1983.)

P. 305340-305371 Letter to Bernice Corman, Esquire, Office of Regional Counsel, U.S. EPA, Region II, from Ms. Jennifer R. Clarke, Dechert, Price & Rhoads, re: Vega Alta Superfund Site, February 10, 1988. (Attachment: Analytical Quality Assurance Review, and various analytical and field sampling methods prepared by ERM.)

P. 305372-305373 Letter to Mr. Robert R. Williams, Chief, Public Water Supply Section, U.S. EPA, Region II, from Mr. Allen L. Zack, Caribbean District Chief, U.S. Department of Interior, re: attached requested results for the "Puerto Rico Islandwide Ground Water Volatile Synthetic Organic Chemicals", February 7, 1989. (Attachment.)

P. 305374-305378 Letter to Mr. Pedro A. Gelabert, Director, Caribbean Field Office, U.S. EPA, Region II, from Mr. Joseph W. Troester, Hydrologist, Caribbean District, U.S. Department of Interior, re: Draft Work Plan for Second Operable Unit Remedial Investigation/Feasibility Study at the Vega Alta Public Supply Wells Site, Vega Alta, Puerto Rico, May 25, 1989. (Attachment: comments and recommendations.)

P. 305379-305382 Letter to John Zackrison, Esquire, Kirkland & Ellis, from Ms. Carole Petersen, Chief, New York/Caribbean Compliance Branch, U.S. EPA, Region

		II, re: Unilateral RD/RA Order (Index No. II-CERCLA-90302); Vega Alta Wellfield Superfund Site, Vega Alta, Puerto Rico; Motorola, Inc., et al., September 26, 1989.
P.	305383-305384	Letter to John Zackrison, Esquire, Kirkland & Ellis, form Ms. Carole Petersen, Chief, New York/Caribbean Branch, U.S. EPA, Region II, re: comments on the October 10, 1989, Revised Vega Alta Sampling Analysis and Monitoring Plan ("SAMP") submitted by Motorola, Inc., Harman Automotive, Inc., and West Company, November 27, 1989.
P.	305385-305535	Letter to Mr. Jose C. Font, Caribbean Field Office, U.S. EPA, Region II, from S. J. Buckley, Project Manager, Bechtel Environmental, Inc., re: enclosed Bechtel Job No. 20034-010, Vega Alta Project, TECHNICAL MEMORANDUM, February 26, 1990. (Attachment.)
P.	305536-305537	Letter to Mr. Jose C. Font, Vega Alta Project Manager, Caribbean Field Office, U.S. EPA, Region II, from Mr. K. Berry-Spark, M.Sc., Contaminant Hydrogeologist, Beak Consultants Limited, re: Westbay Multiport Wells at Vega Alta Site, Part I-Basis for Selection, April 30, 1990.
P.	305538-305546	Letter to Mr. Eduardo M. Negron Navas, Fiddler, Gonzalez & Rodriguez, Attorney and Consellors at Law, from Messrs. Hector Fuentes, Alternate Member, Pedro A. Maldonado, Vice Chairman and Santos Rohena, Chairman, Commonwealth of Puerto Rico/Office of the Governor, re: authorization to discharge purge water into Honda Creek in Vega Alta, May 9, 1990. (Attachments: (1) Table A-1 "Effluent Limitations and Monitoring Requirements", (2) Facsimile to Ms. Susan Barry, Environmental Resources Management, Inc., from Mr. Eduardo Negron Navas, Fiddler, Gonzalez & Rodriguez, re: EQBs Authorization, May 9, 1990, (3) Letter of Transmittal to Mr. Jose Font, Caribbean Field Office, U.S. EPA, Region II, from Ms. Susan T. Barry, Environmental Resources Management, Inc., re: Monthly Progress Report and EQB Permit, June 11, 1990.)
P.	305547-305549	Letter to Mr. Michael Siegel, U.S. EPA, Region II, from Mr. Eduardo L. Buso, Assistant Secretary, GE Puerto Rico Operation, re: NPDES Permit No. PR

0000566, Caribe CE Ccntrols, Vega Alta, PR, September 28, 1990.

P. 305550-305551 Letter to Bernice I. Corman, Esquire, Assistant Regional Ccunsel, U.S. EPA, Region II, and Messrs. Mel Hauptman, Vega Alta Project Manager, U.S. EPA, Region II; Santos Rohena Betancourt, Jr., Chairman, Puerto Rico Environmental Quality Board; and Jose C. Font, Vega Alta Project Manager, Caribbean Field Office, U.S. EPA, Region II, from Mr. Kevin W. Holtzclaw, Project Coordinator, GE Corporate Environmental Programs, re: Administrative Order Index No. II-CERCLA-90301; Vega Alta Superfund Site, November 17, 1990.

P. 305552-305554 Letter to Mr. Mel Hauptman, Vega Alta Project Manager, Chief, New York/Caribbean Compliance Branch, U.S. EPA, Region II, from Mr. Kevin W. Holtzclaw, re: attached Monthly Progress Report for November, 1990, December 10, 1990.

P. 305555-305556 Letter to Mr. Frank C. Brock, Chief, Underground Injection Control Section, U.S. EPA, Region II, from Mr. Miguel A. Rivera, Vice President for Development Branch, Commonwealth of Puerto Rico, Puerto Rico Industrial Development Company, re: Closure Plan - Injection Well, Harman Automotive of P.R., Inc., Vega Alta, Puerto Rico, Project: S-1371-0-85, January 18, 1991.

P. 305557-305561 Letter to Mr. Michael Siegel, U.S. EPA, Region II, from Mr. Nestor Marquez, Manager, Environmental, Health and Safety, GE Puerto Rico Operations, re: NPDES Permit No. PR0000566, Caribe General Electric Products, Inc., Vega Alta Controls, Vega Alta, Puerto Rico, January 22, 1991. (Attachments: (1) Process Flow Diagram, Water and Wastewater Treatment, General Electric, Vega Alta, Puerto Rico (2) General Electric, Vega Alta, Puerto Rico, Wastewater Management Plan, Project Schedule, July 17, 1990.)

P. 305562-305565 Letter to Mr. Frank C. Brock, Underground Injection Control Section, U.S. EPA, Region II, from Mr. Miguel A. Rivera Carrasquillo, Vice President for Development, Commonwealth of Puerto Rico, Puerto Rico Industrial Development Company, re: Closure Plan - Injection Well, Harman Automotive of PR, Inc., Vega Alta, Puerto Rico,

Project No. S-1371-0-85, April 4, 1991. (Attachments: (1) "Acknowledgement of Receipt of Nonhazardous Waste", reported by Ms. Marta Hernandez, TSDF Chemist, November 8, 1990 (2) Letter to Mr. Miguel A. Rivera, Vice President, Development Branch, Puerto Rico Industrial Company, from Mr. Frank C. Brock, Chief, Underground Injection Control Section, re: Soil Samples at Well Site, Harman Automotive, Inc., Vega Alta, PR, PRIDCO Project: S-1371-0-85, March 11, 1991.)

P. 305566-305568 Letter to Mr. Mel Hauptman, Vega Alta Project Manager, Chief, New York/Caribbean Compliance Branch, U.S. EPA, Region II, from Mr. Kevin W. Holtzclaw, Manager, Remedial Projects, Mid-Atlantic Region, GE Corporate Environmental Programs, re: attached Monthly Progress Report for November 1991, December 10, 1991.

P. 305569-305571 Letter to Ms. Sally Odland, Camp Dresser and McKee, Federal Programs Corp., from Messrs. Brian Blum, Senior Scientist/Project Manager; Brian Smith, Senior Scientist; and Daniel Nachman, Vice President/Project Director, Geraghty & Miller, Inc., re: Ground-Water Sampling in the OUII Investigation Area, Vega Alta, Puerto Rico, December 17, 1991. (Attachment: Table 1. Wells Scheduled for Sampling at the OUII Investigation Area, Vega Alta, Puerto Rico, undated.)

P. 305572-305572 Letter to Ms. Sally Odland, Camp Dresser and McKee, Federal Programs Corp., from Messrs. Brian Blum, Senior Hydrogeclogist/Project Manager and Daniel A. Nachman, Vice President/Project Director, Geraghty & Miller, Inc., re: Ground-Water Sampling in the OUII Investigation Area, Vega Alta, Puerto Rico, December 19, 1991.

P. 305573-305574 Letter to Mr. Jose C. Font, Vega Alta Project Manager, Caribbean Field Office, U.S. EPA, Region II, from MS. Sally Odland, Work Assignment Manager, CDM Federal Programs Corporation, re: Revision to Brossman Short Form Dated 11/19/91, December 31, 1991.

P. 305575-305577 Letter to Mr. Mel Hauptman, Vega Alta Project Manager, Chief, New York/Caribbean Compliance Branch, U.S. EPA, Region II, from Mr. Kevin W. Holtzclaw, Manager, Remedial Projects, Mid-Atlantic Region, GE Corporate Environmental

Programs, re: attached Monthly Progress Report for December 1991, January 10, 1992.

P. 305578-305578 Letter to Mr. Jose Perez, Teledyne Packaging of Puerto Rico, Inc., from Messrs. Brian A. Smith, Senior Scientist and Daniel A. Nachman, Vice President/Project Director, Geraghty & Miller, Inc., re: Surveys to be conducted at the Teledyne Packaging grounds in Vega Alta in accordance with the Administrative Order (Index No. II-CERCLA-00301), February 13, 1992.

P. 305579-305595 Letter to Ms. Catherine E. Moyik, TES V Regional Project Officer, U.S. EPA, Region II, from Mr. Scott B. Graber, TES V Regional Manager, re: Draft Summary Technical Review Report Concerning PRP Groundwater Investigation Documents, DCN: TESV-C02081-LR-CKBG, March 2, 1992. (Attached: Draft, Summary Technical Review Report Concerning PRP Groundwater Investigation Documents, Vega Alta Water Supply Well Site, Operable Unit II, Vega Alta, Puerto Rico, prepared for U.S. EPA, Region II, Office of Waste Programs Enforcement, prepared by CDM FPC, February 28, 1992.) (Note: This document is CONFIDENTIAL. It is located at U.S. EPA Superfund Records Center, 290 Broadway, 18th floor, N.Y., N.Y. 10007-1866.)

P. 305596-305599 Letter to Mr. Mel Hauptman, Vega Alta Project Manager, Chief, New York/Caribbean Compliance Branch, U.S. EPA, Region II, from Mr. Kevin W. Holtzclaw, Manager, Remedial Projects, Mid-Atlantic Region, GE Corporate Environmental Programs, re: attached Monthly Progress Report for February 1992, March 10, 1992.

P. 305600-305602 Letter to Mr. Jose Font, Vega Alta Project Manager, Caribbean Field Office, U.S. EPA, Region II, from Mr. Kevin W. Holtzclaw, Manager, Remedial Projects, Mid-Atlantic Region, GE Corporate Environmental Programs, re: Groundwater Flow and Transport Model, Vega Alta Site, Puerto Rico, April 10, 1992. (Attachment: Letter to Mr. Mel Hauptman, Vega Alta Project Manager, New York/Caribbean Compliance Branch, U.S. EPA, Region II, from Mr. David W. Thompson, Manager, Mid-Atlantic/Southeast Region, Environmental Remediation Programs, GE Company, re: Vega Alta Superfund Site, July 15, 1992.)

P.	305603-305619	Letter to Mr. Mel Hauptman, Vega Alta Project Manager, Chief, New York/Caribbean Compliance Branch, U.S. EPA, Region II, from Mr. Kevin W. Holtzclaw, Manager, Remedial Projects, Mid-Atlantic Region, GE Corporate Environmental Programs, re: attached Monthly Progress Report for March 1992, April 10, 1992.
P.	305620-305621	Letter to Mr. Jose C. Font, Vega Alta Project Manager, Caribbean Field Office, U.S. EPA, Region II, from MS. Sally Odland, Work Assignment Manager, CDM Federal Programs Corporation, re: Status of CLP Data, April 30, 1992.
P.	305622-305653	Letter to Mr. Mel Hauptman, Vega Alta Project Manager, Chief, New York/Caribbean Compliance Branch, U.S. EPA, Region II, from Mr. Kevin W. Holtzclaw, Manager, Remedial Projects, Mid-Atlantic Region, GE Corporate Environmental Programs, re: attached Monthly Progress Report for April 1992, May 10, 1992.
P.	305654-305660	Letter to Mr. Mel Hauptman, Vega Alta Project Manager, Chief, New York/Caribbean Compliance Branch, U.S. EPA, Region II, from Mr. Kevin W. Holtzclaw, Manager, Remedial Projects, Mid-Atlantic Region, GE Corporate Environmental Programs, re: Administrative Order Index No. II - CERCLA-00301: Approval of Transfer of Project Coordinator for Vega Alta Well Field, May 20, 1992. (Attachments: (1) Addressee list (2) Corporate resume of David W. Thompson.)
P.	305661-305716	Letter to Mr. Mel Hauptman, Vega Alta Project Manager, Chief, New York/Caribbean Compliance Branch, U.S. EPA, Region II, from Mr. Kevin W. Holtzclaw, Manager, Remedial Projects, Mid-Atlantic Region, GE Corporate Environmental Programs, re: attached Monthly Progress Report for May 1992, June 10, 1992.
P.	305717-305717	Letter to Mr. Jose Font, Vega Alta Project Manager, Caribbean Field Office, U.S. EPA, Region II, from Mr. Kevin W. Holtzclaw, Manager, Remedial Projects, Mid-Atlantic Region, GE Corporate Environmental Programs, re: Vega Alta Superfund Site, June 29, 1992.
P.	305717A-305717K	Letter to Ms. Catherine E. Moyik, TES V Regional Project Officer, U.S. EPA, Region II, from Mr. Scott B. Graber, TES V Regional Manager, re:

Meeting Notes - Geraghty and Miller Modeling Results from PRP Meeting Attended on June 23, DCN: TESV-C02081-LR-CMYN, July 1, 1992. (Attached: Confidential Memorandum Meeting Notes, Geraghty and Miller Groundwater Modeling Results, June 23, 1992, Vega Alta Water Supply Well Site, Operable Unit II, Vega Alta, Puerto Rico, prepared for U.S. EPA, Region II, Office of Waste Programs Enforcement, prepared by CDM FPC, July 1, 1992.) (Note: This document is CONFIDENTIAL. It is located at U.S. EPA Superfund Records Center, 290 Broadway, 18th floor, N.Y., N.Y. 10007-1866.)

P. 305718-305720 Letter to Mr. Mel Hauptman, Vega Alta Project Manager, Chief, New York/Caribbean Compliance Branch, U.S. EPA, Region II, from Mr. David W. Thompson, Manager, Remedial Projects, Mid-Atlantic/Southeast Region, GE Corporate Environmental Programs, re: attached Monthly Progress Report for June 1992, July 8, 1992.

P. 305721-305722A Letter to Mr. Mel Hauptman, Vega Alta Project Manager, Chief, New York/Caribbean Compliance Branch, U.S. EPA, Region II, from Mr. David W. Thompson, Manager, Remedial Projects, Mid-Atlantic/Southeast Region, GE Corporate Environmental Programs, re: attached Monthly Progress Report for July 1992, August 6, 1992.

P. 305723-305726 Letter to Mr. Jose Font, Vega Alta Project Manager, Caribbean Field Office, U.S. EPA, Region II, from Mr. David W. Thompson, Manager, Mid-Atlantic Southeast Region, Environmental Remediation Program, GE Company, re: submittal of report entitled "Groundwater Flow and Transport Model of the Vega Alta Area, Vega Alta, Puerto Rico", prepared by Geraghty & Miller for GE, August 20, 1992. (Attachment: Distribution List.)

P. 305727-305733 Letter to Ms. Catherine E. Moyik, TES V Regional Project Officer, U.S. EPA, Region II, from Mr. Scott B. Graber, TES V Regional Manager, re: Review of GEs Technical Memorandum - Summary of Field Activities for the Operable Unit Two Remedial Investigation, DCN: TESV-C02081-LR-CPHD, August 20, 1992. (Attached: Review of Caribe General Electric Products Report, Technical Memorandum Summary of Initial Field Activities for the Operable Unit Two, Remedial Investigation, Vega Alta, Puerto Rico, Dated July 1992, prepared for U.S. EPA, Region II, Office of Waste Programs

Enforcement, prepared by CDM FPC, August 20, 1992.)

P. 305734-305736 Letter to Mr. Mel Hauptman, Vega Alta Project Manager, Chief, New York/Caribbean Compliance Branch, U.S. EPA, Region II, from Mr. David W. Thompson, Manager, Remedial Projects, Mid-Atlantic/Southeast Region, GE Corporate Environmental Programs, re: attached Monthly Progress Report for August 1992, September 7, 1992.

P. 305737-305740 Letter to Mr. David W. Thompson, Environmental Remediation Program, General Electric Company, from Ms. Carole Petersen, Chief, New York/ Caribbean Superfund Branch II, U.S. EPA, Region II, re: Review of Caribe General Electric Products Report, Technical Memorandum Summary of Initial Field Activities for the Operable Unit Two, Remedial Investigation, Vega Alta, Puerto Rico, Dated July 1992, September 11, 1992.

P. 305741-305746 Letter to Mr. Jose C. Font, U.S. EPA, Region II, from Ms. Sally Odland, Work Assignment Manager, CDM Federal Programs Corporation, re Review of ERM Comments on Caribe General Electric Products July 1992 Technical Memorandum, September 25, 1992.

P. 305747-305749 Letter to Mr. Mel Hauptman, Vega Alta Project Manager, Chief, New York/Caribbean Compliance Branch, U.S. EPA, Region II, from Mr. David W. Thompson, Manager, Remedial Projects, Mid-Atlantic/Southeast Region, GE Corporate Environmental Programs, re: attached Monthly Progress Report for September 1992, October 8, 1992.

P. 305750-305754 Letter to Ms. Carole Petersen, Chief, New York/Caribbean Superfund Branch, U.S. EPA, Region II, from Mr. David W. Thompson, Manager, Remedial Projects, Mid-Atlantic/Southeast Region, GE Corporate Environmental Programs, re: attached Geraghty & Miller letter re: Vega Alta, Puerto Rico Public Supply Well Field Site, Response to ERM, Inc., Comments on OUII Technical Memorandum, October 14, 1992. (Attachment.)

P. 305755-305760 Letter to Ms. Carole Petersen, Chief, New York/Caribbean Superfund Branch, U.S. EPA, Region II, from Mr. David W. Thompson, Manager, Remedial Projects, Mid-Atlantic/Southeast Region, GE

Corporate Environmental Programs, re: attached Geraghty & Miller letter re: Vega Alta, Puerto Rico Public Supply Well Field Site, Response to U.S. EPA Comments on OUII Technical Memorandum, October 15, 1992. (Attachments)

P. 305761-305769 Letter to Jane W. Gardener, Esquire, General Electric Company, from Ms. Bernice I. Corman, Assistant Regional Counsel, U.S. EPA, Region II, re: Camp, Dresser & McKee Review of Geraghty & Miller Saltwater Intrusion Study, October 22, 1992. (Attachment: Letter to Mr. Jose Font, Vega Alta Project Manager, Caribbean Field Office, U.S. EPA, Region II, from Ms. Sally Odland, Work Assignment Manager, Camp, Dresser & McKee, Federal Programs Corp., re: CDM Comments on General Electrics Groundwater Modeling of the Vega Alta Area and Presented in their July 1992 Technical Memorandum and the September 29, 1992 Meeting at EPA, October 22, 1992.)

P. 305770-305776 Letter to Mr. Jose C. Font, U.S. EPA, Region II, Caribbean Field Office, from Ms. Sally Odland, Work Assignment Manager, CDM Federal Programs Corporation, re: CDM Comments on General Electrics Groundwater Modeling of the Vega Alta Area as Presented in their July 1992 Technical Memorandum and September 29, 1992 Meeting at EPA, October 22, 1992.

P. 305777-305785 Letter to Mr. Erwin Smieszek, TES V Regional Project Officer, U.S. EPA, Region II, from Mr. Scott B. Graber, TES V Regional Manager, CDM Federal Programs Corporation, re: attached CDM Comments on General Electrics Groundwater Modeling of the Vega Alta Area as Presented in their July 1992 Meeting at EPA, October 22, 1992.

P. 305786-305786 Letter to Mr. Jose Font, Vega Alta Project Manager, Caribbean Field Office, U.S. EPA, Region II, from Messrs. Brian A. Smith, Senior Scientist/Project Manager and Daniel A. Nachman, Vice President/Project Director, Geraghty & Miller, Inc., re: Sampling and Analysis for the Borehole Investigation, Vega Alta Operable Unit II, October 30, 1992.

P. 305787-305789 Letter to Mr. Mel Hauptman, Vega Alta Project Manager, Chief, New York/Caribbean Compliance Branch, U.S. EPA, Region II, from Mr. David W. Thompson, Manager, Remedial Projects, Mid-Atlantic

Southeast Region, GE Corporate Environmental Programs, re: attached Monthly Progress Report for October 1992, November 10, 1992.

P. 305790-305793 Letter to Mr. Adalberto Bosque, Acting Work Assignment Manager, from Ms. Sally Odland, Work Assignment Manager, CDM Federal Programs Corporation, re: Change in Location of Boring #36, November 10, 1992.

P. 305794-305796 Letter to Mr. Jose Font, Vega Alta Project Manager, Caribbean Field Office, U.S. EPA, Region II, from Messrs. Brian A. Smith, Senior Scientist/Project Manager and Daniel A. Nachman, Vice President/Project Director, Geraghty & Miller, Inc., re: Vega Alta OUII Borehole Drilling Investigation, November 19, 1992. (Attachments: data.)

P. 305797-305798 Letter to Mr. Mel Hauptman, Vega Alta Project Manager, Chief, New York/Caribbean Compliance Branch, U.S. EPA, Region II, from Mr. David W. Thompson, Manager, Remedial Projects, Mid-Atlantic Southeast Region, GE Corporate Environmental Programs, re: attached Monthly Progress Report for November 1992, December 10, 1992.

P. 305799-305806 Letter to Mr. Erwin Smieszek, TES V Regional Project Officer, U.S. EPA, Region II, from Mr. Scott B. Graber, TES V Regional Manager, re: Summary of Meetings in Puerto Rico on December 8, 1992 Concerning the OUI Remedy, DCN: TESV-C02081-LR-CSRY, December 22, 1992.

P. 305807-305809 Letter to Mr. Mel Hauptman, Vega Alta Project Manager, Chief, New York/Caribbean Compliance Branch, U.S. EPA, Region II, from Mr. David W. Thompson, Manager, Remedial Projects, Mid-Atlantic/Southeast Region, GE Corporate Environmental Programs, re: attached Monthly Progress Report for December 1992, January 10, 1993.

P. 305810-305819 Letter to Mr. Jose Font, Vega Alta Project Manager, Caribbean Field Office, U.S. EPA, Region II, from Ms. Sally Odland, Work Assignment Manager, CDM Federal Programs Corp., re: Change in Location of Boring #4, January 12, 1993. (Attachments: data.)

P. 305820-305831 Letter to Mr. Mel Hauptman, Vega Alta Project Manager, Chief, New York/Caribbean Compliance Branch, U.S. EPA, Region II, from Mr. David W. Thompson, Manager, Remedial Projects, Mid-Atlantic/Southeast Region, GE Corporate Environmental Programs, re: attached Monthly Progress Report for January 1993, February 10, 1993.

P. 305832-305857 Letter to Mr. Mel Hauptman, Vega Alta Project Manager, Chief, New York/Caribbean Compliance Branch, U.S. EPA, Region II, from Mr. David W. Thompson, Manager, Remedial Projects, Mid-Atlantic/Southeast Region, GE Corporate Environmental Programs, re: attached Monthly Progress Report for February 1993, March 9, 1993.

P. 305858-305870 Letter to Mr. Jose Font, Vega Alta Project Manager, Caribbean Field Office, U.S. EPA, Region II, from Mr. David W. Thompson, Manager, Remedial Projects, Mid-Atlantic/Southeast Region, GE Corporate Environmental Programs, re: Additional Work Under the Vega Alta OUII Remedial Investigation, March 11, 1993. (Attachments: data.)

P. 305871-305902 Letter to Mr. Ervin Smieszek, TES V Regional Project Officer, U.S. EPA, Region II, from Mr. Scott Graber, TES V Regional Manager, re: Summary of Field Oversight Activities, March 16, 1993, DCN: TESV-C02081-LR-CVRW, March 16, 1993. (Attached: Summary of Field Oversight Activities March 1993, Vega Alta Water Supply Well Site, Operable Unit II, Vega Alta, Puerto Rico, prepared for U.S. Environmental Protection Agency, Office of Waste Program Enforcement, prepared by CDM FPC, March 16, 1993.)

P. 305903-305904 Letter to Mr. Jose C. Font, U.S. EPA, Region II, Caribbean Field Office, from Ms. Sally Odland, Work Assignment Manager, CDM Federal Programs Corporation, re: Locations of Proposed Additional Multiport Wells, March 22, 1993.

P. 305905-305916 Letter to Mr. Mel Hauptman, Vega Alta Project Manager, Chief, New York/Caribbean Compliance Branch, U.S. EPA, Region II, from Mr. David W. Thompson, Manager, Remedial Projects, Mid-Atlantic/Southeast Region, GE Corporate Environmental Programs, re: attached Monthly Progress Report for March 1993, April 8, 1993.

P. 305917-305923 Letter to Mr. Mel Hauptman, Vega Alta Project Manager, Chief, New York/Caribbean Compliance Branch, U.S. EPA, Region II, from Mr. David W. Thompson, Manager, Remedial Projects, Mid-Atlantic/ Southeast Region, GE Corporate Environmental Programs, re: attached Monthly Progress Report for April 1993, May 4, 1993.

P. 305924-305926 Letter to Mr. Jose C. Font, U.S. EPA, Region II, Caribbean Field Office, from Ms. Sally Odland, Work Assignment Manager, CDM Federal Programs Corporation, re: Response to Questions Regarding the Chemical Fate of 1,1-Dichloroethene and Freon, May 24, 1993. (Attached: References Cited.)

P. 305927-305928 Letter to Mr. Mel Hauptman, Vega Alta Project Manager, Chief, New York/Caribbean Compliance Branch, U.S. EPA, Region II, from Mr. David W. Thompson, Manager, Remedial Projects, Mid-Atlantic/Southeast Region, GE Corporate Environmental Programs, re: attached Monthly Progress Report for May 1993, June 8, 1993.

P. 305929-305935 Letter to Mr. Mel Hauptman, Vega Alta Project Manager, Chief, New York/Caribbean Compliance Branch, U.S. EPA, Region II, from Mr. David W. Thompson, Manager, Remedial Projects, Mid-Atlantic/Southeast Region, GE Corporate Environmental Programs, re: attached Monthly Progress Report for June 1993, July 9, 1993.

P. 305936-305936 Letter to Ms. Lourdes Rodriguez, Esquire, Assistant to the Governor, Office of the Governor, from Mr. George Pavlou, Acting Director, Emergency and Remedial Response Division, U.S. EPA, Region II, re: Vega Alta Public Supply Wells Superfund Site, July 16, 1993.

P. 305937-305939 Letter to Mr. Mel Hauptman, Vega Alta Project Manager, Chief, New York/Caribbean Compliance Branch, U.S. EPA, Region II, from Mr. David W. Thompson, Manager, Remedial Projects, Mid-Atlantic/Southeast Region, GE Corporate Environmental Programs, re: attached Monthly Progress Report for July 1993, August 9, 1993.

P. 305940-305942 Letter to Mr. Mel Hauptman, Vega Alta Project Manager, Chief, New York/Caribbean Compliance Branch, U.S. EPA, Region II, from Mr. David W. Thompson, Manager, Remedial Projects, Mid-Atlantic/Southeast Region, GE Corporate

Environmental Programs, re: attached Monthly Progress Report for August 1993, September 9, 1993.

P. 305943-305946 Letter to Mr. Mark E. Grummer, Esquire, Kirkland & Ellis, from Ms. Carole Petersen, Chief, New York/Caribbean Superfund Branch, U.S. EPA, Region II, re: U.S. EPA comments on the Initial Testing Program (ITP) submitted by Environmental Resources Management, Inc., dated August 3, 1993, for the Vega Alta Superfund Site, October 1, 1993.

P. 305947-305949 Letter to Mr. Mel Hauptman, Vega Alta Project Manager, Chief, New York/Caribbean Compliance Branch, U.S. EPA, Region II, from Mr. David W. Thompson, Manager, Remedial Projects, Mid-Atlantic/Southeast Region, GE Corporate Environmental Programs, re: attached Monthly Progress Report for September 1993, October 7, 1993.

P. 305950-305987 Letter to Mr. Mel Hauptman, Vega Alta Project Manager, Chief, New York/Caribbean Compliance Branch, U.S. EPA, Region II, from Mr. David W. Thompson, Manager, Remedial Projects, Mid-Atlantic/Southeast Region, GE Corporate Environmental Programs, re: attached Monthly Progress Report for October 1993, November 9, 1993.

P. 305988-305990 Letter to Mr. Mel Hauptman, Vega Alta Project Manager, Chief, New York/Caribbean Compliance Branch, U.S. EPA, Region II, from Mr. David W. Thompson, Manager, Remedial Projects, Mid-Atlantic/Southeast Region, GE Corporate Environmental Programs, re: attached Monthly Progress Report for November 1993, December 10, 1993.

P. 305991-305993 Letter to Mr. Mel Hauptman, Vega Alta Project Manager, Chief, New York/Caribbean Compliance Branch, U.S. EPA, Region II, from Mr. David W. Thompson, Manager, Remedial Projects, Mid-Atlantic/Southeast Region, GE Corporate Environmental Programs, re: attached Monthly Progress Report for December 1993, January 10, 1994.

P. 305994-305996 Letter to Mr. Mel Hauptman, Vega Alta Project Manager, Chief, New York/Caribbean Compliance Branch, U.S. EPA, Region II, from Mr. David W.

Thompson, Manager, Remedial Projects, Mid-Atlantic/Southeast Region, GE Corporate Environmental Programs, re: attached Monthly Progress Report for March 1994, April 8, 1994.

P. 305997-306004 Letter to Mr. William J. McCabe, Deputy Director, Caribbean Programs, U.S. EPA, Region II, and to Mr. Jose C. Font, U.S. EPA, Region II, Caribbean Field Office, from Ms. Margaret N. Strand, Eckert Seamans Cherin & Mellott, re: Vega Alta Superfund Site, Operable Unit II, Comments on Report Submitted by Caribe General Electric and Unisys, May 23, 1994.

P. 306004A-306025 Letter to Mr. David W. Thompson, Manager, Remedial Projects, Mid-Atlantic/Southeast Region, GE Corporate Environmental Programs, from Ms. Carole Petersen, Chief, New York/Caribbean Superfund Branch, U.S. EPA, Region II, re: EPA and the Commonwealth of Puerto Rico Environmental Quality Board comments on General Electrics Operable Unit Two Remedial and Supplemental Groundwater Investigation Report of the Vega Alta Superfund Site, dated January 1994, May 25, 1994. (Attachment: references.)

P. 306026-306028 Letter to Mr. Mel Hauptman, Vega Alta Project Manager, Chief, New York/Caribbean Compliance Branch, U.S. EPA, Region II, from Mr. David W. Thompson, Manager, Remedial Projects, Mid-Atlantic/Southeast Region, GE Corporate Environmental Programs, re: attached Monthly Progress Report for May 1994, June 6, 1994.

P. 306029-306094 Letter to Ms. Carole Petersen, Chief, New York/Caribbean Superfund Branch, U.S. EPA, Region II, from Mr. David W. Thompson, Manager, Remedial Projects, Mid-Atlantic/Southeast Region, GE Corporate Environmental Programs, re: attached Response to U.S. EPA Comments on the Operable Unit Two Remedial and Supplemental Groundwater Investigation Report, June 30, 1994. (Attachment.)

P. 306095-306097 Letter to Mr. Mel Hauptman, Vega Alta Project Manager, Chief, New York/Caribbean Compliance Branch, U.S. EPA, Region II, from Mr. David W. Thompson, Manager, Remedial Projects, Mid-Atlantic/Southeast Region, GE Corporate Environmental Programs, re: attached Monthly Progress Report for June 1994, July 8, 1994.

P. 306098-306100 Letter to Mr. Mel Hauptman, Vega Alta Project Manager, Chief, New York/Caribbean Compliance Branch, U.S. EPA, Region II, from Mr. David W. Thompson, Manager, Remedial Projects, Mid-Atlantic/Southeast Region, GE Corporate Environmental Programs, re: attached Monthly Progress Report for July 1994, August 9, 1994.

P. 306101-306102 Letter to Mr. Jose C. Font, U.S. EPA, Region II, Caribbean Field Office, from Mr. Hector Russe Martinez, Chairman, Commonwealth of Puerto Rico, Office of the Governor, Environmental Quality Board, Emergency Response and Superfund Area, re: Response to U.S. EPA Comments, OU-II Remedial and Supplemental Groundwater Investigation Report, Vega Alta Superfund site, Vega Alta, Puerto Rico, August 12, 1994.

P. 306103-306105 Letter to Mr. Mel Hauptman, Vega Alta Project Manager, Chief, New York/Caribbean Compliance Branch, U.S. EPA, Region II, from Mr. David W. Thompson, Manager, Remedial Projects, Mid-Atlantic/Southeast Region, GE Corporate Environmental Programs, re: attached Monthly Progress Report for August 1994, September 9, 1994.

P. 306106-306161 Letter to Mr. Jose Font, Vega Alta Project Manager, Caribbean Field Office, U.S. EPA, Region II, from Mr. David W. Thompson, Manager, Remedial Projects, Mid-Atlantic/Southeast Region, GE Corporate Environmental Programs, re: proper discharge of purge water into the Ponderosa Treatment System, September 27, 1994. (Attachments: various data and correspondence relating to the purge water discharge.)

P. 306162-306164 Letter to Mr. Mel Hauptman, Vega Alta Project Manager, Chief, New York/Caribbean Compliance Branch, U.S. EPA, Region II, from Mr. David W. Thompson, Manager, Remedial Projects, Mid-Atlantic/Southeast Region, GE Corporate Environmental Programs, re: attached Monthly Progress Report for September 1994, October 6, 1994.

P. 306165-306166 Facsimile to Mr. Jose Font, Vega Alta Project Manager, Caribbean Field Office, U.S. EPA, Region II, from Mr. David W. Thompson, Manager, Remedial Projects, Mid-Atlantic/Southeast Region, GE Corporate Environmental Programs, re: attached

letter to Mr. Dave Thompson, GE, from James S. Smith, Ph.D., President/Chemist, Trillum Inc., Environmental Consultants, re: Analytical Detection Limits, November 7, 1994.

P. 306167-306169 Letter to Mr. Mel Hauptman, Vega Alta Project Manager, Chief, New York/Caribbean Compliance Branch, U.S. EPA, Region II, from Mr. David W. Thompson, Manager, Remedial Projects, Mid-Atlantic/Southeast Region, GE Corporate Environmental Programs, re: attached Monthly Progress Report for October 1994, November 9, 1994.

P. 306170-306172 Letter to Mr. Mel Hauptman, Vega Alta Project Manager, Chief, New York/Caribbean Compliance Branch, U.S. EPA, Region II, from Mr. David W. Thompson, Manager, Remedial Projects, Mid-Atlantic/Southeast Region, GE Corporate Environmental Programs, re: attached Monthly Progress Report for November 1994, December 8, 1994.

P. 306173-306175 Letter to Mr. Mel Hauptman, Vega Alta Project Manager, Chief, New York/Caribbean Compliance Branch, U.S. EPA, Region II, from Mr. David W. Thompson, Manager, Remedial Projects, Mid-Atlantic/Southeast Region, GE Corporate Environmental Programs, re: attached Monthly Progress Report for December 1994, January 9, 1995.

P. 306176-306212 Letter to Mr. David W. Thompson, Manager, Remedial Projects, Mid-Atlantic/Southeast Region, GE Corporate Environmental Programs, from Ms. Carole Petersen, Chief, New York/Caribbean Superfund Branch, U.S. EPA, Region II, re: U.S. EPA and the Commonwealth of Puerto Rico Environmental Quality Board evaluation of GEs and Unisys "Response to EPA Comments on the OU-II Remedial and Supplemental Groundwater Investigation Report, Vega Alta Superfund Site, Vega Alta, Puerto Rico", January 15, 1995.

P. 306213-306217 Letter to Vega Alta Project Manager, Site Compliance Branch, Emergency and Remedial Response Division, U.S. Environmental Protection Agency, from Mr. David J. Martin, Environmental Project Manager, Unisys Corporation, and Mr. Peter P. Mele, Program Manager, Unisys Corporation, re: December 1994 Progress Report, Vega Alta Well

Site, Puerto Rico, January 19, 1995. (Attached: (1) Letter to Chief, New York/Caribbean Compliance Branch, Emergency and Remedial Response Division, United States Protection Agency, from David. W. Thompson, GE Corporate Environmental Programs, re: Monthly Progress Report for December 1994, January 19, 1995; (2) List of Addresses; (3) Monthly Progress Report, January 9, 1995.)

P. 306218-306228 Letter to Mr. Jose Font, Vega Alta Project Manager, Caribbean Field Office, U.S. EPA, Region II, from Mr. David W. Thompson, Manager, Remedial Projects, Mid-Atlantic/Southeast Region, GE Corporate Environmental Programs, re: attached GE/Unisys Response to USEPA Comment Letter of January 5, 1995, February 3, 1995.

P. 306229-306231 Letter to Mr. Mel Hauptman, Vega Alta Project Manager, Chief, New York/Caribbean Compliance Branch, U.S. EPA, Region II, from Mr. David W. Thompson, Manager, Remedial Projects, Mid-Atlantic/Southeast Region, GE Corporate Environmental Programs, re: attached Monthly Progress Report for January 1995, February 9, 1995.

P. 306232-306233 Letter to Vega Alta Project Manager, Site Compliance Branch, U.S. EPA, Region II, from Messrs. David J. Martin, Environmental Project Manager and Peter P. Mele, Program Manager, Unisys Corporation, re: January 1995 Progress Report, Vega Alta Well Field Site, Puerto Rico, February 13, 1995.

P. 306234-306269 Facsimile transmission to Ms. Cheryl Fines, Camp, Dresser & McKee, from Mr. Jose Font, Vega Alta Project Manager, Caribbean Field Office, U.S. EPA, Region II, re: attached letter to Mr. David W. Thompson, Manager, Remedial Projects, Mid-Atlantic/Southeast Region, GE Corporate Environmental Programs, from Ms. Carole Petersen, Chief, New York/Caribbean Superfund Branch, U.S. EPA, Region II, re: U.S. EPA and the Commonwealth of Puerto Rico Environmental Quality Board evaluation of GEs and Unisys "Response to EPA Comments on the OU-II Remedial and Supplemental Groundwater Investigation Report, Vega Alta Superfund Site, Vega Alta, Puerto Rico", January 15, 1995, February 14, 1994.

P. 306270-306271 Letter to Vega Alta Project Manager, Site Compliance Branch, U.S. EPA, Region II, from Messrs. David J. Martin, Environmental Project Manager and Peter P. Mele, Program Manager, Unisys Corporation, re: February 1995 Progress Report, Vega Alta Well Field Site, Puerto Rico, March 10, 1995.

P. 306272-306272 Facsimile to Mr. Jose Font, Vega Alta Project Manager, Caribbean Field Office, U.S. EPA, Region II, from Messrs. David J. Martin, Environmental Project Manager and Peter P. Mele, Program Manager, Unisys Corporation, re: Vega Alta Well Field Site, Puerto Rico, Ground-Water Sampling Notification, Second Quarter 1995, March 31, 1995.

P. 306273-306290 Letter to Ms. Carol Petersen, Chief, New York/ Caribbean Superfund Branch II, U.S. EPA, Region II, from Mr. Peter P. Mele, Program Manager, Corporate Environmental Affairs, Unisys, re:Vega Alta Supplemental Groundwater Remedial Design Work Plan (SRDWP) and Supplemental Sampling Analysis and Monitoring Plan (SSAMP), April 6, 1995. (Attached: Response to U.S. EPA Comments on the SRDWP and SAMP Submission, Vega Alta Public Superfund Site, Vega Alta, Puerto Rico, April 1995.)

P. 306291-306292 Facsimile to Mr. Jose Font, Vega Alta Project Manager, Caribbean Field Office, U.S. EPA, Region II, from Messrs. David J. Martin, Environmental Project Manager and Peter P. Mele, Program Manager, Unisys Corporation, re: Vega Alta Well Field Site, Puerto Rico, Ground-Water Sampling Notification, Second Quarter 1995, April 10, 1995. (Attachment: data.)

P. 306293-306295 Letter to Mr. Jose C. Font, U.S. EPA, Region II, Caribbean Field Office, from Mr. Emilio Concepcion, Plant Manager, Caribe GE, re: closure of unused ground water well, May 10, 1995.

P. 306296-306298 Letter to Vega Alta Project Manager, Site Compliance Branch, U.S. EPA, Region II, from Messrs. David J. Martin, Environmental Project Manager and Peter P. Mele, Program Manager, Unisys Corporation, re: April 1995 Progress Report, Vega Alta Well Field Site, Puerto Rico, May 15, 1995.

P. 306299-306302 Letter to Mr. Jose C. Font, U.S. EPA, Region II, Caribbean Field Office, from Mr. David J. Martin, Environmental Project Manager, Unisys Corporation, and Mr. Peter P. Mele, Program Manager, Unisys Corporation, re: Vega Alta Field Site, Puerto Rico, Analysis of Inorganics in Ground Water, June 14, 1995. (Attached: GE/Unisys Inorganic Sampling - May 1995, Vega Alta, PR. Undated.)

P. 306303-306309 Facsimile to Mr. Jose Font, Vega Alta Project Manager, Caribbean Field Office, U.S. EPA, Region II, from Mr. David S. Andersen, Project Manager/Geologist, Unisys Corporation, re: Vega Alta, Puerto Rico, SVE Perfomance Test, Operable Unit II, July 24, 1995. (Attachment: site location maps.)

P. 306310-306311 Letter to Mr. Jose C. Font, U.S. EPA, Region II, Caribbean Field Office, from Mr. Joseph D. Monahan, Field Operations Manager, Unisys Corporation, re: Vega Alta Well Field Site, Puerto Rico, Ground Water Sampling Notification, Fourth-Quarter 1995, October 31, 1995.

4.0 FEASIBILITY STUDY

4.3 Feasibility Study Reports

P. 400001-400066 Letter to Mr. Jose Font, Project Manager, Carribean Field Office, U.S. EPA, Region II, from Messrs. Peter P. Mele, Environmental Program Manager, Unisys Corporation, and David W. Thompson, Manager, Mid-Atlantic/Southeast Region, General Electric, re: Vega Alta Superfund Site, Puerto Rico, Feasibility Study Report - Operable unit Two, Administrative Order II-CERCLA-00301, August 10, 1995. (Attached: Report: Operable Unit Two Feasibility Study, Vega Alta Superfund Site, Vega Alta, Puerto Rico, prepared for U.S. EPA on behalf of Caribe General electric and Unisys Corporation, prepared by Unisys Corporation, August 11, 1995.

4.6 Correspondence

P. 400067-400069 Letter to Mr. Mel Hauptman, Vega Alta Project Manager, Chief, New York/Caribbean Compliance Branch, Emergency and Remedial Response Division, U.S. EPA, Region II, from Mr. David W. Thompson,

Manager, Mid-Atlantic/Southeast Region, Environmental Remediation Program, General Electric Corporate Environmental Programs, re: Attached Monthly Progress Report for January, 1994 February 10, 1994.

P. 400070-400072 Letter to Mr. Mel Hauptman, Chief, New York/ Caribbean Compliance Branch, Emergency and Remedial Response Division, from Mr. David W. Thompson, Manager, Mid-Atlantic/ Southeast Region, Environmental Remediation Program, General Electric Corporate Environmental Programs, re: Attached Monthly Progress Report for February, 1994, March 10, 1994.

P. 400073-400075 Letter to Mr. Mel Hauptman, Chief, New York/ Caribbean Compliance Branch, Emergency and Remedial Response Division, from Mr. David W. Thompson, Manager, Mid-Atlantic/ Southeast Region, Environmental Remediation Program, General Electric Corporate Environmental Programs, re: Attached Monthly Progress Report for April, 1994, May 9, 1994.

P. 400076-400084 Letter to Mr. Dave Thompson, General Electric Company, and Mr. Peter P. Mele, Anises Corporation, from Ms. Carole Petersen, Chief, New York/Caribbean Superfund Branch II, U.S. EPA, re: Review of Draft Feasibility Study Report (FS) Operable Unit II, Vega Alta Public Water Supply Wells Site, Vega Alta, Puerto Rico, July 24, 1995. (Attached: Facsimile Journal, July 27, 1995.)

P. 400085-400087 Letter to Mr. Mel Hauptman, Chief, New York/ Caribbean Compliance Branch, Emergency and Remedial Response Division, from Mr. David W. Thompson, Manager, Mid-Atlantic/ Southeast Region, Environmental Remediation Program, General Electric Corporate Environmental Programs, re: Attached Monthly Progress Report for August 1995, September 9,1995.

5.0 RECORD OF DECISION

5.1 Record of Decision

P. 500001-500082 Record of Decision, Vega Alta Public Supply Wells, Vega Alta, Puerto Rico, prepared by U.S. EPA, Region II, September 29, 1987.

5.4 Correspondence

P. 500083-500086 Letter to Mr. Hector Russe, Esquire, Chairman, Puerto Rico Environmental Quality Board, from Mr. George Pavlou, Acting Director, Emergency and Remedial Response Division, U.S. EPA, Region II, re: Implementation of the Operable Unit One ROD and Modifications to the Remedy that EPA is Contemplating, February 3, 1993.

P. 500087-500091 Memorandum to Ms. Jeanne M. Fox, Regional Administrator, U.S. EPA, Region II, from Mr. Douglas R. Blazey, Regional Counsel, U.S. EPA, Region II, and Ms. Kathleen Callahan, Director, Emergency and Remedial Response Division, U.S. EPA, Region II, re: Notice Required by CERCLA Section 117 (c) concerning Vega Alta Public Supply Wells Site, August 26, 1994. (Attached: The U.S. EPA announces an Explanation of Significant Differences, Vega Alta Public Supply Wells Site, Vega Alta, Puerto Rico, undated.)

7.0 ENFORCEMENT

7.1 Enforcement History

P. 700001-700042 Report: Environmental and PRP Status Review of Teledyne Packaging Puerto Rico, Inc. in Vega Alta, Puerto Rico, prepared by Environmental Strategies Corporation, January 25, 1988. (Note: This document is CONFIDENTIAL. It is located at U.S. EPA, Superfund Records Center, 290 Broadway, 18th Floor, N.Y., N.Y. 10007)

P. 700043-700046 A List: Vega Alta Site Addresses, prepared by unknown, prepared for unknown, July 30, 1992.

7.3 Administrative Orders

P. 700047-700066 Administrative Order, In the Matter of: Caribe General Electric Products, Inc., Motorola Telcarro de Puerto Rico, Inc., Harman Automotive Puerto Rico, Inc., Puerto Rico Industrial Development Company, The West Company, Index No. II CERCLA-80217, September 30, 1988.

P. 700067-700086 Administrative Order, In the Matter of: Caribe General Electric Products, Inc., Motorola Telcarro de Puerto Rico, Inc., Harman Automotive Puerto

Rico, Inc., Puerto Rico Industrial Development Company, The West Company, Index No. II-CERCLA-90302, March 22, 1989.

P. 700087-700106 Administrative Order, In the Matter of: Caribe General Electric Products, Inc., Motorola Telcarro de Puerto Rico, Inc., Harman Automotive Puerto Rico, Inc., Puerto Rico Industrial Development Company, The West Company, Teledyne Packaging, P.R., Inc., Index No. II-CERCLA-00301, September 27, 1990.

7.7 Notice Letters and Responses

P. 700107-700108 Notice Letter to Caribe General Electric, Petitioner, from Mr. Pedro Maldonado Ojeda, President, Commonwealth of Puerto Rico, Office of the Governor, Environmental Quality Board, re: Remedial Action, Vega Alta Wells, September 3, 1992.

P 700109-700111 Questionnaire with responses by Mr. Philippe Guex Tooling and Fastening Systems of America, Inc., undated.

7.8 Correspondence

P. 700112-700114 Letter to Mr. Gilberto Rivera, General Electric Controls, Vega Alta, Puerto Rico, from Mr. Conrad Simon, Director, Air and Waste Management Division, re: Notification to Terminate Interim Status EPA I.D. No. PRD090031410, October 3, 1984. (Attachment: Notice of Interim Status Termination.)

P. 700115-700118 Letter to Mr. Christopher Daggett, Ph. D., Regional Administrator, Environmental Protection Agency, Region II, from Mr. Santos Rohena Betancourt, Chairman, Estado Libre Asociado De Puerto Rico/Oficina De Gobernador, re: US vs. Caribe General Electric Products et al Vega Alta Superfund Site, Vega Alta, Puerto Rico, June 16, 1988. (Attached: Letter to Mr. Christopher Daggett, Ph. D.,Regional Administrator, Environmental Protection Agency, Region II, from Mr. Santos Rohena, Jr., Chairman, Commonwealth of Puerto Rico/Office of the Governor, re: Vega Alta Puerto Rico, Superfund Site, February 25, 1988.)

P. 700119-700120 Letter to Mr. Eric Schaaf, Chief, Superfund Enforcement Branch, Office of Regional Counsel,

U.S. EPA, Region II, Attn: Ms. Bernice Corman, Esq., from Mr. Santos Rohena, Chairman, Commonwealth of Puerto Rico, Office of the Governor, re: Vega Alta Wellfield Superfund Site, Puerto Rico, July 12, 1988.

P. 700121-700121 Letter to Mr. Santos Rohena Betancourt, Jr., Chairman, Environmental Quality Board, Santurce, Puerto Rico, from Mr. Stephen D. Luftig, Director, Emergency and Remedial Response Division, U.S.EPA Region II, re: Vega Alta Superfund Site, September 21, 1988.

P. 700122-700127 Letter to various PRPs, from Mr. Eric Schaaf, Chief, New York/ Caribbean Superfund Branch, Office of Regional Counsel, U.S.EPA Region II, re: Revised version of pages of Administrative Order II CERCLA-80217, October 3, 1988.

P. 700128-700139 Letter to Mr. Steve D. Ramsey, Sidley & Austin, from Mr. Douglas B. MacDonald, Palmer & Dodge, and Ms. Encarnita Catalan Machan, General Counsel, Puerto Rico Aqueduct Sewer Authority, re: Vega Alta Superfund Site, October 31, 1988. (Attached: Distribution on Letter to Steve Ramsey dated October 31, 1988; Alternative Water Supply Fact Summary; Improvements to Water Supply System Construction of Distribution Tank, Installation of Transmission Mains and Connection of Deep Wells First Stage, Vega Alta, Puerto Rico - Cost Estimate, August 24, 1988.)

P. 700140-700141 Letter to Mr. Melvin Hauptman, Site Compliance Branch, Emergency and Remedial Response Division, U.S. EPA, Region II, from Mr. James J. Dragna, Pepper, Hamilton & Scheetz, re: Vega Alta Site, Vega Alta, Puerto Rico, Phase II Source Control RI/FS, November 2, 1988.

P. 700142-700144 Letter to Mr. William J. Muszynski, Acting Regional Administrator, U.S. EPA, Region II, from Mr. Stephen D. Ramsey, Sidley & Austin, New York, re: Vega Alta, Puerto Rico Superfund Site, November 4, 1988.

P. 700145-700255 Letter to Mr. William J. Muszynski, Acting Regional Administrator, U.S. EPA, Region II, from Mr. Stephen D. Ramsey, Sidley & Austin, New York, re: Vega Alta, Puerto Rico Superfund Site, November 8, 1988. (Attached: (1) Comments of General Electric Company, Motorola, Inc., and

Harmon Automotive, Inc., to Administrative Order Issued September 30, 1988 Concerning the Vega Alta Superfund Site, prepared by General Electric Company, Motorola, Inc., Harmon Automotive, Inc., November 8, 1988. (2) Comments on the Administrative Order, dated September 30, 1988, Regarding The Vega Alta Superfund Site for General Electric Company, prepared by Bechtel Environmental, Inc., Oak Ridge, Tennessee, November 2, 1988. (3) Comments on Administrative Order Index No. II CERCLA-80217, by Edmund A.C. Crouch, Ph.D., Debra A. Kaden, Ph.D., and Laura C. Green, Ph.D., Environmental Health and Toxicology Group, Meta Systems Inc., November 1, 1988.)

P. 700256-700271 Letter to Mr. William J. Muszynski, Acting Regional Administrator, U.S. EPA, Region II, from Mr. George Miller, Dechert Price & Rhoads, re: Vega Alta Superfund Site, November 9, 1988. (Attached: Administrative Order, Index No. II CERCLA-80217, November 9, 1988.)

P. 700271A-700271A Letter to various PRPs, from Mr. William J. Muszynski, Acting Regional Administrator, U.S. EPA, Region II, re: Suspension of the effective date of Administrative Order, November 23, 1988.

P. 700272-700274 Letter to Mr. William J. Muszynski, Acting Regional Administrator, U.S. EPA, Region II, from Mr. John A. Zackrison, Counsel for Motorola, Inc., re: Vega Alta, Puerto Rico Superfund Site, November 23, 1988.

P. 700275-700276 Letter to Mr. William J. Muszynski, Acting Regional Administrator, U.S. EPA, Region II, from Mr. David B. Farer, Farer Siegal Fersko, re: Vega Alta, Puerto Rico Superfund Site, November 28,1988.

P. 700277-700286 Letter to Mr. Santos Rohena Betancourt, Chairman, Environmental Quality Board, Santurce, Puerto Rico, from Mr. Lee M. Thomas, U.S. EPA, Region II, re: Vega Alta Superfund Site, Vega Alta, Puerto Rico, December 22, 1988. (Attached: Letter to Mr. James J. Florio, Chairman, Subcommittee on Commerce, Consumer Protection and Competitiveness, Committee on Energy and Commerce, House of Representatives, from Mr. Lee M. Thomas, U.S. EPA, Region II, re: Agencys Implementation of the Superfund Amendments and Reauthorization Act of 1986 (SARA), May 20, 1987.)

P. 700287-700289 Letter to Mr. Douglas R. Blazey, Regional Counsel, U.S. EPA, Region II, from Mr. Stephen D. Ramsey, Sidley & Austin, re: Vega Alta, Puerto Rico Superfund Site, January 25, 1989.

P. 700290-700305 Letter to various PRPs, from Mr. Stephen D. Luftig, Director, Emergency and Remedial Response Division, U.S. EPA, Region II, re: Unilateral RD/RA Order (Index No. II- CERCLA-90302), Vega Alta Superfund Site, March 23, 1989. (Attached: Letter to Mr. Santos Rohena Betancourt, Chairman, Environmental Quality Board, Santurce, Puerto Rico, from Mr. Lee M. Thomas, U.S. EPA, Region II, re: Vega Alta Superfund Site, Vega Alta, Puerto Rico, December 22, 1988).

P. 700306-700310 Letter to Ms. Bernice Corman, Esq., Assistant Regional Counsel, U.S. EPA, Region II, from Mr. Stephen D. Ramsey, Sidley & Austin, re: Vega Alta, Puerto Rico Superfund Site, April 12, 1989.

P. 700311-700311 Letter to Mr. John Zackrison, Esq., Kirkland & Ellis, from Ms. Bernice Corman, Esq., Assistant Regional Counsel, New York/Caribbean Superfund Branch, U.S. EPA, Region II, re: Date of First Deliverables Pursuant to Unilateral RD/RA Order (Index No. II- CERCLA-90302), Vega Alta Superfund Site, April 19, 1989.

P. 700312-700314 Letter to Mr. John Malleck, Chief U.I.C. Section U.S. EPA, Region II, from Mr. Nicolas Suarez, General Manager, Harman Automotive, Puerto Rico, Inc., re: Harman Automotive - P.R., Inc., April 26, 1989. (Attached: A Partial Detail View of PRIDCO, March 31, 1989.)

P. 700315-700350 Letter to Mr. Eric Schaaf, Esq.,Office of Regional Counsel, U.S. EPA, Region II, from Mr. Stephen D. Ramsey, Sidley & Austin, re: Vega Alta, Puerto Rico Superfund Site, May 8, 1989. (Attached: Presentation to EPA, April 13, 1989, General Electric Company, Vega Alta Superfund Site, Vega Alta, Puerto Rico.)

P. 700351-700356 Letter to Ms. Bernice Corman, Office of Regional Counsel, U.S. EPA, Region II, from Mr. John Zackrison, Esq., Kirkland & Ellis, re: Vega Alta Superfund Site, August 8, 1989. (Attached: Letter to various addressees, from Stephen P. Cline, P.G., Project Manager, Environmental Resources Management, Inc., July 31, 1989.)

P. 700357-700358 Letter to Mr. Stephen D. Ramsey, Sidley & Austin, from Mr. George Pavlou, Associate Director for Enforcement Programs, re: Unilateral RD/RA Order (Index No. II- CERCLA-90302), Vega Alta Wellfield Superfund Site, Vega Alta, Puerto Rico, Caribe General Electric Company, September 26, 1989.

P. 700359-700362 Letter to Mr. Eduardo L. Buso, Esq., General Electric Company, Ric Piedras, Puerto Rico, from Mr. George A. Shanahan, Assistant Regional Counsel, U.S. EPA, Region II, re: EPA Order No. CWA-II-89-25, Caribe GE Product, Vega Alta, Puerto Rico, October 6, 1989.

P. 700363-700365 Letter to various PRPs, from Mr. Stephen D. Luftig, Director, Emergency and Remedial Response Division, U.S. EPA Region II, re: Vega Alta Wellfield Site, RD/RA Special Notice, November 20, 1989.

P. 700366-700367 Letter to Mr. Stephen D. Ramsey, Sidley & Austin, from Mr. George Pavlou, Associate Director for Enforcement Programs, U.S. EPA, Region II, re: Caribe General Electric Products, Inc., Compliance with Unilateral RD/RA Order (Index No. II- CERCLA-90302), Vega Alta Wellfield Superfund Site, Vega Alta, Puerto Rico, January 16, 1990.

P. 700368-700374 Letter to Mr. Jose C. Font, U.S. EPA, Region II, Caribbean Field Office, and Ms. Bernice Corman, U.S. EPA Region II, from Mr. James J. Dragna, Pepper, Hamilton & Scheetz, re: Vega Alta Wellfield Superfund Site, Vega Alta, Puerto Rico, March 14, 1990.

P. 700375-700376 Letter to Ms. Susan Barry, Environmental Resource Management, Inc., from Mr. Jose C. Font, Project Manager, U.S. EPA, Region II, Caribbean Field Office, re: Extension for implementation of the Vega Alta Site SAMP pursuant to CERCLA Administrative Order 90302, June 13, 1990.

P. 700377-700384 Letter to Ms. Bernice Corman, Esq., U.S. EPA, Region II, from Mr. George J. Miller, Dechert Price & Rhoads, re: Vega Alta Superfund Site, June 20, 1990. (Attached: Letter to Mr. Eduardo M. Negron Navaz, Fiddler, Gonzalez & Rodriguez, Attorney and Councellors at Law, from Mr. Santos Rohena, Chairman, Commonwealth of Puerto Rico, Office of the Governor, re: Authorization for

discharge of purge water, May 9, 1990; Table A-1, Effluent Limitations and Monitoring Requirements, undated.)

P. 700385-700386 Letter to Mr. Charles A. Bandoian, Project Director, Environmental Resource Management, Inc., from Ms. Carole Peterson, Chief, New York/ Caribbean Compliance Branch, U.S. EPA Region II, re: Draft SOW for Remedial Design for the Vega Alta Site, August 17, 1990.

P. 700387-700391 Letter to Ms. Carole Peterson, Chief, New York/ Caribbean Compliance Branch, U.S. EPA, Region II, from Mr. George J. Miller, Dechert Price & Rhodas, re: Vega Alta Superfund Site, August 31, 1990. (Attached: Letter to Ms. Ruth E. Baker, Vega Alta Project Manager, Environmental Resource Management, Inc., frcm Mr. Santos Rohena Betancourt, Chairman Commonwealth of Puerto Rico, Office of the Governor, Environmental Quality Board, re: Draft SOW for Remedial Design for the Vega Alta Wellfield Site, August 10, 1990.)

P. 700392-700411 Letter with handwritten marginalia, to Ms. Bernice Corman, Office of Regional Counsel, U.S. EPA, Region II, from Mr. George J. Miller, Dechert Price & Rhoads, re: Administrative Order, U.S. EPA, Region II, Index No. II - CERCLA - 00301, dated September 27, 1990, October 24, 1990. (Attached: Letter with attachments to Mr. George J. Miller, Dechert Price & Rhoads, from Mr. Gerald L. Kirkpatrick, P.G., ERM Project Manager, re: The West Company of Puerto Rico, Inc., Vega Alta Superfund Site, EPA Index No. II-CERCLA 00301, October 23, 1990.)

P. 700412-700417 Facsimile transmissicn of letter to Mr. Melvin Hauptman, Site Compliance Branch, Emergency and Remedial Response Division, U.S. EPA, Region II, from Mr. David B. Farer, Farer Siegal Fersko, Attorneys at Law, re: Response to Administrative Order, October 22, 1990.

P. 700418-700437 Letter to Mr. Jose C. Font, U.S. EPA, Region II, Caribbean Field Office, from Mr. Randall J. Krause, Pepper, Hamilton & Scheetz, re: Vega Alta Wellfield Superfund Site, Vega Alta, Puerto Rico, October 29, 1990. (Attached: Letter to Ms. Bernice Corman, Esq., U.S. EPA, Region II, from Pepper, Hamilton & Scheetz, unsigned, re: Vega Alta, Puerto Rico Superfund Site, October 24, 1990.)

P. 700438-700439 Letter to Ms. Bernice Corman, Esq, Office of Regional Counsel, U.S. EPA, Region II, from Mr. David B. Farer, Farer Siegal Fersko, Attorneys at Law, re: ERM Report on Need for Treatability Study/ PRP Group Request for Extension of Time for Submission of Remedial Design/ Request for Meeting, March 5, 1991.

P. 700440-700442 Letter to Mr. David B. Farer, Farer Siegal Fersko, Attorneys at Law, from Ms. Carole Peterson, Chief, New York/ Caribbean Superfund Branch, Emergency and Remedial Response Division, re: Vega Alta Superfund Site, First Operable Unit Administrative Order (Index No. II - CERCLA - 90302), May 09, 1991.

P. 700443-700444 Letter to Ms. Bernice Corman, Esq., U.S. EPA, Region II, from Mr. George J. Miller, Dechert Price & Rhoads, re: Vega Alta Superfund Site, June 21, 1991.

P. 700445-700456 Letter to various PRPs from Ms. Carole Petersen, Chief, New York/ Caribbean Compliance Branch, Emergency and Remedial Response Division, U.S. EPA, Region II, re: Unilateral RD/RA Order (Index No. II- CERCLA-90302), Vega Alta Superfund Site, August 01, 1991. (Attached: EPA Review of 30% Design Report, undated.)

P. 700457-700459 Letter to Ms. Bernice Corman, Esquire, U.S. EPA. Region II, and Mr. Peter K. Kautsky, Esquire, Environmental Enforcement Section, Environmental and Natural Resources Division, U.S. Department of Justice, from Mr. George J. Miller, Dechert Price & Rhoads, re; United States v. GE Caribe, et al., Civil Action No. 90-2287 (cc), August 23, 1991. (Attached: Facsimile cover sheet, August 21, 1991.)

P. 700460-700461 Letter to Ms. Bernice Corman, Esq., Assistant Regional Counsel, New York/Caribbean Superfund Branch, U.S. EPA, Region II, from Ms. Peggy L. O Brien, Siddley & Austin, re: Vega Alta Public Supply Wells Superfund Site, October 1, 1991.

P. 700462-700463 Letter to Ms. Bernice Corman, Esq., Assistant Regional Counsel, New York/Caribbean Superfund Branch, U.S. EPA, Region II, from, Mr. Angus Macbeth, Siddley & Austin, re: Vega Alta Public Supply Wells Superfund Site, November 27, 1991.

P. 700464-700468 Letter to Ms. Bernice Corman, Esq., U.S. EPA, Region II, from Mr. George J. Miller, Dechert Price & Rhoads, re: Vega Alta Superfund Site, January 15, 1992. (Attached: Letter to Mr. George J. Miller, Esq., Dechert Price & Rhoads, from Mr. Carl E. Petrus, P.E., Environmental Resources Management, Inc., re: Vega Alta Site Remediation Construction Bidding Schedule, January 13, 1992.)

P. 700469-700473 Letter to various PRPs from Ms. Carole Petersen, Chief, New York/ Caribbean Superfund Branch II , Emergency and Remedial Response Division, U.S. EPA, Region II, re: Vega Alta Superfund Site, July 10, 1992. (Attached: Facsimile cover sheet, September 21, 1992.)

P. 700474-700474 Letter to Ms. Carole Petersen Chief, New York/ Caribbean Superfund Branch II , Emergency and Remedial Response Division, U.S. EPA, Region II, from Ms. Nancy A. Valley, Motorola, Inc., re: Attorney Substitution, July 30, 1992

P. 700475-700487 Letter to Mr. George J. Miller, Dechert Price & Rhoads, from Ms. Maria Luisa Gonzalez, Fiddler, Gonzalez & Rodriguez, re: Vega Alta Superfund Site, September 22, 1992. (Attached: (1) Resolution (original and unofficial translation) addressed to various PRPs, from Mr. Santos Rohena Betancourt, Department of Natural Resources, Puerto Rico, re: Petition to Waive Franchise to Operate de Ponderosa Well during Remedial Action and Cleaning of Vega Alta Aquifer, September 23, 1992; (2) Resolution written in Spanish, re: Resolution waiving obtaining water extraction franchise, September 4, 1992.)

P. 700488-700489 Letter to Mr. Jose C. Font, U.S. EPA, Region II, Caribbean Field Office, from Mr. George J. Miller, Dechert Price & Rhoads, re: Vega Alta Superfund Site, November 13, 1992. (Attached: Notice to Jafer Construction, S. E., from Mr. George J. Miller, Attorney, The West Company of Puerto Rico, Inc., and Motorola Telcarro de Puerto Rico, Inc., re: Notification about Contract Time, November 11, 1992.)

P. 700490-700492 Letter to Ms. Lourdes Rodriguez, Assistant of the Governor, Office of the Governor, San Juan, Puerto Rico, from Ms. Bernice Corman, Esq., Assistant

		Regional Counsel, New York/Caribbean Superfund Branch, U.S. EPA, Region II, re: Vega Alta Superfund Site, April 8, 1993.
P.	700493-700494	Letter/Translation to Mr. Juan F. Woodroffe, President, PRIDCO, from Mr. Benjamin Pomales, Interim Executive Director, re: Vega Alta Superfund Site - U.S. vs. Caribe General Electric Products, Inc., June 4, 1993.
P.	700495-700525	Letter to Mr. Donald G. Frankel, Esq., Environmental Enforcement Section, Environment and Natural Resources Division, United States Department of Justice, from Mr. Langley R. Shook, Sidley & Austin, re: United States v. Caribe General Electric Products, Inc., (Vega Alta Superfund Site), July 6, 1994. (Attached: (1) News Release from The New York Times, July 3, 1994; and (2) Memorandum in Support of Defendant Caribe General Electric's Motion to Suspend and Partially Vacate EPA's Order, Draft, July 5, 1994.)
P.	700526-700550	Letter to various PRPs from Mr. Juan M. Fajardo, Assistant Regional Counsel, Office of Regional Counsel, U.S. EPA, Region II, re: Amendment to Administrative Order Index No. II- CERCLA-90302, Vega Alta Public Supply Wells Site, Vega Alta, Puerto Rico, September 1, 1994. (Attached: Amendment to Administrative Order Index No. II-CERCLA-90302, August 30, 1994, Appendix I and II included.)
P.	700551-700552	Letter to Mr. Juan Fajardo, Office of Regional Counsel, U.S. EPA, Region II, from Ms Margaret N. Strand, Bayh, Connaughton & Malone, P.G., re: Vega Alta Superfund Site, May 3, 1995.
P.	700553-700555	Letter to Mr. Juan Fajardo, Office of Regional Counsel, U.S. EPA, Region II, from Ms. Margaret N. Strand, Eckert Seamans Cherin & Mellott, re: Vega Alta Superfund Site, November 14, 1994. (Attached: Letter to Mr. Langley Shook, Sidley & Austin, from Ms. Margaret N. Strand, Eckert Seamans Cherin & Mellott, re: Vega Alta Superfund Site, November 14, 1994.)
P.	700556-700569	Letter to Mr. Juan Fajardo, Office of Regional Counsel, U.S. EPA, Region II, from Ms Margaret N. Strand, Bayh, Connaughton & Malone, P.G., re: Vega Alta Superfund Site: Well A Plans And Sampling Plans, May 11, 1995. (Attached: Comments on

GE/Unisys Plans for Well A and future sampling at Vega Alta Superfund Site.)

P. 700570-700577 Letter to Mr. Juan Fajardo, Office of Regional Counsel, U.S. EPA, Region II, and to Mr. Jose C. Font, U.S. EPA, Region II, Caribbean Field Office, from Ms Margaret N. Strand, Bayh, Connaughton & Malone, P.G., re: Vega Alta Superfund Site, June 30, 1995. (Attached: (1) Comments on Behalf of Monte Ray Farm and Empresas Fonalledas on Draft Operable Unit II Feasibility Study, Vega Alta Superfund Site; (2) Letter to Mr. Langley Shook, Sidley & Austin, from Ms. Margaret N. Strand, Bayh, Connaughton & Malone, P.G., re: Vega Alta Superfund Site, June 30, 1995.)

P. 700578-700579 Letter to Mr. Jose C. Font, U.S. EPA, Region II, Caribbean Field Office, from Ms Margaret N. Strand, Bayh, Connaughton & Malone, P.G., re: Vega Alta Superfund Site, July 13, 1995.

8.0 HEALTH ASSESSMENT

8.1 Health Assessment

P. 800001-800123 Report: Final Human Health Risk Assessment, Vega Alta Site, Vega Alta, Puerto Rico, Volume I of II, prepared by CDM Federal Programs Corporation, prepared for U.S. EPA, Office of Waste Programs Enforcement, Washington, DC, December 7, 1995.

P. 800124-800375 Report: Final Human Health Risk Assessment, Vega Alta Site, Vega Alta, Puerto Rico, Volume II of II, prepared by CDM Federal Programs Corporation, prepared for U.S. EPA, Office of Waste Programs Enforcement, Washington, DC, December 7, 1995.

10.0 PUBLIC PARTICIPATION

10.3 Public Notices

P. 1000001-1000002 Public Notice: "The United States Environmental Protection Agency ("EPA") announces that it has ordered the performance of remedial design and

remedial action ("RD/RA")at the Vega Alta Municipal Well Field Superfund Site, located in Vega Alta, Puerto Rico (the "Site"), undated.

10.6 Fact Sheets and Press Releases

P. 1000003-1000007 Fact Sheet for the Vega Alta Public Well Field, September 1983. (Attached: (1) Memorandum to Ms. Jacqueline E. Schafer, Regional Administrator, from Mr. William J. Librizi, Director, Office of Emergency and & Remedial Response, U.S. EPA, Region II, re: Vega Alta Drinking Water Task Force Meeting, December 6, 1983; (2) Fact Sheet, Vega Alta Public Supply Wells, 12/06/96; (3) Letter to Mr. Jose M. Cobian, President, Industrial Development Co., from Mr. Weems L. Clevenger, Director, Caribbean Office, U.S. EPA, Region II, re: Request for assistance to identify past and present industrial activities.., June 28, 1983.)

P. 1000008-1000010 Hoja de Informacion del Superfondo, Vega Alta, Pozos de Suministro Publico, Vega Alta, Puerto Rico, Julio 95.(Note: This document is written in Spanish.)

P. 1000011-1000013 Superfund Fact Sheet, Vega Alta Public Supply Well Site, Vega Alta, Puerto Rico, undated.

RECORD OF DECISION FACT SHEET
EPA REGION II

Site:

Site name: Vega Alta Public Supply Well Site

Site location: Vega Alta, Puerto Rico

HRS score (date of score): 42.24 (9-1-84)

EPA ID Number:PRD980763775

Record of Decision:

Date signed: 9/30/97

Operable Unit: OU-2

Selected remedy: Soil Vapor extraction System

Estimated Construction Completion: Two years

Capital cost: (in 1997 dollars) $2,777,000M

Annual O & M cost: $502,900

Present-worth cost: $7,473,000 (5% discount rate for 10 years)

Lead:

U.S. Environmental Protection Agency Enforcement

Primary Contact: Adalberto Bosque, (787) 729-6951 ext. 236

Secondary Contact: Melvin Hauptman, (212) 637-3952

Main PRPs: Dave Thompson , General Electric Co., (610)992-7890
David Martin, Unisys Corporation, (610)993-3039

Waste:
Waste type: Volatile Organics

Waste origin: Wastes generated during plant operation

Estimated waste quantity: not known

Contaminated medium: soil